



UNIVERSITATEA DE VEST  
"VASILE GOLDIȘ"  
din ARAD

# Zilele Academice Arădene

Ediția a XXXII - a

25-29 Mai 2022



**ROMANIA**  
**MINISTRY OF NATIONAL EDUCATION**  
**“VASILE GOLDIȘ” WESTERN UNIVERSITY OF**  
**ARAD**



UNIVERSITATEA DE VEST  
**“VASILE GOLDIȘ”**  
din ARAD

**ZILELE ACADEMICE ARĂDENE**  
**Ediția a XXXII-a, 25-29 mai 2022**

***THE ACADEMIC DAYS OF ARAD***  
***XXXII-nd Edition, May 25-29, 2022***

## Table of Contents

<b>SECȚIUNILE CADRELOR DIDACTICE/CERCETĂTORI .....</b>	<b>28</b>
<b>TEACHING STAFF'S/RESEARCHER'S SECTIONS .....</b>	<b>28</b>
<b>SECTION I .....</b>	<b>29</b>
<b>INTERDISCIPLINARITATE ÎN DOMENIUL BIOMEDICAL ȘI PRECLINIC..</b>	<b>29</b>
<b>CROSS-DISCIPLINARITY IN BIOMEDICAL AND PRECLINICAL DOMAINS .....</b>	<b>29</b>
<b>Microscopical investigation of anatomical structures responsible for the secretion of bioactive compounds in Leonurus cardiaca L. ....</b>	<b>29</b>
Viviane Bota <sup>1</sup> , Neli Kinga Olah <sup>1</sup> , Elisabeta Chișe <sup>1</sup> , Endre Mathe <sup>1</sup> , Maria-Magdalena Zamfirache <sup>2</sup> , Violeta Turcuș <sup>1</sup> .....	29
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> Alexandru Ioan Cuza University of Iași .....	29
<b>Investigations on a series of morphological, biochemical and productivity indicators of four genotypes of oats (Avena Sativa L.) in the soil and clima.....</b>	<b>31</b>
Ovidiu Ungureanu <sup>1</sup> , Iulian Stana <sup>1</sup> , Elena Ungureanu <sup>2</sup> , Viviane Bota <sup>1</sup> , Florin Marinescu <sup>3</sup> , Violeta Turcuș <sup>1</sup> .....	31
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> Iași University of Life Sciences, <sup>3</sup> Research and Development Station for Cattle Breeding in Arad .....	31
<b>A new approach in studying left ventricular diastole and systole ....</b>	<b>33</b>
Lucian Romeo Popescu, Adina Pop Moldovan, Maria Puschita, Maria Orodan, Violeta Turcuș.....	33
„Vasile Goldis” Western University of Arad .....	33
<b>Assessment of wild flora in the Moneasa Area in the context of sustainable development under the influence of climate change. Case Study .....</b>	<b>34</b>
Violeta Turcuș <sup>1</sup> , Paul Albu <sup>1</sup> , Viviane Bota <sup>1</sup> , Gicu Gabriel Arsene <sup>2</sup> .....	34
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> Banat University of Agricultural Sciences and Veterinary Medicine.....	34
<b>Analysis of mechanical impedance at aortic level and elasticity coefficient for several cardiac diseases.....</b>	<b>35</b>
Lucian Popescu, Adina Pop Moldovan, Maria Puschita, Maria Orodan, Violeta Turcuș .....	35
„Vasile Goldis” Western University of Arad .....	35
<b>Medical responsibility and how to prevent malpractice.....</b>	<b>36</b>
Florin Mihai Sandor, Alexandru Neșiu, Casiana Boru-Stănescu, Cris Precup .....	36
„Vasile Goldis” Western University of Arad .....	36
<b>Hepatoprotective effects of Corylus avellana extract and chrysin/cyclodextrin nanocomplexes in diabetes mellitus complications.....</b>	<b>37</b>

Cornel Baltă <sup>1</sup> , Hildegard Herman <sup>1</sup> , Sami Gharbia <sup>1</sup> , Alina Ciceu <sup>1</sup> , Marcel Rosu <sup>1</sup> , Bianca Mladin <sup>1</sup> , Sorina Nicoleta Voicu <sup>2</sup> , Coralia Cotoraci <sup>3</sup> , Anca Dinischiotu <sup>2</sup> , Ferenc Fenyvesi <sup>4</sup> , Judit Váradi <sup>4</sup> , Neli Olah <sup>5</sup> , Ramona Burtescu <sup>6</sup> , Anca Hermenean <sup>1,2</sup> .....	37
<i><sup>1</sup>“Aurel Ardelean” Institute of Life Sciences, “Vasile Goldiș” Western University of Arad, <sup>2</sup>Department of Biochemistry and Molecular Biology, Faculty of Biology, University of Bucharest, <sup>3</sup>Faculty of Medicine “Vasile Goldiș” Western University of Arad, <sup>4</sup>Department of Pharmaceutical Technology, Faculty of Pharmacy, University of Debrecen, Hungary, <sup>5</sup>Faculty of Pharmacy, “Vasile Goldiș” Western University of Arad, <sup>6</sup>SC PlantExtrakt SRL, Radaia, Cluj .....</i>	<i>37</i>
<b>Cellular and molecular pathways involved in liver fibrosis and the potential anti-fibrotic role of <i>Secale cereale</i> extract reinforced with chrysin/cyclodextrin nanocomplexes .....</b>	<b>39</b>
Alina Ciceu <sup>1</sup> , Ferenc Fenyvesi <sup>2</sup> , Neli Olah <sup>3</sup> , Anca Hermenean <sup>1</sup> .....	39
<i><sup>1</sup>“Aurel Ardelean” Institute of Life Sciences, “Vasile Goldiș” Western University of Arad, <sup>2</sup> Department of Pharmaceutical Technology, Faculty of Pharmacy, University of Debrecen, Hungary, <sup>3</sup> Faculty of Pharmacy, “Vasile Goldiș” Western University of Arad .....</i>	<i>39</i>
<b>Importance of respiratory rehabilitation in Covid-19 patients .....</b>	<b>41</b>
Paula Barata, Dana Olar, Cecilia Avram, .....	41
<i>„Vasile Goldiș” Western University of Arad .....</i>	<i>41</i>
<b>New Trends in Medical Data Quality Assessment .....</b>	<b>42</b>
Gheorghe Ioan Mihalaș .....	42
Academy of Medical Sciences, .....	42
<i>„Vasile Goldiș” Western University of Arad .....</i>	<i>42</i>
<b>Hepatoprotective effects of adipose tissue-derived stem cells (ADSCs), hepatocyte growth factor (HGF), and silymarin/cyclodextrin complexes combined therapy in a mouse model of liver fibrosis and diabetes .....</b>	<b>44</b>
Sami Gharbia <sup>1,2</sup> , Simona-Rebeca Ignat <sup>1</sup> , Sorina Dinescu <sup>1</sup> , Ferenc Fenyvesi <sup>3</sup> , Bianca Mladin <sup>1</sup> , Cornel Baltă <sup>1</sup> , Hildegard Herman <sup>1</sup> , Marcel Rosu <sup>1</sup> , Alina Ciceu <sup>1</sup> , Anca Hermenean <sup>2</sup> , Marieta Costache <sup>1</sup> .....	44
<i><sup>1</sup>Department of Biochemistry and Molecular Biology, Faculty of Biology, University of Bucharest, <sup>2</sup>Institute of Life Sciences “Aurel Ardelean”, Vasile Goldiș Western University of Arad, <sup>3</sup> Department of Pharmaceutical Technology, Faculty of Pharmacy, University of Debrecen, Hungary .....</i>	<i>44</i>
<b>HPV and its relation with genital and non-genital cancers .....</b>	<b>46</b>
Cristian Furău <sup>1</sup> , Roxana Furău <sup>1</sup> , Cristina Pasăre <sup>2</sup> , Denisa Todor <sup>1</sup> , Laurențiu Luca <sup>2</sup> .....	46
<i><sup>1</sup>„Vasile Goldiș” Western University of Arad, <sup>2</sup>Emergency Clinical County Hospital of Arad- Ob-Gyn Dep .....</i>	<i>46</i>

<b>The management of deliveries from underage mothers during COVID 19 pandemic- a euroregional survey</b> .....	47
Cristian Furău <sup>1</sup> , Petar Arsenijevic <sup>2</sup> , Roxana Furău <sup>1</sup> , Florin Sandor <sup>1</sup> , Oana Todut <sup>3</sup> , Casiana Boru <sup>1</sup> , Anca Macau <sup>4</sup> , Cris Precup <sup>1</sup> .....	47
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> University of Kragujevac, <sup>3</sup> Emergency Clinical County Hospital of Arad-Ob-Gyn Department, <sup>4</sup> University of Medicine and Pharmacy Carol Davila Bucharest.....	47
<b>How do we perceive abortion- a questionnaire study for Western Romania</b> .....	48
Oana Besa <sup>1</sup> , Oana Todut <sup>2</sup> , Roxana Furău <sup>1</sup> , Ioana Vornic <sup>1</sup> , Casiana Boru <sup>1</sup> , Denisa Todor <sup>1</sup> , Cristina Pasăre <sup>2</sup> , Cristian Furău <sup>1</sup> .....	48
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> Emergency Clinical County Hospital of Arad-Ob-Gyn Department.....	48
<b>Ethics of the use of human bodies for didactic purposes and medical research in the contemporary european religious context</b> .....	50
Corina-Daniela Frandea <sup>1</sup> , Filip Andrei Frandea <sup>2</sup> , Corina Crişan <sup>1</sup> .....	50
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> Babes- Bolyai University of Cluj-Napoca.....	50
<b>The importance of the relationship between depressive disorders and ischemic heart diseases</b> .....	51
Laura Ioana Bondar.....	51
„Vasile Goldis” Western University of Arad.....	51
<b>Climate changes in 2022 and the impact on the world's economies</b> .....	52
Marcel Grec.....	52
„Vasile Goldis” Western University of Arad.....	52
<b>Theoretical foundation of biomedical research in 2022</b> .....	54
Marcel Grec.....	54
„Vasile Goldis” Western University of Arad.....	54
<b>Biochemical methods used to determine the genetic disease of carbohydrates metabolism</b> .....	55
Luminiţa Pilat.....	55
„Vasile Goldis” Western University of Arad.....	55
<b>V. myrtillus extracts comparative analysis - Phytonutrient Profiles, Antioxidant Capacity and in vivo rescue effects tested in a D. melanogaster model</b> .....	56
Carmen Neamţu <sup>1</sup> , Andreea Adriana Neamţu <sup>2</sup> , Endre Mathe <sup>1</sup> , Violeta Turcuş <sup>1</sup> , Neli Kinga Olah <sup>1</sup> .....	56
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> University of Oradea (Romania).....	56
<b>Work of microbial resistance from suprainfections patients with COVID-19 in Intensive Care Unit</b> .....	58
Teodora Daniela Marţi <sup>1,2</sup> , Florentina Gabriela Ţapoş <sup>1</sup> , Gabriel Alin Mihu <sup>1</sup> .....	58

<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> Emergency Arad County Hospital .....	58
<b>Polymeric micelles as promising nanocarriers for tumor-targeted drug delivery</b> .....	59
Herman Hildegard <sup>1</sup> , Leonard Atanase <sup>2</sup> , Anca Hermenean <sup>1</sup> .....	59
<sup>1</sup> “Aurel Ardelean” Institute of Life Sciences, Vasile Goldis Western University of Arad, <sup>2</sup> Faculty of Medical Dentistry, Apollonia University of Iasi.....	59
<b>Considerations regarding the "Cantemir and Irina-Ioana Riscutia" Collection Fund, a projection of the past towards the future</b> .....	60
Corina Daniela Franduş .....	60
„Vasile Goldis” Western University of Arad.....	60
<b>Changes in tight-junctions of the neurovascular unit in age-related brain disorders</b> .....	62
Laura Costea, Adriana Radu, George Pribac.....	62
„Vasile Goldis” Western University of Arad.....	62
<b>Cichorium intybus local populations biodiversity screening and their importance in diet</b> .....	63
Mihali Ciprian Valentin, Neciu Florin, Saplacan Gheorghe, Dragomir Neculai, Mathe Endre, Neamţ Radu Ionel, Mizeranschi Alexandru Eugeniu, Ilie Daniela Elena .....	63
„Vasile Goldis” Western University of Arad.....	63
<b>SECTION II</b> .....	65
<b>INTERDISCIPLINARITATE ÎN SPECIALITĂȚI MEDICALE</b> .....	65
<b>CROSS-DISCIPLINARITY IN</b> .....	65
<b>CLINICAL MEDICINE</b> .....	65
<b>Modern treatment in polycythemia vera in the Hematology Department of Arad</b> .....	65
Coralia-Adina Cotoraci, Alciona Sasu, Alexandra Nădăban Alexa .....	65
„Vasile Goldis,, Western University of Arad, Faculty of Medicine; Hematology Department, Clinical County Emergency Hospital of Arad .....	65
<b>Evaluation of thrombotic risk and prophylaxis of thrombotic events in pregnant women with thrombophilia</b> .....	66
Coralia-Adina Cotoraci, Alciona Sasu, Alexandra Nădăban Alexa, Daniel Papiu.....	66
„Vasile Goldis,, Western University of Arad, Faculty of Medicine; Hematology Department, Clinical County Emergency Hospital of Arad .....	66
<b>Genetic and epigenetic implications in child asthma-about the length of telomeres</b> .....	67
Simona Dumitra, Viorica Lazăr, Carmen Căndea, Carmen Stănculeţ, Claudia Roman, Adelina Pangratie, Roxana Hreniuc.....	67
„Vasile Goldis” Western University of Arad.....	67
<b>Study of fragility fractures the third age</b> .....	68

Monica Horge .....	68
„Vasile Goldis” Western University of Arad .....	68
<b>Medico-legal aspects of traumatic injuries produced by shooting</b> ...	69
Florin Mihai Șandor, Alexandru Neșiu, Boru-Stănescu Casiana, Cris Precup .....	69
„Vasile Goldis” Western University of Arad .....	69
<b>Particular aspects in the onset of personality disorders. Case presentation</b> .....	70
Robert Almășan.....	70
„Vasile Goldis” Western University of Arad .....	70
<b>Long - Covid 19 syndrome associated with Pneumococcal Meningoencephalitis. Clinical features in a pediatric case</b> .....	72
Lazar Viorica, Dorin Lazar, Crisan Carmen, Stănculeț Carmen, Claudia Roman, Pangratie Adeline, Hreniuc Roxana, Crasoveanu Gabriela, Greta Greco, Daniela Teodora Marti, Simona Dumitra .....	72
„Vasile Goldis” Western University of Arad .....	72
<b>Special occupational medicine problems caused by the pandemic of covid 19</b> .....	73
Narcisa Carmen Mladin, Abhinav Sharma, Monica Cecilia Habuc, Stelian Ioan Morariu .....	73
„Vasile Goldis” Western University of Arad .....	73
<b>Mood disorders in the context of the pandemic</b> .....	74
Maria Cristina Precup, Cris Precup, Florin Mihai Șandor, Butari Denis, Ligia Piroș.....	74
„Vasile Goldis” Western University of Arad .....	74
<b>Dental treatment strategy and bioethics in case of patients with Alzheimer disease</b> .....	75
Maria Cristina Precup, Claudiu Leucuța, Ligia Piroș, Florin Mihai Șandor, Zsolt Gyori, Cris Precup.....	75
„Vasile Goldis” Western University of Arad .....	75
<b>Mechanisms of oxidative stress and maternal-fetal involvement</b> .....	76
Ioana Maria Cioran Sgaverdea Vornic .....	76
Afilon Jompan.....	76
„Vasile Goldis” Western University of Arad .....	76
<b>Pena Shokeir Syndrome</b> .....	78
Rujița Ciurea .....	78
„Vasile Goldis” Western University of Arad .....	78
<b>Acute ischemia of left lower limb and massive pulmonary embolism</b> .....	80
Florica Pop, Monica Puticiu, Alberto Radu Jipa .....	80
„Vasile Goldis” Western University of Arad, Arad County Hospital, Emergency.....	80
<b>Dissecting aneurysm of the abdominal aorta in politrauma</b> .....	82

Florica Pop, Alberto Radu Jipa, Monica Puticiu.....	82
„Vasile Goldis” Western University of Arad, Arad County Hospital, Emergency.....	82
<b>The role of corticosteroid therapy in the asthmatic patient during the Covid pandemic</b> .....	83
Paula Barata, Dana Olar, Gheorghe Nini .....	83
„Vasile Goldis” Western University of Arad.....	83
<b>Case presentation – Acute respiratory failure</b> .....	84
Puticiu Monica Iuliana <sup>1</sup> , Dinu Alexandra Ana <sup>2</sup> , Beuca Mariana <sup>2</sup> , Noghiu Robert Caius <sup>2</sup> , Țapoș Gabriela Florentina <sup>1</sup> .....	84
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> Arad County Clinical Hospital .....	84
<b>Anatomic-physiological and histological aspects of the placenta</b> .....	85
Ioana Maria Cioran Sgaverdea Vornic, Afilon Jompan, Gheorghe Furău, Cristina Pasare, Oana Bisorca, Laurentiu Luca, Noemi Csipkar, Ana Maria Ardelean.....	85
„Vasile Goldis” Western University of Arad.....	85
<b>Type 1 Diabetes insulin dependent and COVID 19</b> .....	88
Elena Claudia Roman, Viorica Lazăr, Carmen Stănculeț, Carmen Cindea, Adeline Larisa Pangratie, Roxana Hreniuc, Simona Dumitra .....	88
„Vasile Goldis” Western University of Arad.....	88
<b>Meningitis TB</b> .....	89
Carmen Stanculeț, Claudia Roman, Viorica Lazar, Carmen Cindea, Adelina Pangratie, Roxana Hreniuc, Simona Dumitra.....	89
„Vasile Goldis” Western University of Arad.....	89
<b>Correlations for diabetic and dermatologic patients- a 5 year retrospective study of patients admitted in Arad’s County</b> .....	91
Roxana Furău, Denisa Todor, Cristian Furău .....	91
„Vasile Goldis” Western University of Arad.....	91
<b>Diabetes mellitus and dermatological lesions association's impact on quality of life</b> .....	92
Roxana Furău, Denisa Todor, Cristian Furău .....	92
„Vasile Goldis” Western University of Arad.....	92
<b>Arad’s Maternal and Infant Care Project for communities in poverty in Arad County</b> .....	93
Cristian Furău <sup>1</sup> , Ioana Vornic <sup>1</sup> , Oana Todut <sup>2</sup> , Cristina Pasare <sup>2</sup> , Loredana Roșu <sup>1</sup> , Casiana Boru <sup>1</sup> , laurențiu Luca <sup>2</sup> , Gheorghe Furău <sup>1</sup> .....	93
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> Emergency Clinical County Hospital of Arad- Ob-Gyn Department .....	93
<b>Dermatological manifestations of pediatric multisystem inflammatory syndrome associated with COVID-19</b> .....	94
Ozden Turel.....	94
Bezmialem Vakif University Hospital.....	94

<b>Genetic testing in oncology - when and how!</b> .....	95
Cristina Popescu, Valerica Belengeanu .....	95
„Vasile Goldis” Western University of Arad .....	95
<b>New aspects in asthma – GINA 2021 GUIDE (GLOBAL INITIATIVE FOR ASTHMA)</b> .....	96
Larisa Alexandra Rus, Camelia Ciacli .....	96
„Vasile Goldis” Western University of Arad .....	96
<b>Diagnosis and treatment challenges in angioedema</b> .....	97
Camelia Anișoara Ciacli, Elena Lucchesini .....	97
„Vasile Goldis” Western University of Arad .....	97
<b>Myocarditis associated with SARS COV2 infection- Clinical case presentation</b> .....	98
Vîlcea Anamaria, Borta Simona Maria, Pușchița Maria .....	98
„Vasile Goldis” Western University of Arad .....	98
<b>Superior digestive haemorrhage in patients treated with anti-inflammatory, anticoagulant and antiplatelet agents</b> .....	99
Iulia Cristina Gazak, Eftimie Miușescu.....	99
„Vasile Goldis” Western University of Arad .....	99
<b>New treatment trends and antibiotic resistance in Helicobacter Pylori infection</b> .....	101
Claudiu Gheorghe Pantea, Eftimie Miușescu .....	101
„Vasile Goldis” Western University of Arad .....	101
<b>Ventilatory support at COVID_19 patients</b> .....	102
Radu Tulbure <sup>1</sup> , Olariu Teodora <sup>2</sup> , Nicolescu Amalia <sup>2</sup> , Olariu Iustin <sup>2</sup> .....	102
<sup>1</sup> Emergency Clinical County Hospital of Arad, <sup>2</sup> „Vasile Goldis” Western University of Arad .....	102
<b>Multidisciplinary approach of a patient diagnosed with SARS-COV-2 infection – Case presentation</b> .....	103
Tulbure Radu <sup>1</sup> , Olariu Teodora <sup>2</sup> , Nicolescu Amalia <sup>2</sup> , Subas Alexandra <sup>1</sup> , Olariu Iustin <sup>2</sup> .....	103
<sup>1</sup> Emergency Clinical County Hospital of Arad, <sup>2</sup> „Vasile Goldis” Western University of Arad .....	103
<b>Schizophrenia. Case presentation</b> .....	104
Mariș Mariana, Ligia Piroș, Robert Almășan, Alexandra Cozac.....	104
„Vasile Goldis” Western University of Arad .....	104
<b>Treatment with convalescent plasma in SARS CoV-2 infection</b> .....	105
Nicolescu Amalia <sup>1</sup> , Olariu Teodora <sup>1</sup> , Tulbure Radu <sup>2</sup> , Olariu Iustin <sup>1</sup> , Lazar Viorica <sup>1</sup> .....	105
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> Emergency Clinical County Hospital of Arad .....	105
<b>The plasmapheresis treatment in case of Guillain-Barre syndrome - clinical experience of an ICU ward</b> .....	106
Cristian Nicolescu.....	106

„Vasile Goldis” Western University of Arad.....	106
<b>The new approaches in the rehabilitation in case of polinevritis or poliradiculopathy .....</b>	<b>107</b>
Laura Nicolescu.....	107
„Vasile Goldis” Western University of Arad.....	107
<b>The use of Artificial Intelligence technologies in healthcare .....</b>	<b>108</b>
Igor Vikhrov.....	108
Tashkent Pediatric Medical Institute.....	108
<b>Early rehabilitation of patients with COVID-19 infections .....</b>	<b>110</b>
Davron Muminov .....	110
Tashkent Pediatric Medical Institute .....	110
<b>Technological innovations in digestive endoscopy for our .....</b>	<b>112</b>
<b>patients - Video Capsule Endoscopy – interdisciplinary approach</b>	<b>112</b>
Amelia Uzum, Oana Koppandi, Eftimie Miușescu, Dana Iovănescu, Bogdan Totolici, Carmen Neamțu, Oana Maria Jigău, Sebastian Victor Grada, Andreea Iulia Papoi, Mădălina Blaj, Marius Belean, Florinel Cozma.....	112
„Vasile Goldis” Western University of Arad.....	112
<b>SECTION III .....</b>	<b>113</b>
<b>INTERDISCIPLINARITATE ÎN CHIRURGIE.....</b>	<b>113</b>
<b>CROSS-DISCIPLINARITY IN SURGERY .....</b>	<b>113</b>
<b>Targeted therapy for advanced renal cell carcinoma .....</b>	<b>113</b>
Alexandru Neșiu, Cris Virgiliu Precup, Casiana Boru-Stănescu, Mihai Florin Șandor .....	113
„Vasile Goldis” Western University of Arad.....	113
<b>Rare causes of bleeding in the first trimester of pregnancy- Case report of a Chorionic bump.....</b>	<b>115</b>
Dieter Krutsch <sup>1</sup> , Adrian Popa <sup>1</sup> , Gheorghe Furău <sup>2</sup> , Cristina Onel <sup>2</sup> , Bianca Panda <sup>1</sup> , Casiana Boru <sup>2</sup> , Ioana Vornic <sup>2</sup> , Cristian Furău <sup>2</sup> .....	115
<sup>1</sup> Emergency Clinical County Hospital of Arad-Ob-Gyn Department, <sup>2</sup> „Vasile Goldis” Western University of Arad .....	115
<b>Irreversible contraception- an overview over the desire for tubal ligation during cesarean .....</b>	<b>116</b>
Cristian Furău <sup>1</sup> , Cristina Onel <sup>1</sup> , Oana Todut <sup>2</sup> , Roxana Furău <sup>1</sup> , Ionel Nati <sup>3</sup> , Loredana Roșu <sup>1</sup> , Ioana Vornic <sup>1</sup> , Gheorghe Furău <sup>1</sup> .....	116
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> Emergency Clinical County Hospital of Arad, <sup>3</sup> Obstetrics and Gynecology Clinic I Cluj Napoca .....	116
<b>Cesarean section on request- a myth or just reality.....</b>	<b>117</b>
Cristian Furău <sup>1</sup> , Ionel Nati <sup>2</sup> , Oana Todut <sup>3</sup> , Ioana Vornic <sup>1</sup> , Casiana Boru <sup>1</sup> , Laurentiu Luca <sup>1</sup> , Cristina Pasăre <sup>3</sup> , Gheorghe Furău <sup>1</sup> .....	117
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> Obstetrics and Gynecology Clinic I Cluj Napoca, <sup>3</sup> Emergency Clinical County Hospital of Arad .....	117
<b>About surgical management in FOURNIER`S gangrene .....</b>	<b>118</b>

Horăţiu Sabin Papiu, Gigi Aiordăchioae, Andrei Korodi, Teodora Olariu, Daniela Moţ.....	118
<i>"Vasile Goldiş" Western University of Arad</i> .....	118
<b>Our experience in management of the periprosthetic femoral fractures</b> .....	119
Dan Fruja, Roland Fazakas, Paul Deme, Tamas Kovacs, Sergiu Tugui ....	119
<i>"Vasile Goldiş" Western University of Arad</i> .....	119
<b>Diabetes mellitus associated with pregnancy: management and complications</b> .....	120
Gheorghe Furău, Dora Adriana Igna, Anamaria Ardelean, Casiana Boru, Angelica Filimon, Cristina Onel, Dorina Burdan, Ana-Liana Bouroş-Tătaru .....	120
<i>"Vasile Goldiş" Western University of Arad</i> .....	120
<b>The management of preterm birth in Arad County</b> .....	121
Ana-Liana Bouroş-Tătaru, Radu Nicolae Ceapă, Anamaria Ardelean, Casiana Boru, Angelica Filimon, Dorina Burdan, Ioana Vornic, Gheorghe Furău.....	121
<i>"Vasile Goldiş" Western University of Arad</i> .....	121
<b>Management of genital prolapse in Arad County</b> .....	122
Ana-Liana Bouroş-Tătaru <sup>1</sup> , Dragoş Florescu <sup>2</sup> , Anamaria Ardelean <sup>1</sup> , Loredana Roşu <sup>1</sup> , Cerasela Buzatu <sup>1</sup> , Casiana Boru <sup>1</sup> , Marius Furău <sup>1</sup> , Gheorghe Furău <sup>1</sup> .....	122
<i><sup>1</sup>"Vasile Goldiş" Western University of Arad, <sup>2</sup>Cluj Napoca Rehabilitation Hospital</i> .....	122
<b>Menopause and management of menopausal-induced pathologies</b> .....	123
Anamaria Ardelean, Jompan Afilon, Gheorghe Furău, Casiana Boru, Loredana Roşu, Marius Furău, Ana-Liana Bouroş Tătaru.....	123
<i>"Vasile Goldiş" Western University of Arad</i> .....	123
<b>Quercetin Impact on Colorectal Cancer</b> .....	124
Bogdan Dan Totolici <sup>1</sup> , Carmen Neamţu <sup>1</sup> , Amina Alaya <sup>2</sup> , Eموke Mihok <sup>2</sup> , Teodor Andrei Maghiar <sup>3</sup> , Andreea Adriana Neamţu <sup>3</sup> , Endre Mathe <sup>1</sup> .....	124
<i><sup>1</sup>"Vasile Goldiş" Western University of Arad, <sup>2</sup>University of Debrecen (Hungary), <sup>3</sup>University of Oradea (Romania)</i> .....	124
<b>Management of olecranon fractures</b> .....	125
Roland Fazakas, Dan Fruja, Graţian Damian .....	125
<i>"Vasile Goldiş" Western University of Arad</i> .....	125
<b>Therapy and care of the terminally ill critical patient with Covid 19</b> .....	126
Teodora Olariu <sup>1</sup> , Iustin Olariu <sup>1</sup> , Amalia Niculescu <sup>1</sup> , Horăţiu Papiu <sup>1</sup> , Victor Toma <sup>2</sup> , Ioana Toma <sup>3</sup> , Radu Tulbure, Mirela Bălan <sup>4</sup> .....	126

<i>1"Vasile Goldiș" Western University of Arad, 2 Emergency Clinical County Hospital of Arad, 3 Victor Babes University of Timisoara, 4 The Order of the Nurses from Arad</i> .....	126
<b>SECTION IV</b> .....	<b>127</b>
<b>PREZENT ȘI VIITOR ÎN STOMATOLOGIE</b> .....	<b>127</b>
<b>PRESENT AND FUTURE IN DENTISTRY</b> .....	<b>127</b>
<b>Conditioning of the gingival groove, source of errors and constraints in the fixed prosthesis</b> .....	127
Valeria Covrig, Teodora Eva Lucaciu Lupulescu, Otilia Stana, Adelina Berari.....	127
<i>„Vasile Goldiș" Western University of Arad</i> .....	127
<b>Method of simultaneous imprinting of the entire prosthetic field for fixed prosthesis</b> .....	128
Valeria Covrig, Teodora Eva Lucaciu Lupulescu, Otilia Stana, Diana Marian .....	128
<i>„Vasile Goldiș" Western University of Arad</i> .....	128
<b>Combining chlorhexidine with fluoride - a stronger weapon in the fight against gingivitis and carious lesions</b> .....	129
Teodora Eva Lucaciu Lupulescu, Valeria Covrig, Călin Mancaș, Adelina Berari, Diana Marian, Radu Elisei.....	129
<i>„Vasile Goldiș" Western University of Arad</i> .....	129
<b>Protection of the patient's psyche in dental therapy</b> .....	130
Teodora Eva Lucaciu Lupulescu, Valeria Covrig, Otilia Stana, Mihaela Adomnicăi, Gabriela Elisei.....	130
<i>„Vasile Goldiș" Western University of Arad</i> .....	130
<b>Bioactive materials in endodontics</b> .....	131
Diana Marian, Andreea Boboc-Gusman, Andreia-Amalia Dabuleanu, Oana Suiu, Diana Stefanescu.....	131
<i>„Vasile Goldiș" Western University of Arad</i> .....	131
<b>Periodontal disease. Systemic factors</b> .....	133
Ioana Ilyes, Tiberiu Hosszu, Paul Freiman, Ion Corlan, Ioana Lile, Roxana Radu, Otilia Stana, Diana Marian .....	133
<i>„Vasile Goldiș" Western University of Arad</i> .....	133
<b>Initial Periodontal Therapy in Patients with Periodontitis</b> .....	134
Ioana Ilyes, Paul Freiman, Tiberiu Hosszu, Ion Corlan, Ioana Lile, Roxana Radu, Teodora Lupulescu, Mihaela Adomnicai .....	134
<i>„Vasile Goldiș" Western University of Arad</i> .....	134
<b>Teeth whitening, esthetic aspects</b> .....	135
Adelina Berari, Ioana Lile, Diana Marian, Paul Freiman, Tiberiu Hosszu, Gabriela Elisei, Carolina Cojocariu Hoge, Radu Elisei.....	135
<i>„Vasile Goldiș" Western University of Arad</i> .....	135
<b>Resolution of the estetic function through by making ceramic crowns</b> .....	136

Adelina Berari, Ioana Lile, Diana Marian, Ciprian Pașca, Tiberiu Hosszu, Gabriela Elisei, Carolina Cojocariu Hoge, Radu Elisei.....	136
„ <i>Vasile Goldis</i> ” Western University of Arad .....	136
<b>ART techniques for restoring temporary teeth without rotary instrumentation.....</b>	<b>137</b>
Tamara Gorcea, Alida Marcovici, Diana Marian .....	137
„ <i>Vasile Goldis</i> ” Western University of Arad .....	137
<b>Prosthetic therapeutic solutions in case of deciduous dentition....</b>	<b>139</b>
Tiberiu Hosszu, Ioana Lile, Paul Freiman, Diana Marian, Ioana Ilyes, Adelina Berari, Carolina Cojocariu Hoge, Catalena Szekeres.....	139
„ <i>Vasile Goldis</i> ” Western University of Arad .....	139
<b>Orthodontic-prosthetic and implantological treatment in case of frontal tooth anodontia .....</b>	<b>140</b>
Tiberiu Hosszu, Paul Freiman, Ioana Lile, Diana Marian, Teodora Lucaciu Lupulescu, Otilia Stana, Gabriela Elisei, Radu Elise.....	140
„ <i>Vasile Goldis</i> ” Western University of Arad .....	140
<b>Late eruption of immature permanent teeth, etiology and therapeutic solutions .....</b>	<b>141</b>
Tiberiu Hosszu, Ioana Lile, Paul Freiman, Mihaela Adomnicai, Liviu Gavrilă-Ardelean, Ciprian Pașca, Otilia Stana, Iustin Olariu .....	141
„ <i>Vasile Goldis</i> ” Western University of Arad .....	141
<b>Modern edodontic instrumentation using the Trunatomy System .....</b>	<b>142</b>
Alida Marcovici, Tamara Marcovici, Diana Marian .....	142
„ <i>Vasile Goldis</i> ” Western University of Arad .....	142
<b>The role of plasmapheresis in Guillan-Bare syndrome -clinical experience of an ICU ward.....</b>	<b>144</b>
Cristian Nicolescu.....	144
„ <i>Vasile Goldis</i> ” Western University of Arad .....	144
<b>Clinical- therapeutic aspects of cleft lip and palate.....</b>	<b>145</b>
Carolina Cojocariu Hoge, Tiberiu Hosszu, Paul Freiman, Ioana Lile, Szekeres Catalena, Adelina Berari, Ion Corlan, Gaby Elisei.....	145
„ <i>Vasile Goldis</i> ” Western University of Arad .....	145
<b>Inclusion of maxillary canines .....</b>	<b>146</b>
Carolina Cojocariu Hoge, Paul Freiman, Tiberiu Hosszu, Ioana Lile, Catalena Szekeres, Adelina Berari, Ion Corlan, Diana Marian.....	146
„ <i>Vasile Goldis</i> ” Western University of Arad .....	146
<b>Mobile prostheses adapting process.....</b>	<b>147</b>
Liviu Gavrilă-Ardelean, Otilia Stana, Adelina Berari, Iustin Olariu, Gabriela Elisei, Teodora Lupulescu-Lucaciu, Tiberiu Hosszu .....	147
„ <i>Vasile Goldis</i> ” Western University of Arad .....	147
<b>Refitting complete denture .....</b>	<b>148</b>
Liviu Gavrilă-Ardelean, Tiberiu Hosszu, Otilia Stana, Iustin Olariu, Gabriela Elisei, Teodora Lupulescu-Lucaciu, Adelina Berari .....	148

„ <i>Vasile Goldis</i> ” <i>Western University of Arad</i> .....	148
<b>Dental veneers</b> .....	149
Stana Otilia Lavinia, Stana Ademir Horia, Radu Roxana, Hosszu Tiberiu..	149
„ <i>Vasile Goldis</i> ” <i>Western University of Arad</i> .....	149
<b>Dental Implants</b> .....	150
Stana Otilia Lavinia, Stana Ademir Horia, Lile Ioana, Hosszu Tiberiu.....	150
„ <i>Vasile Goldis</i> ” <i>Western University of Arad</i> .....	150
<b>The importance of tooth loss</b> .....	151
Otilia Lavinia Stana, Ademir Horia Stana, Ioana Elena Lile, Valeria Covrig, Teodora Eva Lucaciu-Lupulescu .....	151
„ <i>Vasile Goldis</i> ” <i>Western University of Arad</i> .....	151
<b>Principles of dental preparation in prosthetics</b> .....	152
Otilia Lavinia Stana, Ademir Horia Stana, Paul Freiman, Valeria Covrig, Teodora Eva Lucaciu-Lupulescu .....	152
„ <i>Vasile Goldis</i> ” <i>Western University of Arad</i> .....	152
<b>Reconstruction of Atrophic Maxilla with Zygomatic Implants</b> .....	153
Emrah Soylu .....	153
<i>Erciyes University Faculty of Dentistry</i> .....	153
<b>Cariology Concepts : A Trip Through Time</b> .....	154
Hamdi Hamama.....	154
<i>Faculty of Dentistry, Mansoura University</i> .....	154
<b>Characterization of Healthy and Tumor Oral Cell Lines of Human Origin -The preliminary stage in the assessment of relevant chemical compounds</b> .....	155
Ion Virgil Corlan.....	155
„ <i>Vasile Goldis</i> ” <i>Western University of Arad</i> .....	155
<b>The Influence of Some Synthesis Compounds on Healthy and Tumoral Oral Cell Lines :PGK, HGF and SCC4</b> .....	156
Ion Virgil Corlan.....	156
„ <i>Vasile Goldis</i> ” <i>Western University of Arad</i> .....	156
<b>Changes in global DNA methylation and hydroxymethylation in oral mucosa according to tobacco smoke exposure</b> .....	157
Gabriela Avram <sup>1</sup> , Anca Marcu <sup>2</sup> , Alexandra Moatar <sup>2</sup> , Corina Samoila <sup>2</sup> , Angela Podariu <sup>2</sup> , Edward Seclaman <sup>2</sup> , Catalin Marian <sup>2</sup> .....	157
<sup>1</sup> „ <i>Vasile Goldis</i> ” <i>Western University of Arad</i> , <sup>2</sup> ” <i>Victor Babes</i> ” <i>University of Medicine and Pharmacy Timisoara</i> .....	157
<b>Submaxilectomy</b> .....	158
Radu Elisei, Gabriela Elisei, Elisabeta Vasca, Gabriela Avram, Ioana Lile, Roxana Radu, Tiberiu Hosszu, Teodora Lupulescu.....	158
„ <i>Vasile Goldis</i> ” <i>Western University of Arad</i> .....	158
<b>The proportion of gold in dentistry</b> .....	159
Gabriela Elisei, Radu Elisei, Berari Adelina, Ioana Lile, Tiberiu Hosszu, Carolina Cojocariu Hoge, Teodora Lupulescu, Iustin Olaru.....	159

„Vasile Goldis” Western University of Arad .....	159
<b>Oro-sinus communication</b> .....	160
Radu Elisei, Teodora Lupulescu, Elisabeta Vasca, Iustin Olariu, Roxana Radu, Gabriela Avram, Ioana Lile, Gabriela Elisei .....	160
„Vasile Goldis” Western University of Arad .....	160
<b>Dentistry aesthetics of composite resin restorations</b> .....	161
Gabriela Elisei, Radu Elisei, Berari Adelina, Ioana Lile, Tiberiu Hosszu, Carolina Cojocariu Hogeia, Mihaela Adomnicai, Liviu Gavrilă Ardelean ...	161
„Vasile Goldis” Western University of Arad .....	161
<b>Algorithm of therapy in dental emergencies</b> .....	162
Iustin Olariu <sup>1</sup> , Teodora Olariu <sup>1</sup> , Ramona Amina Popovici <sup>2</sup> , Victor Toma <sup>3</sup> , Ioana Ruxanda Toma <sup>4</sup> , Elisabeta Vasca <sup>1</sup> , Renate Liane Bran <sup>5</sup> , Horațiu Papiu <sup>1</sup> .....	162
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> Victor Babes University of Timisoara, <sup>3</sup> Hospital of Arad, <sup>4</sup> Timisoara Municipal Hospital, <sup>5</sup> Postliceal School of Arad .....	162
<b>Evaluation of dental status in dental students</b> .....	163
Simona Leu, Loredana Lazar, Eleny Antulatos, Diana Marian, .....	163
„Vasile Goldis” Western University of Arad .....	163
<b>Depression and periodontal disease</b> .....	165
Diana Bandac, Larisa Suci, Paul Freiman, Tiberiu Hosszu, Ioana Duma .....	165
„Vasile Goldis” Western University of Arad .....	165
<b>Digital smile design. The key to predictability in esthetic cases</b> .....	167
Bogdan Faur, Adelina Berari, Elisabeta Vasca, Gabriela Elisei, Radu Elisei .....	167
„Vasile Goldis” Western University of Arad .....	167
<b>Oral rehabilitation using prosthesis with special attachments</b> .....	169
Victor Moraru, Bogdan Faur, Mihaela Velicovici, Ioana Lile, Adelina Berari .....	169
„Vasile Goldis” Western University of Arad .....	169
<b>Endodontic preparation using ProTaper Ultimate system</b> .....	171
Diana Marian, Mihaela Velicovici, Gabriela Elisei, Mihaela Adomnicăi, Elisabeta Vasca, Adelina Berari.....	171
„Vasile Goldis” Western University of Arad .....	171
<b>Modern methods of preparation and finishing of prosthetic abutments</b> .....	173
Catalina Banciu, Loredana Lazar, Ioana Duma, Georgiana Barbatei, Zsolt Covaci .....	173
„Vasile Goldis” Western University of Arad .....	173
<b>Frontal oral rehabilitation- clinical case</b> .....	175
Simona Leu, Loredana Lazar, Eleny Antulos, Alexandru Ciurea .....	175
„Vasile Goldis” Western University of Arad .....	175

<b>Oral disorders that direct the patient to the geneticist</b> .....	177
Belengeanu Valerica, Diana Marian, Teodora Lucaciu Lupulescu, Gabriela Avram.....	177
„Vasile Goldis” Western University of Arad.....	177
<b>Update on the techniques for approaching post-extraction oro-sinus communications</b> .....	179
Elisabeta Vasca <sup>1</sup> Diana Marian <sup>1</sup> Elisei Radu <sup>1</sup> Virgil Vasca <sup>1</sup> , Olariu Iustin <sup>1</sup> Adalia Foldes <sup>2</sup> .....	179
<sup>1</sup> Faculty of Dental Medicine „Vasile Goldis” Western University of Arad,	
<sup>2</sup> Clinica Dunca Baia Mare .....	179
<b>Clinical-statistical study in osseointegration of implants in elderly patients</b> .....	181
Elisabeta Vasca <sup>1</sup> Diana Marian <sup>1</sup> Elisei Radu <sup>1</sup> Raluca-Iuliana Munteanu <sup>3</sup> , Olariu Iustin <sup>1</sup> Adalia Foldes <sup>2</sup> .....	181
<sup>1</sup> Faculty of Dental Medicine, ”Vasile Goldis” Western University of Arad, Romania, <sup>2</sup> Clinica Dunca Baia Mare, <sup>3</sup> Hyperclinica Genesys MedLife.....	181
<b>SECTION V</b> .....	<b>183</b>
<b>MEDICAMENTELE MODERNE – DE LA NATURĂ LA BIOTEHNOLOGIILE MODERNE</b> .....	<b>183</b>
<b>MODERNE</b> .....	<b>183</b>
<b>MODERN MEDICINES – FROM NATURE TO MODERN BIOTECHNOLOGIES</b> .....	<b>183</b>
<b>Natural bioactive compounds useful in the fight against antibiotics multi-resistance</b> .....	183
Neli-Kinga Olah, Elisabeta Chișe, Adriana Dărăban, Viviane-Beatrice Bota, Endre Mathe, Violeta Turcuș.....	183
„Vasile Goldis” Western University of Arad.....	183
<b>Natural bioactive compounds with potential protective effect on human DNA</b> .....	185
Elisabeta Chișe, Neli-Kinga Olah, Adriana Dărăban, Viviane-Beatrice Bota, Endre Mathe, Violeta Turcuș.....	185
„Vasile Goldis” Western University of Arad.....	185
<b>Research regarding the Silver nanoparticle applicability</b> .....	186
Svetlana Trifunșchi <sup>1</sup> , Melania Florina Munteanu <sup>1</sup> , Elena Narcisa .....	186
Pogurschi <sup>2</sup> .....	186
<sup>1</sup> „Vasile Goldis” Western University of Arad, Faculty of Pharma , <sup>2</sup> University of Agronomic Sciences and Veterinary Medicine of Bucharest .....	186
<b>Potential increasing of immunity by using vegetal products rich in vitamin D</b> .....	187
Claudia Crina Toma.....	187
„Vasile Goldis” Western University of Arad.....	187
<b>The role of the pharmacist in oncology</b> .....	188
Luana Florina Drăghiță, Liliana Bartok Popa, Claudia Crina Toma .....	188

„Vasile Goldis” Western University of Arad .....	188
<b>Safety of Dabigatran versus Acenocoumarol in Older Patients with High Risk for Thromboembolism</b> .....	189
Simona Conea <sup>1</sup> , Călin Pop <sup>2,1</sup> , Sorana Bolboacă <sup>3</sup> , Cristina Mogoșan <sup>3</sup> , Tudor Călinici <sup>3</sup> .....	189
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> County Hospital, Baia Mare, <sup>3</sup> “Iuliu Hațieganu” University of Medicine and Pharmacy, Cluj.....	189
<b>Tridimensional hydroxyapatite structures for drug delivery applications</b> .....	190
Alexandra Ioana Bucur, Bogdan Ovidiu Taranu, Mihai-Cosmin Pascariu, Cristina Mosoarca, Raul Alin Bucur, Corina Orha, Radu Banica.....	190
<i>INCEMC Timisoara, Romania</i> .....	190
<b>Increasing the reproducibility of flash-type luminescence ATP determination</b> .....	191
Alexandra Ioana Bucur <sup>1</sup> , Mihai Cosmin Pascariu <sup>2</sup> , Cristina Mosoarca <sup>1</sup> , Ioana Ramona Ciopănoiu <sup>2</sup> , Raul Alin Bucur <sup>1</sup> , Radu Banica <sup>1</sup> .....	191
<sup>1</sup> <i>INCEMC Timisoara, Romania</i> , <sup>2</sup> „Vasile Goldis” Western University of Arad .....	191
<b>Analysis of salicin in some willow bark food supplements</b> .....	192
Lădașiu Călin. Alina Cata, Mariana Stefanut, Ioana Ienascu .....	192
<i>INCEMC Timisoara</i> .....	192
<b>Biological properties of some Romanian Brassicaceae Extracts</b> .....	193
Ioana M.C.Ienașcu <sup>1</sup> , Mariana N Ștefănuț <sup>2</sup> , Adina Căta <sup>2</sup> , Delia Muntean <sup>3</sup> , Valentina Buda <sup>3</sup> , Corina Danciu <sup>3</sup> , Monica Licker <sup>3</sup> , Raluca Pop <sup>3</sup> .....	193
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> <i>INCEMC Timisoara</i> , <sup>3</sup> <i>University of Medicine and Pharmacy “Victor Babes” Timișoara</i> .....	193
<b>Vitamins in Self-Medication</b> .....	194
Adriana Dărăban <sup>1</sup> , Aurelia Hulbăr <sup>1</sup> , Ioana Ramona Ciopănoiu <sup>1</sup> , Elisabeta Chișe <sup>1</sup> , Ruxandra Tarcevschii <sup>2</sup> , Elena Moroșan <sup>3</sup> .....	194
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> <i>KRKA</i> , <sup>3</sup> <i>Carol Davila University of Medicine and Pharmacy, Bucharest</i> .....	194
<b>Polysaccharides modified at the reducing end: synthesis and characterization</b> .....	196
Carolina Cojocariu Hoge <sup>1</sup> , Alina Serb <sup>2</sup> , Ramona Novaconi <sup>2</sup> , Marius Georgescu <sup>2</sup> , Eugen Sisu <sup>2</sup> , Nicolae Dinca <sup>3</sup> , Flaviu-Calin Lădașiu-Ciolacu <sup>4</sup> , Mihai Cosmin Pascariu <sup>1,4</sup> .....	196
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> “Victor Babes” University of Medicine and Pharmacy Timisoara, <sup>3</sup> “Aurel Vlaicu” University of Arad, <sup>4</sup> <i>INCEMC Timisoara</i> .....	196
<b>SECTION VI</b> .....	197
<b>NOI TENDINȚE SI EVOLUȚII ALE ECONOMIEI MONDIALE</b> .....	197
<b>NEW TRENDS AND EVOLUTIONS OF THE WORLD ECONOMICS</b> .....	197

<b>Empirical study on economic efficiency and managerial performance in EU companies operating in the plastics industry</b>	197
Delia David, Ștefania Amalia Nicoară	197
„Vasile Goldis” Western University of Arad	197
<b>Does financial development, globalisation and institutional quality drive the income convergence in the Central and Eastern European Union Countries</b>	198
Olimpia Neagu <sup>1</sup> , Teodora Porumbăcean <sup>2</sup> , Andrei Marius Anghelina <sup>1</sup>	198
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> Babeș-Bolyai University of Cluj-Napoca	198
<b>The impact of automation on the US labor market</b>	199
Doru-Puiu Ioan Ardelean <sup>1</sup> , Arpad Kerti <sup>2</sup> , Vasile Lucian Lazăr <sup>1</sup>	199
<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> Freie Universität Berlin	199
<b>The value of money in time</b>	200
Vasile Mare	200
„Vasile Goldis” Western University of Arad	200
<b>The evolution of railway transport infrastructure in Romania after 1990</b>	201
Andrei Anghelina, Olimpia Neagu, Alexandru Claudiu Haiduc, Stefania Nicoara	201
„Vasile Goldis” Western University of Arad	201
<b>On the stability of the semilinear equations</b>	202
Magnolia Tilca	202
„Vasile Goldis” Western University of Arad	202
<b>Considerations regarding the change of the population consumption structure during the pandemic (analysis 2016-2021)</b>	203
Mircea Constantin Teodoru	203
„Vasile Goldis” Western University of Arad	203
<b>Principles for determining the level of the nominal salary. Inequalities between the public and private sectors in Romania</b>	204
Anamaria Tohătan	204
„Vasile Goldis” Western University of Arad	204
<b>Jordan economy: development, challenges and opportunities</b>	205
Hamad Kasasbeh	205
Alzaytooneh University of Jordan	205
<b>Performance during crisis in Eurozone versus Non-Euro countries</b>	206
Lavinia Mustea	206
West University of Timișoara	206
<b>Challenges for the Accounting Profession in the New Technologies Times</b>	207
Ciprian Dan Costea	207
„Vasile Goldis” Western University of Arad	207

<b>E-commerce trends in Romania in the context of the COVID-19 pandemics</b> .....	208
Tania A.Lazăr <sup>1</sup> , Vasile L.Lazăr <sup>2</sup> .....	208
<i><sup>1</sup> Technical University of Cluj-Napoca, <sup>2</sup>„Vasile Goldis” Western University of Arad</i> .....	208
<b>Influence of the Supreme Audit Institution on the performance of the management of resources</b> .....	209
Nicolae Paul Virag .....	209
<i>„Vasile Goldis” Western University of Arad</i> .....	209
<b>Learning from Chinese Management</b> .....	210
Eugen Florin Remeș <sup>1</sup> , Florin Lucian Isac <sup>2</sup> .....	210
<i><sup>1</sup>„Vasile Goldis” Western University of Arad, <sup>2</sup>„Aurel Vlaicu” University of Arad, Romania</i> .....	210
<b>SECTION VII</b> .....	<b>211</b>
<b>NOI TENDINȚE ÎN SILVICULTURĂ, AGROTURISM, GEOGRAFIE ȘI INFORMATICĂ</b> .....	<b>211</b>
<b>NEW TRENDS IN FORESTRY, AGRITOURISM, GEOGRAPHY AND COMPUTER SCIENCE</b> .....	<b>211</b>
<b>Methods for seedbed preparation in forestry nurseries</b> .....	211
Nicușor Boja, Petru Darău, Florin Boja, Corneliu Maior, Vidrean Dan ...	211
<i>„Vasile Goldis” Western University of Arad</i> .....	211
<b>Antonio Mocioni de Foeni a predecessor of sustainable hunting management</b> .....	213
Corneliu Maior, Petru Darău, Florin Boja, Mihai Brad, Nicușor Boja .....	213
<i>„Vasile Goldis” Western University of Arad</i> .....	213
<b>Adventive woody plants in the flora of Arad County</b> .....	214
Ioan Don, Cornelia Doinița Don, Dan Vidrean .....	214
<i>„Vasile Goldis” Western University of Arad</i> .....	214
<b>Cyber Security Awareness</b> .....	215
Alin Titus Pîrcălab.....	215
<i>„Vasile Goldis” Western University of Arad</i> .....	215
<b>Asseing the tourist potential of Arad county</b> .....	216
Patricia Dorli Dumescu <sup>1</sup> , Dana Monica Dănoiu <sup>2</sup> , Florin Dumescu <sup>3</sup> , .....	216
<i><sup>1</sup>”Victor Babes” University Of Medicine And Pharmacy Timișoara, <sup>2</sup>Agency For Environmental Protection Arad, <sup>3</sup>„Vasile Goldis” Western University of Arad</i> .....	216
<b>Jordan from Sky</b> .....	217
Ali Al Dahoud.....	217
<i>Al Zaytoonah University of Jordan</i> .....	217
<b>Aspects regarding some Dynamical Systems</b> .....	218
Ciobanu Monica, Obădeanu Virgil.....	218
<i>„Vasile Goldis” Western University of Arad</i> .....	218
<b>SECTION VIII</b> .....	<b>219</b>

<b>NOI TENDINȚE ÎN DREPTUL CIVIL ȘI PENAL EUROPEAN.....</b>	<b>219</b>
<b>NEW TRENDS IN EUROPEAN CIVIL AND EUROPEAN CRIMINAL</b>	
<b>LAW.....</b>	<b>219</b>
<b>Reinventing Terror Online .....</b>	<b>219</b>
Alin Titus Pîrcălab, .....	219
„Vasile Goldis” Western University of Arad.....	219
<b>The supreme financial control exercised by the Romanian Court of</b>	
<b>Accounts .....</b>	<b>220</b>
Gheorghe Stîngu .....	220
„Vasile Goldis” Western University of Arad.....	220
<b>The administrative contentious in the light of the new New</b>	
<b>Administrative Code .....</b>	<b>221</b>
Paul Valentin Neamț.....	221
„Vasile Goldis” Western University of Arad.....	221
<b>Children's rights - an integral part of the human rights system .....</b>	<b>222</b>
Anca Florina Moroșteș .....	222
„Vasile Goldis” Western University of Arad.....	222
<b>Application of certain principles in civil trial.....</b>	<b>223</b>
Daniela Cristina Creț .....	223
„Vasile Goldis” Western University of Arad.....	223
<b>Civil law. Obligations. Tortious Civil Liability. Fortuitous Event and</b>	
<b>Force Majeure. Administrative-Territorial Authority .....</b>	<b>224</b>
Cristian Alunaru .....	224
„Vasile Goldis” Western University of Arad.....	224
<b>"The Consent", an essential condition for the processing of personal</b>	
<b>data by data controllers .....</b>	<b>225</b>
Cosmin Cernat .....	225
„Vasile Goldis” Western University of Arad.....	225
<b>"Theory of national interest" - exception to the application of</b>	
<b>personal law in private international law .....</b>	<b>226</b>
Daniel Berlingher .....	226
„Vasile Goldis” Western University of Arad.....	226
<b>Release, power and membership.....</b>	<b>227</b>
Anda-Ienei Nedelcu.....	227
„Vasile Goldis” Western University of Arad.....	227
<b>Impact of Covid - 19 measures on respect for human rights in ECHR</b>	
<b>case law.....</b>	<b>228</b>
Georgeta Sabău .....	228
„Vasile Goldis” Western University of Arad.....	228
<b>Considerations regarding combating consumption substances with</b>	
<b>psychoactive properties.....</b>	<b>229</b>
Liviu Tăut.....	229
„Vasile Goldis” Western University of Arad.....	229

<b>The party that won the case. Disputes over the award of costs .....</b>	230
Ștefan Lucaciuc.....	230
„Vasile Goldis” Western University of Arad .....	230
<b>Consumer information and counselling obligations .....</b>	231
Alin Drăgan.....	231
„Vasile Goldis” Western University of Arad .....	231
<b>The right not to incriminate oneself of the persons interviewed as a witness to abusive conduct. Case study.....</b>	232
Pavel Palcu, Anca Moroșteș.....	232
„Vasile Goldis” Western University of Arad .....	232
<b>This paper aims to offer an overview of the vicarious liability regime in English law.....</b>	233
Petru Ciacli, Bogdan Ciacli .....	233
„Vasile Goldis” Western University of Arad .....	233
<b>Vacancy of the presidential office and interim office .....</b>	234
Mihaela Narcisa Stoicu .....	234
„Vasile Goldis” Western University of Arad .....	234
<b>Reparation of the moral prejudice requested in labor disputes.....</b>	235
Radu Nicolae Stoian .....	235
„Vasile Goldis” Western University of Arad .....	235
<b>SECTION IX.....</b>	<b>236</b>
<b>ABORDĂRI INTERDISCIPLINARE ÎN ȘTIINȚE SOCIALE ȘI UMANISTE</b>	<b>236</b>
<b>CROSS-DISCIPLINARY APPROACHES IN SOCIAL SCIENCES AND HUMANITIES.....</b>	<b>236</b>
<b>Existential psychotherapy. Existential anxieties and fundamental worries in life and in the profession .....</b>	<b>236</b>
Sorin Nica .....	236
„Vasile Goldis” Western University of Arad .....	236
<b>Nehemiah Grew's inquiries into the "anatomy of plants" .....</b>	<b>238</b>
Oana Matei.....	238
„Vasile Goldis” Western University of Arad .....	238
<b>Emotional and Spiritual Freedom—the Freedom to Be Who We Are .....</b>	<b>239</b>
Delia-Mariana Ardelean.....	239
„Vasile Goldis” Western University of Arad .....	239
<b>Zarand County in the first half of the 16th century.....</b>	<b>240</b>
Sorin Bulboacă.....	240
„Vasile Goldis” Western University of Arad .....	240
<b>Dr. Vasile Lucaciu (1852-1922) .....</b>	<b>241</b>
Claudiu Porumbăcean.....	241
„Vasile Goldis” Western University of Arad .....	241
<b>The psycho-social stress felt by employees during the pandemic covid.....</b>	<b>242</b>

Oana Morcan .....	242
„Vasile Goldis” Western University of Arad.....	242
<b>Reframing - therapeutic means for the integration of children separated from the family, in a new private family system (NGO) 90-2020 .....</b>	<b>243</b>
Oana Morcan .....	243
„Vasile Goldis” Western University of Arad.....	243
<b>Socialization and functionality of society .....</b>	<b>245</b>
Aurora Lupaş.....	245
„Vasile Goldis” Western University of Arad.....	245
<b>Intentionality as a limit within a phenomenological approach in human sciences .....</b>	<b>246</b>
Adrian Păcurar.....	246
„Vasile Goldis” Western University of Arad.....	246
<b>LEGIO V MACEDONICA – Pages of history .....</b>	<b>247</b>
Marius Grec .....	247
„Vasile Goldis” Western University of Arad.....	247
<b>The pandemic years. Aspects regarding the involvement of the church in social actions.....</b>	<b>248</b>
Maria Oprea .....	248
„Vasile Goldis” Western University of Arad.....	248
<b>A new challenge for contemporary education - the management of educational microgroups .....</b>	<b>249</b>
Teodor Pătrăuță.....	249
„Vasile Goldis” Western University of Arad.....	249
<b>The ideas of Woodrow Wilson and the Romanian intellectuals from Austria-Hungary .....</b>	<b>250</b>
Maria Alexandra Pantea .....	250
„Vasile Goldis” Western University of Arad.....	250
<b>The Challenge of Understanding Medical Translations .....</b>	<b>252</b>
Stăncuța Dima-Laza .....	252
„Vasile Goldis” Western University of Arad.....	252
<b>Cultural values promoted in the journal “Studies of Science and Culture” from Arad.....</b>	<b>253</b>
Viviana Milivoievici.....	253
Romanian Academy, Timisoara Branch.....	253
<b>Modern Methods in Teaching Culture to Foreign Language Students .....</b>	<b>256</b>
Gianina Daniela Sabău.....	256
„Vasile Goldis” Western University of Arad.....	256
<b>Psychological factors involved in the symptoms of diseases of the endocrine system.....</b>	<b>257</b>
Angela Bogluț.....	257

„Vasile Goldis” Western University of Arad .....	257
<b>Teaching in the post-Covid world</b> .....	258
Annemarie Arsenie Guzei.....	258
„Vasile Goldis” Western University of Arad .....	258
<b>Interdisciplinary mental health counseling of university students</b> .....	260
Nashwa Ibrahim.....	260
Mansoura University, Egypt.....	260
<b>The Use of English for Presentations at International Conferences</b> .....	261
Laura-Rebeca Stiegelbauer .....	261
„Vasile Goldis” Western University of Arad .....	261
<b>An interdisciplinary approach to space and human beings</b> .....	262
Roxana Silvia Moraru.....	262
„Vasile Goldis” Western University of Arad .....	262
<b>Migration and nonmigration,</b> .....	263
Tiberiu Dîscă.....	263
„Vasile Goldis” Western University of Arad .....	263
<b>Ethics and Psychotherapy in Spinoza's Philosophy</b> .....	264
Maria Sinaci.....	264
„Vasile Goldis” Western University of Arad .....	264
<b>The political influence of prof. univ. dr. Aurel Ardelean, rector of UVVG, during his term as senator in promoting Romanian university education</b> .....	265
Ioan Daniel Albu.....	265
„Vasile Goldis” Western University of Arad .....	265
<b>SECTION X</b> .....	<b>266</b>
<b>PROVOCĂRI DE SECURITATE ÎNTR-O LUME INTERCONECTATĂ</b> .....	<b>266</b>
<b>SECURITY CHALLENGES IN AN INTERCONNECTED WORLD ....</b>	<b>266</b>
<b>Social and cultural identities in Haiti: Echoes of origins and contemporary realities</b> .....	266
Speranța Sofia Milancovici .....	266
„Vasile Goldis” Western University of Arad .....	266
<b>Conceptualizing the role of societal resilience in countering hybrid warfare</b> .....	268
George-Marius Șinca.....	268
“Babeș-Bolyai” University Cluj-Napoca.....	268
<b>”Fixing” broken nations: United Nations missions in Haiti</b> .....	269
Ștefan Iaroslav Daniel .....	269
„Vasile Goldis” Western University of Arad .....	269
<b>The influence of war in Ukraine on EU's energy policy</b> .....	270
Nicoleta Lășan.....	270
„Vasile Goldis” Western University of Arad .....	270

<b>Poor exercise of fundamental rights and freedoms within informal communities, groups of homeless people and beggars.....</b>	<b>271</b>
Adrian Toma.....	271
„Vasile Goldis” Western University of Arad.....	271
<b>Labor migration in the EU. Romania in a European context.....</b>	<b>272</b>
Vendelin Francisc Glazer .....	272
„Vasile Goldis” Western University of Arad.....	272
<b>Vasile Goldiș, forerunner of the idea of unity of European States in the years of the first world war .....</b>	<b>273</b>
Eugen Gagea .....	273
„Vasile Goldis” Western University of Arad.....	273
<b>The Impact of COVID-19 Pandemic on Teaching and Learning Methods .....</b>	<b>274</b>
Cristian Bențe .....	274
„Vasile Goldis” Western University of Arad.....	274
<b>SECTION XI.....</b>	<b>275</b>
<b>CALITATEA EDUCAȚIEI IN MILENIUL III.....</b>	<b>275</b>
<b>QUALITY OF EDUCATION IN THE THIRD MILLENNIUM.....</b>	<b>275</b>
<b>The educational climate of the school / class .....</b>	<b>275</b>
Viorica Haluca.....	275
Emanuil Gojdu Hunedoara Economic High School.....	275
<b>Well-being and learning.....</b>	<b>276</b>
Carmen Disca .....	276
Iancu de Hunedoara National College .....	276
<b>Integrated curriculum in romanian education.....</b>	<b>277</b>
Tiberiu Disca .....	277
„Vasile Goldis” Western University of Arad.....	277
<b>Contemporary educational paradigms .....</b>	<b>278</b>
Teodor Pătrăuță.....	278
„Vasile Goldis” Western University of Arad.....	278
<b>Personality and success in education .....</b>	<b>279</b>
Livia Pătrăuță.....	279
„Sava Brancovici” Technological High School Ineu .....	279
<b>The Modern Approach in Human Resource Management .....</b>	<b>280</b>
Camelia Beșleagă.....	280
Hunedoara County School Inspectorate.....	280
<b>Human resources management - basic principles .....</b>	<b>281</b>
Daniela Bufnea .....	281
Hunedoara County School Inspectorate.....	281
<b>Human Resource Management - essence, purpose, components.....</b>	<b>282</b>
Claudia Vasiu.....	282
Hunedoara County School Inspectorate.....	282
<b>Didactics of geography. A current approach .....</b>	<b>283</b>

Carmen Dîscă.....	283
<i>Iancu de Hunedoara National College</i> .....	283
<b>Modern kindergarten management</b> .....	284
Adriana Stângă.....	284
<i>„Dumbrava Minunată” Kindergarten Hunedoara</i> .....	284
<b>Early education in Romania</b> .....	285
Carmen Tepes.....	285
<i>Kindergarten with extended hours nr.1, Hunedoara</i> .....	285
<b>Strategies for preventing and eliminating school failure in primary education</b> .....	286
Vendelin Francisc Glazer .....	286
<i>„Vasile Goldis” Western University of Arad</i> .....	286
<b>Innovative approaches in adult education and training</b> .....	287
Vasile-Ioan Pop.....	287
<i>„Vasile Goldis” Western University of Arad</i> .....	287
<b>The quality of education in the modern society</b> .....	288
Simona Macarie .....	288
<i>„Vasile Goldis” Western University of Arad</i> .....	288
<b>The computerization of education midway necessity and efficiency.</b> .....	289
Horea Sebastian Macarie.....	289
<i>Sports Highschool Satu Mare</i> .....	289
<b>Education in pandemic times</b> .....	290
Luiza Pascal .....	290
<i>Matei Corvin Technological High School</i> .....	290
<b>Preparatory class - advantages and disadvantages</b> .....	291
Negrea Mihaela.....	291
<i>Matei Corvin Technological High School, Hunedoara</i> .....	291
<b>Non-formal education in the context of the pandemic COVID-19</b> .....	292
Constantin Marius Aradan.....	292
<i>„Vasile Goldis” Western University of Arad</i> .....	292
<b>Mentoring activities in pandemic times</b> .....	293
Andreea Feher.....	293
<i>Theoretical High School „A. M. Guttenbrunn ”Arad</i> .....	293
<b>Competence in mentoring</b> .....	294
Cosmin Colțun.....	294
<i>„Moise Nicoară” National College Arad</i> .....	294
<b>Personal relationship between mentor and beneficiary</b> .....	295
Ligia Iercan .....	295
<i>„Moise Nicoară” National College Arad</i> .....	295
<b>Mentor qualities</b> .....	296
Alina Popescu .....	296
<i>„Moise Nicoară” National College Arad</i> .....	296

<b>The benefits of mentoring.....</b>	297
Adriana Filip.....	297
<i>"Moise Nicoară" National College Arad .....</i>	297
<b>Pedagogical practice planning .....</b>	298
Brigitte Waldwogel .....	298
<i>"Moise Nicoară" National College Arad .....</i>	298
<b>The modern approach to the educational space in kindergarten, .....</b>	299
Lorena Urîtu .....	299
<i>Kindergarten PP 1 Hunedoara .....</i>	299
<b>SECTION XII .....</b>	<b>300</b>
<b>ACTUALITĂȚI ÎN CERCETAREA BIOMEDICALĂ.....</b>	<b>300</b>
<b>CURRENT AFFAIRS IN BIOMEDICAL RESEARCH .....</b>	<b>300</b>
<b>Sesiune pentru studenții doctoranzi din Domeniul Medicină și Biologie/ Session for doctoral students in the domains of Medicine and Biology .....</b>	<b>300</b>
<b>Pulmonary arterial hypertension in thyroid disorders.....</b>	300
Delia Panduru, Radu Lala, Maria Pușchiță.....	300
<i>„Vasile Goldis” Western University of Arad.....</i>	300
<b>Toxoplasma gondii Infection in Patients with Psychiatric Disorders from Western Romania.....</b>	302
Sebastian Grada.....	302
<i>„Vasile Goldis” Western University of Arad.....</i>	302
<b>Hepatitis C Clearance by Direct-Acting Antivirals .....</b>	303
Oana Koppandi, Eftimie Miulescu, Dana Iovănescu, Amelia Uzum, Oana Maria Jigau, Andreea Iulia Papoi, Sebastian Grada.....	303
<i>„Vasile Goldis” Western University of Arad.....</i>	303
<b>Corelation between Pentraxin 3 (PTX 3) and diabetic polyneuropathy.....</b>	304
Andrei Ardelean .....	304
<i>„Vasile Goldis” Western University of Arad.....</i>	304
<b>Particular aspects in the onset of personality disorders. Case presentation.....</b>	305
Robert Almasan, Afilon Jompan .....	305
<i>„Vasile Goldis” Western University of Arad.....</i>	305
<b>Analysis of deliveries from juvenile mothers during COVID 19 pandemic.....</b>	307
Florin Mihai Sandor <sup>1</sup> , Roxana Furău <sup>1</sup> , Cris Precup <sup>1</sup> , Casiana Boru-Stănescu <sup>1</sup> , Petar Arsenijevic <sup>2</sup> , Dejana Rakic <sup>2</sup> , Milos Popadic <sup>2</sup> , Cristian Furău <sup>1</sup> .....	307
<i><sup>1</sup>„Vasile Goldis” Western University of Arad, <sup>2</sup>University of Kragujevac ....</i>	307
<b>Importance of analgo-sedation in patients with severe pelvic and spine trauma during prehospital transport .....</b>	308
Florica Băgescu-Drugă (Pop).....	308

„Vasile Goldis” Western University of Arad, Emergency Arad County Hospital.....	308
<b>Congestion- the hallmark of heart failure and current diagnostic challenges.....</b>	310
Daniela Hoza Mocan, Ioan Radu Lala, Adina Pop Moldovan,.....	310
„Vasile Goldis” Western University of Arad .....	310
<b>Topical negative pressure therapy in chronic wounds : an immunohistochemical analysis of vessel transformation .....</b>	312
Maria Hoară, Bogdan Totolici .....	312
„Vasile Goldis” Western University of Arad .....	312
<b>Paraclinical clinical considerations of post COVID-19 interstitial pneumonia .....</b>	313
Erika Simon Repolski.....	313
„Vasile Goldis” Western University of Arad .....	313
<b>Prevalence of anemia in the elderly .....</b>	315
Daniel Papiu, Afilon Jompan, Coralia Cotoraci, Alciona Sasu, Alexandra Nădăban .....	315
„Vasile Goldis” Western University of Arad .....	315
<b>Incretins drugs in diabetes and Covid-19 infection .....</b>	315
Daniela Mihailescu, Maria Puschita .....	316
„Vasile Goldis” Western University of Arad .....	316
<b>Assessment of mesenchymal stem cells’ interaction with magnetic gelatin-based scaffolds .....</b>	316
Alexandra Dobranici <sup>1</sup> , Aida Şelaru <sup>1</sup> , Elena Olăreţ <sup>2</sup> , Izabela Stancu <sup>2</sup> , Marieta Costache <sup>1</sup> , Sorina Dinescu <sup>1</sup> .....	317
<sup>1</sup> Faculty of Biology, University of Bucharest, <sup>2</sup> APMG, University Politehnica of Bucharest .....	317
<b>Trauma and COVID 19 study in the orthopedics department of Arad county hospital 2020-2022.....</b>	319
Paul Deme, Giada Baroni, Dan Fruja, Alexandru Pop, Roland Fazakas ..	319
„Vasile Goldis” Western University of Arad .....	319
<b>Non-alcoholic fatty liver disease and metabolic syndrome. Correlation between the degree of hepatic steatosis and dyslipidemia in patients with type 2 diabetes mellitus .....</b>	320
Andreea Iulia Papoi, Oana-Maria Jigău, Sebastian Grada, Oana Koppandi, Florinel Cozma, Amelia Uzum,Dana Iovănescu, Eftimie Miuteşcu.....	320
„Vasile Goldis” Western University of Arad .....	320
<b>Studies on the cellular and molecular mechanisms involved in post- COVID-19 pulmonary fibrogenesis.....</b>	322
Daniela-Adriana Oatiş.....	322
„Vasile Goldis” Western University of Arad .....	322
<b>Monitoring the incidence of platelets derived from platelets in oncohematological pathologies .....</b>	324

Alexandra Nădăban Alexa, Coralia-Adina Cotoraci, Eftimie Miulescu, Alciana Sasu, Daniel-Horațiu Papiu.....	324
<i>„Vasile Goldis” Western University of Arad.....</i>	324
<b>Tetranectin as a Marker for the Prediction and Diagnosis of Heart Failure .....</b>	326
Paula Alexandra Hornea, Voicu Dașcău, Luminița Pilat, Maria Pușchiță .....	326
<i>„Vasile Goldis” Western University of Arad.....</i>	326
<b>The crosstalk between paclitaxel and inflammasome in breast cancer mechanism.....</b>	327
Liliana-Roxana Balahura Stămat, Sorina Dinescu, Marieta Costache .....	327
<i>Faculty of Biology, University of Bucharest.....</i>	327

***SECȚIUNILE CADRELOR  
DIDACTICE/CERCETĂTORI***

***TEACHING  
STAFF'S/RESEARCHER'S  
SECTIONS***

## SECTION I

### INTERDISCIPLINARITATE ÎN DOMENIUL BIOMEDICAL ȘI PRECLINIC

### CROSS-DISCIPLINARITY IN BIOMEDICAL AND PRECLINICAL DOMAINS

#### **Microscopical investigation of anatomical structures responsible for the secretion of bioactive compounds in *Leonurus cardiaca***

**L.**

Viviane Bota<sup>1</sup>, Neli Kinga Olah<sup>1</sup>, Elisabeta Chișe<sup>1</sup>, Endre Mathe<sup>1</sup>,  
Maria-Magdalena Zamfirache<sup>2</sup>, Violeta Turcuș<sup>1</sup>

<sup>1</sup>„*Vasile Goldis*” Western University of Arad, <sup>2</sup>*Alexandru Ioan Cuza*  
*University of Iași*

**Abstract:** *Leonurus cardiaca* L. is a medicinal plant used since ancient times for the treatment of cardiac and gynecological problems, anxiety, depression, insomnia, and other nervous conditions. The hypotensive, antispasmodic, vasoconstrictive, and cardioprotective effects have been confirmed by clinical experiments. Current research sustains the protective activity on the nervous system and recently has been confirmed the presence of an important alkaloid leonurine in the aerial parts. The anatomical structure and its relation to the secretion and storage of bioactive compounds are less known. For this study, we analysed the structure of the vegetative organs of *L. cardiaca* species originating from the Romanian wild flora, using optical microscopy, according particular attention to possible areas of production and storage of bioactive compounds. We performed transversal sections through the roots, rhizome, aerial stem, and foliar limb. The samples were double-stained with ruthenium red and iodine green. The results show specific anatomical structures of this species and some elements that could be responsible for the production and storage of active

principles, particularly on the upper level of the aerial parts. The stem presents on its surface long, pluricellular trichomes and multiple secretory hairs, some short, with four or eight cells gland, some long, with 3 cell stalk and unicellular gland, and others appear sessile. The superior epidermis of the foliar limb is covered in long and short trichomes and frequent short, secretory hairs with a varied number of cell glands. Our results contribute to a better understanding of the structure of vegetative organs for this species and highlight elements that may be involved in the production and storage of active principles.

## **Investigations on a series of morphological, biochemical and productivity indicators of four genotypes of oats (*Avena Sativa* L.) in the soil and clima**

Ovidiu Ungureanu<sup>1</sup>, Iulian Stana<sup>1</sup>, Elena Ungureanu<sup>2</sup>, Viviane Bota<sup>1</sup>,  
Florin Marinescu<sup>3</sup>, Violeta Turcuș<sup>1</sup>

<sup>1</sup>, „Vasile Goldis” Western University of Arad, <sup>2</sup>Iași University of Life Sciences, <sup>3</sup>Research and Development Station for Cattle Breeding in Arad

**Abstract:** Oats (*Avena sativa* L.) are a rich source of starch, protein and fat, with applications in a variety of economic segments, including the feeding of children and sick people, and animal feed. In this study, aspects of morphology, biochemistry and productivity of spring oat genotypes were evaluated under the temperature, humidity and soil conditions of the Crișurilor Plain, considering the possibility of extending this crop in the western part of Romania. The single-factor experiment was conducted with four spring oat varieties under optimal technology conditions in four replications. The experimental variants used are: V1 - Lovrin 1; V2 - Mureșana; V3 - Ovidiu; V4 - Jeremy. The control variant is the average of the four varieties taken in the study. Vegetation period, plant height, number of branches per panicle, number of caryopses per panicle, mass of 1000 grains, hectoliter mass, seed yield, percentage content of protein, fat, starch, cellulose and ash in seeds, and economic efficiency were evaluated. Genotype-environment interactions generate a high degree of variability in the growth and development of cereal plants, especially oats (*Avena sativa* L.). Temperature, precipitation, cloudiness and relative humidity conditions did not differ much from the multiannual average. Temperatures during the oat growing season (March to July) were higher than the multiannual average, but did not affect plant growth and development. Precipitation was generally sufficient during most of the growing season, with a small deficit in June - July and a surplus in April - May. The morphological and biochemical characteristics observed show a good adaptability of the plants to the pedo-climatic conditions of the study area, an aspect also supported by the high productions in all variants. The best results from an economic point of view were obtained for the varieties Ovidiu and Jeremy. The high

percentage of starch in the seeds supports the large-scale use of these oat varieties in the food industry, especially starch industry. The results support the successful cultivation of spring oat varieties in the area of the Crişurilor Plain under optimal and economically efficient conditions.

## **A new approach in studying left ventricular diastole and systole**

Lucian Romeo Popescu, Adina Pop Moldovan, Maria Puschita,  
Maria Orodan, Violeta Turcuş

*„Vasile Goldis” Western University of Arad*

**Abstract:** This study proposes a new vision in characterizing the ventricular diastole and systole. The approach is made starting from energetic consideration, by applying the energy conservation law for the blood entering from left atrium into left ventricle during diastole period. We had proposed two brand new coefficients to describe the cardiac cycle and we had verified if the coefficients are correlated with classically used parameters. We consider that the energetic approach takes into consideration the whole mechanical movement that is happening inside the heart and can offer a very synthetic and scientific solid view about the cardiac cycle. The new coefficients are simply to be calculated and as you will see from our research the correlation with other classically used parameters is obvious.

**Assessment of wild flora in the Moneasa Area in the context of sustainable development under the influence of climate change.  
Case Study**

Violeta Turcuş<sup>1</sup>, Paul Albu<sup>1</sup>, Viviane Bota<sup>1</sup>, Gicu Gabriel Arsene<sup>2</sup>

<sup>1</sup>„*Vasile Goldis*” Western University of Arad, <sup>2</sup>*Banat University of Agricultural Sciences and Veterinary Medicine*

**Abstract:** Of all the ecosystems, the mountains are disproportionately exposed to climate changes, making them difficult to evaluate. The studies effectuated until now show profound changes in the composition of herb layer, migration, and thermophilisation phenomenon. These are a big concerns because the mountain ecosystems are an extremely valuable resource for their biodiversity and ecosystem services. In this study, we evaluated the floristic inventory of Moneasa area, Codru Moma Mountains, using a series of criteria (taxonomy, ecological indices, bioforms, geographic area, citotaxonomy). Special attention was given to medicinal plants used in phytotherapy, analyzing their share in the herb layer. The study also includes data about species used in gastronomy and industry. The results offer a base for the prediction of local flora's possible responses to climate changes depending on their physiological limits.

**Analysis of mechanical impedance at aortic level and elasticity coefficient for several cardiac diseases**

Lucian Popescu, Adina Pop Moldovan, Maria Puschita, Maria Orodan, Violeta Turcuş

*„Vasile Goldis” Western University of Arad*

**Abstract:**In an early study we had proposed a new vision in characterizing the ventricular diastole and systole. We had proposed two brand new coefficients to describe the cardiac cycle and we had verified if the coefficients are correlated with classically used parameters. We had considerer that the energetic approach take into consideration the whole mechanical movement that is happening inside the heart and can offer a very synthetic and scientific solid view about the cardiac cycle. The 3 new coefficients are simply to be calculated and can be as used as parameters in characterizing different heart diseases.

## Medical responsibility and how to prevent malpractice

Florin Mihai Sandor, Alexandru Neşiu, Casiana Boru-Stănescu, Cris Precup

*„Vasile Goldis” Western University of Arad*

**Abstract:** Malpractice is the professional error committed in the exercise of the medical act or pharmaceutical act, generating damages on the patient, involving the civil liability of the medical staff and the provider of medical, sanitary and pharmaceutical products and services (Art. 642 of law 95/2006).

The medical staff is civilly liable for damages caused by error, which also include negligence, recklessness or insufficient medical knowledge in the exercise of the profession, by individual acts in prevention, diagnosis or treatment procedures.

The medical staff is also civilly liable for damages arising from non-compliance with the regulation regarding the confidentiality, informed consent and the obligation to provide medical assistance.

The medical staff is civilly liable for damages caused in the exercise of the profession also when it exceeds the limits of its competence, except in cases of urgency in which no medical staff with the necessary competence is available.

The medical activity is very complex, which involves a serious professional training, with permanent improvement and development of medical knowledge, as well as a correct application of the acquired knowledge (therapeutic protocols, internal rules and respect for patient rights).

## Hepatoprotective effects of *Corylus avellana* extract and chrysin/cyclodextrin nanocomplexes in diabetes mellitus complications

Cornel Baltă<sup>1</sup>, Hildegard Herman<sup>1</sup>, Sami Gharbia<sup>1</sup>, Alina Ciceu<sup>1</sup>, Marcel Rosu<sup>1</sup>, Bianca Mladin<sup>1</sup>, Sorina Nicoleta Voicu<sup>2</sup>, Coralia Cotoraci<sup>3</sup>, Anca Dinischiotu<sup>2</sup>, Ferenc Fenyvesi<sup>4</sup>, Judit Váradi<sup>4</sup>, Neli Olah<sup>5</sup>, Ramona Burtescu<sup>6</sup>, Anca Hermenean<sup>1,2</sup>

<sup>1</sup>"Aurel Ardelean" Institute of Life Sciences, "Vasile Goldiș" Western University of Arad, <sup>2</sup>Department of Biochemistry and Molecular Biology, Faculty of Biology, University of Bucharest, <sup>3</sup>Faculty of Medicine "Vasile Goldiș" Western University of Arad, <sup>4</sup>Department of Pharmaceutical Technology, Faculty of Pharmacy, University of Debrecen, Hungary, <sup>5</sup>Faculty of Pharmacy, "Vasile Goldiș" Western University of Arad, <sup>6</sup>SC PlantExtrakt SRL, Radaia, Cluj

**Abstract:** Diabetes is a chronic disease that has a strong social and economic impact on the world's population. The quality of life in individuals affected by this pathology is significantly impaired. The presence in this pathology of the insulin resistance of the cells, as well as the constantly increased blood glucose levels, leads to progressive liver alterations that will lead to the installation of liver fibrosis. The liver will gradually lose its function, having a direct impact on the quality and life expectancy of the patients. In this study, we aimed to obtain a preparation that enhances the bioavailability of active substances, by incorporating the flavonoid chrysin and the gemmotherapy preparation of *Coryllus avelana* into the cyclodextrin nanocomplexes. In order to study the effect of this formulation on liver fibrosis, and to understand the molecular mechanisms involved in this process, we chose a murine model of liver fibrosis. Experimental diabetes was induced by intraperitoneal injection with a single dose of streptozotocin. Confirmed diabetic mice were treated intraperitoneally with CCl<sub>4</sub> dissolved in olive oil, twice a week for 7 weeks. The molecular pathway of TGF-β/Smad modulated liver fibrosis was studied in this murine model. To achieve this goal, we studied gene expression by qPCR and protein expression by immunohistochemistry techniques of α-SMA, TGF-β, Smad 2/3 and Smad 7. Moreover, we evaluated the structural and

ultrastructural changes by using histopathology and electron microscopy. Following the data obtained, we observed the blockade of liver fibrosis and its reversal in the groups treated with the newly gemmotherapy-based *Coryllus avelana* extract reinforced with chrysin/cyclodextrin nanocomplexes compared to the control group, as well as compared to the groups that received chrysin or cyclodextrin nanocomplexes combined with chrysin. Thus, we can conclude that the addition of biological substances from this nanocomplex has a synergistic effect, potentiating its beneficial effect, and their incorporation into cyclodextrins helps to increase their availability. These results suggest the hepatoprotective effects of the *Coryllus avelana* extract reinforced with chrysin/cyclodextrin nanocomplexes in diabetes mellitus complications. This new nanocomplex opens new research opportunities in the field and stands out as a strong candidate both in the therapy of liver fibrosis and especially in its prevention.

Funding: This research was funded by Romanian Ministry of Research and Innovation, project number PN-III-P2-2.1-PED2019-3609 (262PED/2020).

## **Cellular and molecular pathways involved in liver fibrosis and the potential anti-fibrotic role of *Secale cereale* extract reinforced with chrysin/cyclodextrin nanocomplexes**

Alina Ciceu<sup>1</sup>, Ferenc Fenyvesi<sup>2</sup>, Neli Olah<sup>3</sup>, Anca Hermenean<sup>1</sup>

<sup>1</sup>*“Aurel Ardelean” Institute of Life Sciences, “Vasile Goldiș” Western University of Arad,* <sup>2</sup>*Department of Pharmaceutical Technology, Faculty of Pharmacy, University of Debrecen, Hungary,* <sup>3</sup>*Faculty of Pharmacy, “Vasile Goldiș” Western University of Arad*

**Abstract:** Hepatic fibrosis is the result of the wound-healing response of the liver to repeated injury. The main cells involved in hepatic fibrogenesis are: hepatic stellate cells, portal fibroblasts, mesenchymal stem cells derived from bone marrow, hepatocytes and biliary epithelial cells, and fibrocytes. Following chronic liver injury, liver cells undergo various changes. Damage hepatocytes undergo apoptosis. The sinusoidal endothelial cells change to a state of a capillarization of the sinusoids. The Kupffer cells produce different chemokines and cytokines. The quiescent hepatic stellate cells change their status to an activated state, increasing the accumulation of extracellular matrix components. This is a complex network which contains fibrous proteins and proteoglycans that provide physical scaffold and structural support for liver parenchyma and non-parenchyma cells. Transforming growth factor- $\beta$ 1 is the major pro-fibrotic cytokine involved in fibrogenesis. It is produced by Kupffer cells, endothelial cells and hepatocytes has been recognized as a key activator of HSCs in the pathogenesis of liver fibrosis and acts by activating Smad signalling pathway. It also mediates the activation and differentiation of fibroblasts to myofibroblasts, and their migration to site of injury and regulates epithelial to mesenchymal transition.

In normal condition, matrix can be degraded by a variety of enzymes, but primarily by matrix degrading metalloproteinases (MMPs). Activated MMPs are susceptible to inhibition by key extracellular inhibitors, tissue inhibitors of metalloproteinases (TIMPs). In the healthy liver TIMP-MMPs ratio is balanced, extracellular matrix is degraded and thus does not accumulate causing fibrosis. By contrast, after the liver injury, TIMP-MMP

balance is disturbed, and TIMPs are over-expressed, contributing to ECM deposition and development of fibrosis.

There are only a few data in the literature regarding the hepatoprotective effect of rye (*Secale cereale*) root gemmotherapeutic extract. It has shown his regenerative activity on hepatocytes and on the liver parenchyma and normalized the values of liver transaminases, based only on medical observation, but this data has to be further demonstrated by experimental results. Chrysin is a flavonoid found in propolis, honey, many fruits, and plant extracts. Chrysin protects liver from chemotherapeutic drugs and other hepatotoxic agents. The oral bioavailability of chrysin is reduced owing to its poor aqueous solubility, which results in its limited medical application. In order to improve the solubility of chrysin while maintaining its biosorption efficacy it is necessary to develop new products by complexation of this flavonoid with cyclodextrins. Therefore, the formulation of the gemmotherapeutic root extract of *Secale cereale* with chrysin/cyclodextrin nanocomplexes has the role to increase the antifibrotic potential of this gemmotherapeutic extract.

**Acknowledgement:** This work was supported by a grant from the Romanian Ministry of Research, Innovation and Digitalization UEFSCDI, project number PN-III-P1-1.1-PD-2021-0327.

## **Importance of respiratory rehabilitation in Covid-19 patients**

Paula Barata, Dana Olar, Cecilia Avram,

*„Vasile Goldis” Western University of Arad*

**Abstract:** Introduction: Respiratory rehabilitation is an increasingly current and impactful branch of medicine given the epidemiological context that has led to the introduction of extremely beneficial recovery programs for post-Covid-19 patients. This concept of medical rehabilitation appeared in the Romanian medical world in 1922, and later the practice of respiratory rehabilitation materialized. Contents: Global Initiative Strategy for Chronic Obstructive Lung Disease (GOLD) advocates for lung rehabilitation in patients with chronic lung disease from early stages and those suffering from exacerbations, but also in patients with Covid-19 / post Covid even during hospitalization for the many benefits on the lung. Another thing of real interest is to evaluate the patient at zero point and to adapt the rehabilitation program for each patient, thus having an individualized program that includes aerobic exercises, strength training, balance training, respiratory training with different degrees of intensity. The evaluation at the beginning of the program is repeated at the end of the respiratory rehabilitation program. Among the benefits observed from the first session are: improving physical and mental condition, reducing symptoms, increasing the capacity for effort and performing daily activities. And considering that lately there is more and more discussion in all specializations about a multidisciplinary team and in the case of respiratory recovery, a team is needed that includes a pulmonologist, a kinetotherapist, a physiotherapist and a psychologist. Conclusions: The role of pulmonary rehabilitation has a major impact on the lives of post-Covid patients because it reduces symptoms, improves functional status, reintroduces the patient into society and of course the importance of trying to reduce healthcare costs.

## New Trends in Medical Data Quality Assessment

Gheorghe Ioan Mihalaş

Academy of Medical Sciences,  
„Vasile Goldis” Western University of Arad

**Abstract:** Introduction. Data occupy a central position in medical informatics. Any medical action starts with collection of some data, which follow the well known “elementary cycle of medical information”: patient – data – physician, where it merges with another informational flux represented by medical knowledge generating a new information – diagnosis – therapy applied to the patient, closing the cycle. Formally, data begin their cycle usually as a text in the medical record of the patient. The quality of the entire medical care of the patient strongly depends on the quality of the recorded data. The present paper describes the new trends about the assessment of the medical data quality.

Use of medical data. Besides the main purpose – the cure of the patient, the data are stored in medical data bases having as a basic unit the patient’s EHR (Electronic Health Record), or DES (Dosarul Electronic de Sănătate), useful to ensure the continuity of care but also for research, as a secondary use, after anonymization.

Data quality characteristics. According to AHIMA (American Health Information Management Association) the quality of data should cover more dimensions: accuracy, completeness, consistency, definition, granularity, relevancy and timeliness. Several methods have been proposed for facilitating the practical implementation, like structuring the medical record or using codifications (ICD, SNOMED), including also unstructured information as free text.

Present state of medical data quality. Several surveys revealed that there are many deviations encountered in real cases: incomplete records, ambiguities, unreadable text, even errors.

Proposed measures to improve medical data quality. The importance of the topic generated several proposed measures covering more levels:

- at technical level: advanced data collection software with quality check and, in the context of “digital health” the data manager or data curator positions,

- at educational level: discussing the potential damage produced by unreliable data and emphasizing the ethical factor too,
- at administrative level: improving the procedures of data collection and introducing standards dedicated to data quality (ISO 25012),
- at legal level: redefining responsibilities.

Conclusions. The paper reveals the complexity of assessing the quality of medical data and the importance of the topic within the entire educational program for medical students.

## Hepatoprotective effects of adipose tissue-derived stem cells (ADSCs), hepatocyte growth factor (HGF), and silymarin/cyclodextrin complexes combined therapy in a mouse model of liver fibrosis and diabetes

Sami Gharbia<sup>1,2</sup>, Simona-Rebeca Ignat<sup>1</sup>, Sorina Dinescu<sup>1</sup>, Ferenc Fenyvesi<sup>3</sup>, Bianca Mladin<sup>1</sup>, Cornel Baltă<sup>1</sup>, Hildegard Herman<sup>1</sup>, Marcel Rosu<sup>1</sup>, Alina Ciceu<sup>1</sup>, Anca Hermenean<sup>2</sup>, Marieta Costache<sup>1</sup>

<sup>1</sup>Department of Biochemistry and Molecular Biology, Faculty of Biology, University of Bucharest, <sup>2</sup>Institute of Life Sciences “Aurel Ardelean”, Vasile Goldis Western University of Arad, <sup>3</sup>Department of Pharmaceutical Technology, Faculty of Pharmacy, University of Debrecen, Hungary

**Abstract:** Liver fibrosis and diabetes mellitus are two chronic diseases that significantly impact long-term life expectancy. The co-existence of these two pathologies is much more debilitating than each of these entities independently. Research results indicate that the high blood level of glucose is associated with the development of cirrhosis in patients with chronic liver diseases.

Regenerative therapies as alternatives to liver transplantation being great attention in the hepatology field. The therapy with ADSCs and their distinctive features such as easy obtainability, low immunogenicity, and ability to self-renew as well as the ability to differentiate along multiple lineage pathways, provides a novel strategy for the treatment of liver dysfunction, but the high glucose environment induced by diabetes remains a challenge for stem cells to perform tissue regeneration.

We investigated *in vivo* the efficiency of ADSCs and combined therapy of ADSCs with HGF targeting HSCs fibrogenic activity on CCl<sub>4</sub>-induced liver fibrosis in diabetic mice and the cumulative hepatoprotective benefit of silymarin/HPBCD nano complexes.

Experimental diabetes was induced by intraperitoneal injection with a single dose of streptozotocin. Confirmed diabetic mice were treated intraperitoneally (i.p.) with CCl<sub>4</sub> dissolved in olive oil (20% v/v, 2 ml/kg), twice a week for 7 weeks. Mice were divided into groups and treated as follows: ADSCs; ADSCs and HGF; ADSCs, HGF therapy and Sy/HPBCD nano complexes. Whereas the ADSCs and HGF were injected intravenously (i.v), the Sy/HPBCD

nanocomplexes were administrated orally for 14 days. The potential effect of ADSCs and/or with HGF and Sy/HPBCD nanocomplexes in CCl<sub>4</sub>-induced liver fibrosis on diabetic mice was assessed after 2 weeks of treatments through histology, molecular and biochemical methods. The profibrotic pathways were activated in the fibrotic group, as confirmed by an increase in the transforming growth factor-  $\beta$ 1 (TGF- $\beta$ 1) and Smad 2/3 mRNA expression and liver immunopositivity, and activation of the hepatic stellate cell (HSC), marked by and raised gene expression of alpha-smooth muscle actin ( $\alpha$ -SMA) and immunopositivity. All the applied treatments alleviated pathological changes and decreased the fibrotic markers.

**Acknowledgment.** This work was supported by a Romanian Ministry of Education and Research grant, CNCS—UEFISCDI, project number PN-III-P1-1.1-PD-2019-0337, within PNCDI III.

## **HPV and its relation with genital and non-genital cancers**

Cristian Furău<sup>1</sup>, Roxana Furău<sup>1</sup>, Cristina Pasăre<sup>2</sup>, Denisa Todor<sup>1</sup>,  
Laurențiu Luca<sup>2</sup>

<sup>1</sup>„Vasile Goldis” Western University of Arad, <sup>2</sup>Emergency Clinical  
County Hospital of Arad- Ob-Gyn Dep

**Abstract:** HPV infection is one of the most frequent infection that can be acquired through sexual intercourse and has been associated with cervical cancer (zur Hausen). Co-testing for cervical cancer as a screening tool will be analyzed. Further research revealed its involvement in other genital cancers, but also in cancers of the head and neck region. My presentation is aimed to present this correlations, but also the preventive action that is required. Anti HPV vaccination and its success will be presented, as well as arguments for gender neutral vaccination

## **The management of deliveries from underage mothers during COVID 19 pandemic- a euroregional survey**

Cristian Furău<sup>1</sup>, Petar Arsenijevic<sup>2</sup>, Roxana Furău<sup>1</sup>, Florin Sandor<sup>1</sup>,  
Oana Todut<sup>3</sup>, Casiana Boru<sup>1</sup>, Anca Macau<sup>4</sup>, Cris Precup<sup>1</sup>

<sup>1</sup>„Vasile Goldis” Western University of Arad, <sup>2</sup>University of Kragujevac, <sup>3</sup>Emergency Clinical County Hospital of Arad-Ob-Gyn Department, <sup>4</sup>University of Medicine and Pharmacy Carol Davila Bucharest

**Abstract:** Introduction: Deliveries from underage mothers represent a major healthcare problem for many countries, but especially for Romania, the EU country with the most deliveries from juvenile mothers. It is well known that under age mothers have higher risks to develop medical complication due to pregnancy and delivery, but the psychosocial and behavioral ones are even worst and quite difficult to assess.

Objectives: To analyze the deliveries from juvenile mother in 4 university medical centers (3 from Romania and one from Serbia) and to assess the impact of COVID 19 on this problem.

Method: Teams from the four medical centers are performing a retrospective study using the data received from the Emergency Clinical County Hospital of Arad, the Emergency Clinical County Hospital of Timis, the Emergency Clinical Hospital Saint Pantelimon Bucharest (all three from Romania) and University Medical Hospital of Kragujevac, Serbia. The period statistically analyzed is 01.01.2019-21.12.2021, using the same clinical parameters.

Results: The study is still ongoing, as not all of the information has been collected so far. Data collected from 2019 is similar with the previous years, while for the Arad center an increase of the number of juvenile mothers is seen during the pandemic.

Conclusions: Juvenile mothers are prone to develop complications compared to general population. COVID 19 had a negative influence on juvenile mothers and sexual abuse (juvenile mothers aged less than 16 years). Better sexual education and social programs are needed in order to reduce the number of juvenile mothers and to help them get a much better social reinsertion.

## How do we perceive abortion- a questionnaire study for Western Romania

Oana Besa<sup>1</sup>, Oana Todut<sup>2</sup>, Roxana Furău<sup>1</sup>, Ioana Vornic<sup>1</sup>, Casiana Boru<sup>1</sup>, Denisa Todor<sup>1</sup>, Cristina Pasăre<sup>2</sup>, Cristian Furău<sup>1</sup>

<sup>1</sup>„Vasile Goldis” Western University of Arad,<sup>2</sup>Emergency Clinical County Hospital of Arad-Ob-Gyn Department

**Abstract:** Introduction: Abortion is a very delicate subject in Romania taking into consideration its interdiction before 1990 and after that its liberalization. Many women are performing multiple abortions on request; abortion could be seen as a “contraceptive” method for some, although the members of the clerical corps are against abortion. Data regarding abortions are limited and not properly reported; therefore, confusions when presenting this topic are very frequent.

Objectives: To obtain a point of view from the general population regarding abortion on request and the circumstances people believe it represents a good option to prevent an unwanted pregnancy. Our teams working hypothesis was that the general population perceive abortion negative, while those using it have high chances of being stigmatized.

Method: Our prospective questionnaire based investigation used an online questionnaire that was applied to 1642 persons in the period 13.08.2020-04.02.2021. The inclusion criteria was that participants replied to all of the questions. A statistical analysis was performed on the Excel2016 obtained data using EpiInfo7.

Results: From the 1642 included questionnaires, 1438 responders were female (87.6%), 83.6% were in the age groups (20-39 years of age), 1039 (63.3%) were living in an urban environment and 53.5% had university studies, 56% (919) were employed, 79.4% declaring themselves as attending the orthodox church. The repliers expressed their disapproval with abortion- 66% (1082), considering it a crime- 66.8% (1095) and not willing to offer support to a person undergoing abortion- 62.5% (1024). The majority of the repliers declared to know both medical complications- 81.4% (1334) and psychological ones- 75.2% (1232) and believe that the father should be involved in the decision- 55.1% (903), as he might be psychologically affected as well- 70.5% (1156), although he would

pass over the consequences easier- 57.6% (944). Regarding the effects on the couple's life, 82.6% thought that the abortion could affect it and can lead to break-up. 42.3% (694) were in favor in interdicting the abortion, while only 38.7% (634) sustained that women could appeal to abortion if needed. 19.5% (319) would undergo abortion for an unwanted pregnancy, while 60% (982) would not; 73.6% (1206) would not perform abortion due to the low incomes, while 55.4% (908) would not request abortion for an underage person. In case of sexual abuse, only 40.6% (665) would agree with abortion. Even if the pregnancy could be dangerous for the mother, only 58.6% (960) would agree with the medical abortion. 83.2% of the repliers (1364) would want better information (video information) about the abortion before the procedure. Feeling ashamed because of the abortion was present in 26.5% (435) of the responders, while considering it a sin- 72.4% (1187). In case of a spontaneous abortion 67.9% (1113), people will not feel any guilt, as for fetal severe malformations, they would appeal to abortion in 38.3% (628) of the cases. Psychotherapy would be consider by 81.8% (1341) after an abortion, while 94.7% (1552) would be in favor for better educational campaigns to reduce abortions amongst teenagers.

Conclusions: Our study offers a very good image of how people perceive abortion and related topics in Western Romania. Although responders are against abortions in most of the situations, our country has the highest number of abortion in the European Union

## **Ethics of the use of human bodies for didactic purposes and medical research in the contemporary european religious context**

Corina-Daniela Frandeuş<sup>1</sup>, Filip Andrei Frandeuş<sup>2</sup>, Corina Crişan<sup>1</sup>

<sup>1</sup>„*Vasile Goldis*” *Western University of Arad*, <sup>2</sup>*Babes- Bolyai University of Cluj-Napoca*

**Abstract:** I started a daring move about 15 years ago by putting together the information we have about the ethics of donating corpses and dissecting human corpses in the predominantly Christian European context. I then tried to establish a dichotomy between the Christian cults that support the use of human corpses for scientific purposes and the Christian cults that dogmatically oppose this practice. In the current European context, however, following the migration of recent years, the demographic structure has changed and in particular we have seen a profound change in the composition of students by increasing the number of students with Muslim religion.

At the moment, the Christian point of view is not very useful and we cannot ignore the issue brought about by the penetration of the Muslim religion in Europe. On the other hand, we want to emphasize the need for the medical body to know the legal religions in Romania and the obligation to cooperate with the clerical body of any cult or religion for this purpose. We consider that it is an ethical necessity to explain and impress on the students the respect for the object of the dissection on the cadaveric material and the determination of the students in the personal responsibility regarding each studied piece and its origin. On the other hand, it is opportune to find alternative variants of the study of anatomy and embryology in a different way than by the usage of human material. The scope of the subject made it mandatory to integrate in the working group a specialist in international relations and international law.

Key words: ethics, dissection, religion, international law

## **The importance of the relationship between depressive disorders and ischemic heart diseases**

Laura Ioana Bondar

*„Vasile Goldis” Western University of Arad*

**Abstract:** The relationship between the mind and heart disease dates back to antiquity, when it aroused the interest of all: philosophers, scientists, doctors, emperors and ordinary people.

Depression is a disease that is becoming more common these days, with a significant impact on public health. When this disease is accompanied by ischemic heart disease, morbidity and mortality increase exponentially among the general population. To improve the patient's quality of life, this intriguing relationship must be closely monitored, as both risk factors and pathophysiological links may be common. Moreover, people with depression have a higher risk of developing ischemic heart disease, but patients with heart disease also have a higher risk of developing depression.

In this study, the data were selected following a comprehensive analysis, in the period of 2021-2022, by direct investigation of 150 patients, as well as consulting the observation files of patients diagnosed with depressive disorders and ischemic heart disease in the Department of Psychiatry (Acute and Chronic Departments) within the Arad County Clinical Hospital.

For the patients included in the study, different scales were used to assess the degree of depression, such as: Hamilton Depression Rating Scale, Montgomery-Asberg Depression Rating Scale, Beck Depression Inventory.

The study shows that out of the total number of patients investigated, 80% required early cardiological and psychiatric intervention.

This confirms the importance of individualized multidisciplinary approach to management, because the collaboration between psychiatrists and cardiologists can be an additional benefit to patients.

## Climate changes in 2022 and the impact on the world's economies

Marcel Grec

*„Vasile Goldis” Western University of Arad*

**Abstract:** Global warming is the continuous increase in recorded average temperatures of the atmosphere in close proximity to the soil, as well as ocean water, observed in recent decades. The EU report on the consequences of global warming on the security environment draws attention to the fact that the melting of Arctic ice could make exploitable natural resources such as fishing, or the natural gas and oil deposits that are currently trapped under the frozen continental shelf. This could generate divergences between Russia, the United States, Canada, Norway and Denmark.

In order to reduce CO<sub>2</sub> emissions, it is recommended to use energies that are not based on combustion technology, such as solar energy, hydraulic energy and wind energy. Capturing solar energy is difficult, the current recommendations are that it be captured in the form of biomass. The current exploitable hydraulic energy is limited and cannot meet demand, but it plays a key role in covering the load peaks. Wind energy is only available in certain areas, and the yield of its capture is low.

Up to 20% of the world's GDP may be lost annually due to the steady increase in CO<sub>2</sub> emissions into the atmosphere. This is the main conclusion of the Stern Report, presented in Bucharest by one of its authors, Dimitri Zenghelis. Published on October 30, 2006, by British economist Nicholas Stern, the 700-page report examines the impact that global warming is having on the world economy. Zenghelis treats the estimates with reservation, but with a claim of completeness: "The whole problem of global warming is based on probabilities. We cannot know exactly what is the cause of this phenomenon. There is some uncertainty about the link between the amount of CO<sub>2</sub> in the atmosphere and rising temperatures. We are dealing with uncertainty built on uncertainty. That is why we should be very skeptical of people who come up with accurate figures and precise forecasts of the consequences." He also said that investing 1 percent of global GDP annually to eliminate the effects of climate warming could be an environmentally and economically effective

solution, with the difference between the costs of action and non-action being between 4 and 19 percent of the world's gross domestic product.

Conclusions Summary is as follows:

- Global warming is, according to observations, an indisputable fact.
- The scientific community admits that the main cause of global warming is the increase in the concentration of CO<sub>2</sub> in the atmosphere as a result of human activity.
- The effects of global warming degrade the quality of life on Earth.
- Humanity can and must take steps to stop its contribution to global warming.

#### Partial BIBLIOGRAPHY

- 1) 'Kyoto Protocol', the official text
- 2) IPCC – "Climate change and biodiversity"
- 3) IPCC- "Technologies, policies and measures to mitigate climate change"
- 4) IPCC- "Stabilization of atmospheric greenhouse gases: physical, biological and socio-economic effects"
- 5) IPCC- "Effects of the CO<sub>2</sub> reduction proposals"

## Theoretical foundation of biomedical research in 2022

Marcel Grec

*„Vasile Goldis” Western University of Arad*

**Abstract:** In general, physicians make a clear distinction between "therapeutic" experimentation and "cognitive" experimentation. In reality, the scientific experiment in medicine has a well-defined epistemological intention. Its purpose is to gain knowledge. "Therapeutic" experimentation is a test of a human person, a process of treatment, diagnosis or prevention, which can directly influence the health of that person and at the same time allow the enrichment of knowledge (for example: the test of the Covid-19 vaccine in a population threatened by the disease). Clinical research meets these general requirements. The doctor can apply a new treatment if, according to his conscience and his own moral values, he gives hopes of saving his life, restoring his state of health or reducing his suffering. Experimental treatment can only be done if there is informed consent of the patient, provided that his capacity is not affected by internal or external factors. The fight against Covid-19 pandemic brings new academic talks regarding ethics in medicine and in laboratory research.

Partial bibliography

1. Roșca Liudmila. The ethical ideal, the survival of contemporary man and the formative potential of bioethics // The strategy of survival from the perspective of bioethics, philosophy and medicine / Collection of scientific articles. Vol 20. Red. responsible Dr. hab. in philosophy, prof. univ. T. N. Țârdea. - Chisinau: Print-Caro, 2014.
2. Rusnac Daniela. The role of humanitarian expertise in the strategy of survival // The strategy of survival from the perspective of bioethics, philosophy and medicine / Collection of scientific articles with international participation. Vol 21. Red. responsible, Dr. hab. in philosophy, prof. univ. Teodor N. Țârdea. - Chisinau: CEP "Medicine", 2015.

## **Biochemical methods used to determine the genetic disease of carbohydrates metabolism**

Luminița Pilat

*„Vasile Goldis” Western University of Arad*

**Abstract:** Biochemical methods used to determine the genetic disease of carbohydrates metabolism

Carbohydrates metabolic disorders result due to the defect in one or more enzymes involved in carbohydrates metabolism.

Pyruvate dehydrogenase complex deficiency has been considered one of the most common biochemically proven causes of congenital lactic acidosis. This is one of the most common neurodegenerative disorders associated with abnormal mitochondrial metabolism. The enzyme catalyzes the conversion of pyruvate into acetyl CoA, the first step of Krebs cycle.

Malfunction deprives the body of energy and pyruvate which is derived from catabolism of carbohydrates is not converted into acetyl CoA.

The result is a buildup of lactate and alanine.

Keywords: pyruvate dehydrogenase complex, Krebs cycle

## V. myrtillus extracts comparative analysis - Phytonutrient Profiles, Antioxidant Capacity and in vivo rescue effects tested in a D. melanogaster model

Carmen Neamțu<sup>1</sup>, Andreea Adriana Neamțu<sup>2</sup>, Endre Mathe<sup>1</sup>, Violeta Turcuș<sup>1</sup>, Neli Kinga Olah<sup>1</sup>

<sup>1</sup>„Vasile Goldis” Western University of Arad, <sup>2</sup>University of Oradea (Romania)

**Abstract:** Bilberries (*Vaccinium myrtillus* L.) have been reported to hold a plentitude of health-promoting properties beyond basic nutrition, mainly attributed to their anthocyanin content and antioxidant activity. In this article, we built the phytochemical profile of three wild bilberry fruit extract formulations (aqueous, methanolic, and hydro-methanolic) using UHPLC-ESI-MS/MS putative analysis, identifying 88 individual phytochemicals, mainly flavonoids (total content  $8.41 \pm 0.11$  mg QE/g dw), free amino acids, polyphenols (total content  $21.68 \pm 0.19$  mg GAE/g dw), carboxylic acids, and vitamins. Furthermore, the antioxidant activity of the extract was assessed, reaching  $78.03 \pm 0.16\%$  DPPH free radical scavenging activity, comparable to literature values determined for bilberry extracts of other origin. Due to the increased prevalence of metabolic syndrome and based on the reviewed benefits of bilberries, we tested the most potent formulation of our bilberry extracts in this biological context. The in vivo rescue effect of a bilberry extract supplemented diet on *Drosophila melanogaster* was assessed by monitoring biochemical and genomic markers. Hemolymph trehalose levels were halved upon addition of 3% hydro-methanolic bilberry extract to a high-sugar (1.5 M sucrose) diet, as compared to the non-supplemented high-sugar diet. Noteworthy, the rescue seen for flies kept on the bilberry extract supplemented high-sugar diet appeared to parallel the trehalose levels observed in the case of the control diet (50 mM sucrose) flies. Moreover, next to the trehalose-lowering type of in vivo effects, other gene expression related rescues were also detected for genes such as InR, Akh, AstA, AstC, Irk, Npc2g, and CCHA2 upon supplementation of the high-sugar diet with our hydro-methanolic bilberry fruit extract. Our findings suggest that such a bilberry fruit extract could generate physiological and genomic type of

compensatory mechanisms so that further translational approaches would advance the understanding of some human specific pathological conditions.

## Work of microbial resistance from suprainfections patients with COVID-19 in Intensive Care Unit

Teodora Daniela Marți<sup>1,2</sup>, Florentina Gabriela Țapoș<sup>1</sup>, Gabriel Alin Mișu<sup>1</sup>

<sup>1</sup>, „Vasile Goldis” Western University of Arad, <sup>2</sup>Emergency Arad County Hospital

**Abstract:** The work objective estimated the prevalence of microbial resistance and the use of antimicrobial substances in the Anesthesia and Intensive Care Unit of the Arad Country Emergency Clinical Hospital.

The descriptive analysis of the microbiology registers and the computer database of SCJU Arad was performed, that contain data about the patients diagnosed in the hospital with the new SARS-CoV-2, types of associated infections and antibiograms of isolated bacteria. The work was included patients from the ICU, hospitalized during 5 months, from June to December 2020.

We evaluated 54 SARS-CoV-2 positive patients who had a positive bacteriological diagnosis and we identified and isolated a number of 82 bacterial strains. The most common etiologies were *Klebsiella pneumoniae* (39.65%) and *Acinetobacter baumannii* (25.86%). The highest rates of resistance to antimicrobial were: *Klebsiella pneumoniae* - 91.30% for beta-lactamase inhibitors, 86.95% for 3rd generation cephalosporins, 82.60% for carbapenems but also for aminoglycosides, 78.26% of fluoroquinolones; *Acinetobacter baumannii* strains had high degrees of antibiotic resistance, as it follows: 100% compared to carbapenems and fluoroquinolones, 86.66% compared to aminoglycosides.

*Klebsiella pneumoniae* isolates are 78.26% sensitive to colistin, aminoglycosides/ 47.82%. Colistin remains the antibiotic that all isolates of *Acinetobacter baumannii* in our work are sensitive. Microbial resistance remains a major problem for Romania.

## **Polymeric micelles as promising nanocarriers for tumor-targeted drug delivery**

Herman Hildegard<sup>1</sup>, Leonard Atanase<sup>2</sup>, Anca Hermenean<sup>1</sup>

<sup>1</sup> *“Aurel Ardelean” Institute of Life Sciences, Vasile Goldis Western University of Arad,* <sup>2</sup> *Faculty of Medical Dentistry, Apollonia University of Iasi*

**Abstract:** Cancer is a leading cause of death worldwide, accounting for ten million deaths annually, or nearly one in six deaths. Conventional methods to treat cancer, such as chemotherapy, are associated with severe systemic side effects. Therefore, the encapsulation of anti-cancer drugs in nano-sized carrier systems has been proposed as an approach to increase the drug concentration at a localized site while reducing their side effects.

Polymeric micelles (PMs), obtained by the self-assembly of amphiphilic block or graft copolymers, have been used as promising nanocarriers for tumor-targeted delivery due to their favorable properties, such as excellent biocompatibility, prolonged circulation time, favorable particle sizes (10–100 nm), enhanced permeability and retention effect and the possibility of functionalization. These structures have proven their ability to deliver poorly water-soluble anticancer drugs, improve drug stability, and have good penetration and site-specificity, leading to enhance therapeutic efficacy. Furthermore, micelles can be economically produced on a large scale which is an important practical advantage.

In this study, we present a short review of novel drug delivery systems based on smart polymeric micelles, to overcome the poor solubility of chemotherapy drugs, to attenuate chemoresistance and to increase its bioavailability and therapeutic efficacy, but also to reduce the chemotherapy-induced intestinal mucositis effects.

**Acknowledgement:** This research was supported by a grant from the Romanian Ministry of Research, Innovation and Digitalization UEFISCDI, project number PN-III-P1-1.1-PD-2021-0346 (PD93/2022).

## Considerations regarding the "Cantemir and Irina-Ioana Riscutia" Collection Fund, a projection of the past towards the future

Corina Daniela Frandeu

*"Vasile Goldis" Western University of Arad*

**Abstract:** The beginnings of the Vasile Goldis Western University of Arad were marked by the great names of the Romanian intellectual and scientific elite, including the world-class Romanian anthropologist, the renowned professor Dr. Cantemir Riscutia 08.09.1923-17.01.2003 who, invited by the founding rector, the late Professor Dr. Aurel Ardelean gave the opening course at the law school on September 15, 1990. It is known that the great anthropologist always considered himself a son of Arad and wanted until the last moment of his life to donate to Arad the fruit of his work. a life for the establishment of a bio anthropology laboratory and a museum that would include the body of pieces researched and restored during his life in which he was seconded by his wife, the plastic artist Irina-Ioana Riscutia. This donation was made with the help of the deceased's wife.

The donated fund includes works published by the renowned anthropologist, Dr. Cantemir Riscuția, anthropological databases on research on 6,000 subjects from 22 villages in the Apuseni Mountains, paleoanthropological reconstructions of international scientific relevance (such as the head of the woman Pitecanthropus erectus Pitecanthropus modjokertensis baby's head, 1,350,000 years old - copies of originals on display at the Museum of Anthropology in Java, Indonesia, donated Andreescu or Nicolae Bălcescu, the unique bust that reproduces the face of Ludwig van Beethoven from his youth, an absolute premiere made by reconstructing a plaster mask of the composer in the workshop of Constantin Baraschi), expertise and reconstructions interesting, on the contrary, the field of forensics (Râmaru case), a rich correspondence with top figures from the world of anthropology (professors Mihail Gherasimov, Ralph von Koenigswald, Teucu Jacob, etc.), anthropological tools and, not least, a very valuable specialized library.

In this paper we want to bring to the Arad Academic Days a projection of the size and value of the Fondem Cantemir Riscutia

and Irina Ioana Riscutia owned by our university, a fund from which modestly in 2018 we made together with a dedicated team an exhibition and a potential base research in the field.

## **Changes in tight-junctions of the neurovascular unit in age-related brain disorders**

Laura Costea, Adriana Radu, George Pribac

*"Vasile Goldis" Western University of Arad*

**Abstract:** As the percentage of older individuals increases in most countries, so does the number of age-related neurodegenerative disorders, such as Alzheimer's disease and Parkinson's disease. Even without such pathology, normal aging of the cerebral microvasculature leads to impaired cognitive functions. Cerebral micro-vessels are part of a bigger structure referred to as the neurovascular unit, which encompasses the relation of neural tissue and brain vasculature. The most important cellular components of the neurovascular unit are cerebral endothelial cells, pericytes, astrocytes and neurons. All of them together form the brain-blood barrier, a highly-selective semi-permeable border. The proper function of all these structures is critical for brain health. We will concentrate on tight junctions (TJ), which are inter-epithelial adhesion complexes that control paracellular permeability. After an overview of the neurovascular unit components, we will examine how some of the most important proteins in TJs (claudin 5, occludin and zonula occludens 1) are affected in normal aging, aging of the immune system and age-related neurodegenerative disorders. Identifying and describing changes in the components of the neurovascular unit may lead to further scientific research in this field and the development of therapies for these disorders.

## ***Cichorium intybus* local populations biodiversity screening and their importance in diet**

Mihali Ciprian Valentin, Neciu Florin, Saplacan  
Gheorghe, Dragomir Neculai, Mathe Endre, Neamț Radu Ionel,  
Mizeranschi Alexandru Eugeniu, Ilie Daniela Elena

*”Vasile Goldis” Western University of Arad*

**Abstract:** This is a preliminary characterization screening study of a several spontaneous flora populations belonging to the species *Cichorium intybus* / common chicory and cultivated varieties Spadona and Puna (varieties, already used in the diet of breed animals due to the high percentage of protein). The samples, individuals belonging to local populations of the species *Cichorium intybus* / common chicory were collected from the main Romanian regions: Maramureș, Moldova, Dobrogea, Muntenia, Banat, Crișana, Transylvania and individuals belonging to the Spadona, Puna variants, respectively. It was performed a genetic analysis of nuclear, chloroplastidial, mitochondrial and intergenic genetic markers: ITSs [(ITS-u1 / ITS-u4), ITS1 (transcribed spacer), ITS2 (transcribed spacer), ITS3, ITS4], nad1 / 2–3, cox1, matK, rbcLa, rpoB, rpoC1, psbA-trnH (intergenic spacer-chloroplast), rbcL-accD (intergenic spacer-chloroplast) trnL-trn (intergenic spacer-chloroplast). Biochemical analysis was performed for P, K and N total protein respectively (%). In genetic analysis, the similarity matrices for analyzed molecular markers correlated with the sampling locations and the cultivated varieties Spadona / Puna indicate the Constanța county population as the closest to the cultivated variety – Spadona and the local populations from Arad/AR Hunedoara/HD, Caras-Sebeș/CS and Bihor/BH counties exhibits the highest genetic interpopulational similarities. In biochemical analysis, the highest values of nitrogen correlated with protein (%) was presented in Constanța/CT (2.74 N2 / 17.13% protein) and Sibiu/SB (2.72 N2 / 17.00% protein) populations, even higher than in the cultivated variety (Spadona - 2.13 N2 / 13.31% protein). Concluding, the common chicory from Constanța and Sibiu counties populations are

the closest to the cultivated variety - Spadona, these populations are the best suitable candidates in a possible plant ameliorating program.

## SECTION II

### INTERDISCIPLINARITATE ÎN SPECIALITĂȚI MEDICALE

### CROSS-DISCIPLINARITY IN CLINICAL MEDICINE

#### **Modern treatment in polycythemia vera in the Hematology Department of Arad**

Coralia-Adina Cotoraci, Alciona Sasu, Alexandra Nădăban Alexa

*„Vasile Goldis,, Western University of Arad, Faculty of Medicine;  
Hematology Department, Clinical County Emergency Hospital of  
Arad*

**Abstract:** Polycythemia Vera, Vaquez's disease, described in 1982 (PV), is a relatively indolent chronic myeloproliferative neoplasm with a median survival of more than 35 years in young patients, but its natural course may be interrupted by thrombotic, fibrotic, or leukemia events. Modern therapy addresses the intimate changes at the molecular level that produce this disease. This study follows the patients who received this new treatment, since its introduction in Romania, from a clinical and paraclinical point of view.

## **Evaluation of thrombotic risk and prophylaxis of thrombotic events in pregnant women with thrombophilia**

Coralia-Adina Cotoraci, Alciona Sasu, Alexandra Nădăban Alexa,  
Daniel Papiu

*„Vasile Goldis,, Western University of Arad, Faculty of Medicine;  
Hematology Department, Clinical County Emergency Hospital of  
Arad*

**Abstract:** Thrombophilias are diseases that pathologically increase blood clotting. These diseases can be inherited or acquired. Possible complications are thromboembolic events, which occur depending on the severity of thrombophilia, but also other factors related to lifestyle, pathological history of the patient, etc. This study describes the treatment strategy for the prevention of these thromboembolic events that the Arad Hematology Clinic addresses for pregnant women with thrombophilia followed by the clinic's doctors.

## **Genetic and epigenetic implications in child asthma-about the length of telomeres**

Simona Dumitra, Viorica Lazăr, Carmen Cârdea, Carmen Stănculeț,  
Claudia Roman, Adelina Pangratie, Roxana Hreniuc

*„Vasile Goldis” Western University of Arad*

**Abstract:** Telomeres are repetitive DNA sequences located at the terminal end of chromosomes, being essential in maintaining genomic integrity.

Their progressive shortening by cell division leads to cell senescence and apoptosis.

Telomeres' length reduction has been proposed as a general marker of aging, related to morbidity and mortality in many degenerative or chronic diseases, including asthma.

The meta-analysis of the articles studying the correlation between child asthma and telomere length statistically showed few results, in small groups, with different variables and associations - race, pollution, therapy, dietary factors.

Conclusions

Short telomeres are associated with persistent asthma.

At birth short telomeres are not risk factors for toddler asthma.

It has not yet been established a direct connection between child asthma and telomeres alteration.

Cortisone treatment for asthmatic children has a protective effect on telomeres being under the action of the pollutants.

Prospective studies on larger groups of children are needed in order to establish stronger statistical correlations, this topic became interesting for researchers only in the last years.

Key words

Child asthma telomeres

## **Study of fragility fractures the third age**

Monica Horge

*„Vasile Goldis” Western University of Arad*

**Abstract:** Fractures at any level are a real public health problem posed by the clinical picture and complications arising secondarily. There is a very high incidence of fractures in the elderly population, with frequent complications and high mortality.

The quality of life of these patients is affected by the disabling consequences, often for their entire life and also social and economic repercussions of global concern.

One of the causes of fractures in the elderly population is osteoporosis, which results annually worldwide into more than 8,9 million fractures in U.S.A , Europe and Japan.

Key words: fracture, aging population, osteoporosis, prevalence, risk fracturing

## **Medico-legal aspects of traumatic injuries produced by shooting**

Florin Mihai Șandor, Alexandru Neșiu, Boru-Stănescu Casiana, Cris Precup

*„Vasile Goldis” Western University of Arad*

**Abstract:** Firearms are mechanisms or mechanical instruments that acts through a projectile, a traumatic agent with a mechanical-dynamic effect, the displacement of which is determined by the burning of an explosive powder. These represent a special category of vulnerable agents, the traces produced by shooting occupying a special place in general pathology, in forensic pathology, as well as in forensics.

Knowledge of the morphological features of gunshot wounds, as well as the forensic issues raised by shooting death, are essential elements on which the resolution of judicial problems concerning violent shooting deaths depends. Collaboration between the forensic doctor, the forensic expert and the responding officer is essential in investigating the conditions of the shooting.

In forensic practice, the analysis of the conditions under which the shooting occurred can be extremely difficult and poses a series of complex issues that must be established by forensic expertise in the forensic report of autopsy.

## **Particular aspects in the onset of personality disorders. Case presentation**

Robert Almășan

*„Vasile Goldis” Western University of Arad*

**Abstract:**Introduction: A personality disorder is an enduring pattern of inner experience and behavior that deviates markedly from the expectations of the individual's culture, is pervasive and inflexible, has an onset in adolescence or early adulthood, is stable over time, and leads to distress or impairment. Around 10% of individuals worldwide suffer from a personality disorder. With prevalence rates of up to 24% in primary care and more than 30% amongst psychiatric patients, personality disorders, as a group, range amongst the most frequent disorders treated by psychiatrists and psychotherapists.

Case presentation: The patient is a 21 year old single male who presented for the first time to his local mental health center. His accusations included identity disorders, insomnia, emotional lability, impulsivity, heteroaggression, recurrent suicidal thoughts, feelings of inner emptiness, intrapsychic tension, irritability, increased anxiety, poor self-control even to the point of cutting the forearm with a razor; the reasons for these feelings and actions he could not identify. There was no history of any previous psychiatric contact. During the two weeks of hospitalization, following psychodiagnostic evaluations, anamnestic, clinical data and paraclinical examinations, a borderline personality disorder was detected.

Treatment: Psychiatric drug treatment was initiated to stabilize psychodynamics and behavior to ensure patient integrity. The patient also took part in group psychotherapy but also in the individual ones within the hospital, which led to a favorable evolution.

Result: Given that the patient was in a psychiatric service for the first time, the response to treatment was adequate, the case having a slow but favorable evolution with the partial amendment of the symptomatology to the point where he even gained a partial insight on the pathology during the two weeks of hospitalization. However, the management of the case was a difficult one, in the first days of hospitalization the patient was sometimes uncooperative, demanding, frustrated and irritable.

Discussions: Numerous symptoms of the patient and his behavior made us focus on a borderline personality disorder, given that this case meets 7 of the 9 diagnostic criteria referring to DSM V. Even the increased prevalence of this disorder is not negligible, because according to some statistics it can be even 6% among the general population and about 20% among patients admitted to psychiatric wards. Recognizing behaviors that deviates from normal norms, cardinal signs of pathology, seeking specialized help as soon as possible, and initiating treatment with both medication and psychotherapy can drastically reduce dramatic events that may occur due to this disorder.

Conclusions: We can consider this case a therapeutic success, especially if we refer to the rather short duration of hospitalization, with all the costs involved, the patient's health visibly improved both physically and especially mentally, gaining insight into the pathology which gives us hope about the patients compliance with treatment; and last but not least, the satisfaction of such a case, which could at any time get out of control in an irreversible manner, could even result in a successful suicide attempt, but which, due to multiple psychopharmacological and psychotherapeutical interventions, resulted in the patient being discharged safety for both him and society.

## **Long - Covid 19 syndrome associated with Pneumococcal Meningoencephalitis. Clinical features in a pediatric case**

Lazar Viorica, Dorin Lazar, Crisan Carmen, Stănculeț Carmen, Claudia Roman, Pangratie Adeline, Hreniuc Roxana, Crasoveanu Gabriela, Greta Greco, Daniela Teodora Marti, Simona Dumitra

*„Vasile Goldis” Western University of Arad*

**Abstract:** Introduction. Numerous clinical trials have shown that 10% of patients diagnosed with COVID-19 experience persistent symptoms after infection for another month, and 1.5-2% of patients may experience symptoms up to three months after the disease.

Bacterial meningitis is a severe condition, accompanied by a high degree of mortality or permanent neurological sequelae. In modern medicine, the appearance of this condition should be a perfectly controllable event from a medical point of view. Pneumococcal meningitis is rarely primary, more often secondary.

Objectives. The pathogenic mechanism by which the disease occurs proves to be difficult to demonstrate, which raises questions about the diagnostic or therapeutic approach.

Material and method. A 2-year-old patient from an urban area, with 3 days before hospitalization, presents fever, chills, drowsiness and an extremely affected general condition. After one day, it shows purple elements on the chest, upper and lower limbs, scrotal and dorso-lumbar area. It is cardiovascular compensated. Pulmonary bronchial rhonchi present bilaterally spread on both areas of the lung. SpO<sub>2</sub> 96% spontaneous. Shows neck stiffness, positive Kerning sign. Under antibiotic therapy with Meropenem and Vancomycin, Dexamethasone, CERL, PEV with electrolytes and stimulants, after 10 days the clinical evolution is favorable.

Conclusion. In pediatric patients, the symptoms are modest and misleading in diagnosing bacterial meningitis. Treatment, even if well managed, cannot cure all diagnosed cases, but there are exceptions. It is well known that "every meningitis has its own encephalitis and every encephalitis has its own meningitis."

Key words: bacterial meningitis, pneumococcus, long covid-19 syndrome

## **Special occupational medicine problems caused by the pandemic of covid 19**

Narcisa Carmen Mladin, Abhinav Sharma, Monica Cecilia Habuc,  
Stelian Ioan Morariu

*„Vasile Goldis” Western University of Arad*

### **Abstract:** Introduction

Covid 19 pandemic has created a multitude of dysfunctions in the provision of occupational health care.

The purpose of this paper is to highlight the major issues that the specialty has faced in the last two years.

### Material and method

The material was represented by the employed staff as well as by the patients under special supervision.

### Results and discussions

During the pandemic, Occupational health services were carried out with the provision of measures to prevent the spread of SARS COV 2 infection both among workers and medical staff.

Measures have been taken into account as:

- limiting the contact of the outpatient health personnel with the patients
- contraindications to conducting investigations (Spirometry)
- the transformation of some occupational medicine departments into covid support units led to the impossibility of hospitalization in order to diagnose and treat the patients under supervision

### Conclusions

1. During the covid 19 pandemic Occupational medicine suffered a lot
2. Reporting of the occupational diseases has been severely affected
3. Surveillance of patients with occupational disease was not possible, which worsened the health of these patients

## **Mood disorders in the context of the pandemic**

Maria Cristina Precup, Cris Precup, Florin Mihai Șandor, Butari  
Denis, Ligia Piroș

*„Vasile Goldis” Western University of Arad*

**Abstract:** Mood disorders are common in patients diagnosed with COVID 19, during both period of illness and convalescence. Given the negative media coverage of the serious cases and deaths, over a long period of time, they can lead to many mood disorders, in both patients and they relatives, who need or wood frequently need psychological support or psychiatric treatment. The frequent stigmatization in patients diagnosed with COVID 19 can in many cases lead to mood disorders. Affective or mood disorders most often are including depressive and maniac, or both mixed syndromes, but which may have a different intensity and evolution. The major risk of depression in severe cases is determined by the existence of the suicidal component, and suicide can also occur when the patient has the specific prescribed medication administered. Statistical data from the literature show that approximately 10-15% of patients with various forms of depression, but most often those with major depression, considered to be the most severe form of depression, according to the specific criteria, end up committing suicide, and the psychologist has a very important role in the treatment of depression to prevent this tragic end up.

## **Dental treatment strategy and bioethics in case of patients with Alzheimer disease**

Maria Cristina Precup, Claudiu Leucuța, Ligia Piroș, Florin Mihai  
Șandor, Zsolt Gyori, Cris Precup

*„Vasile Goldis” Western University of Arad*

**Abstract:** The Alzheimer disease represents a neurological progressive degenerative illness that leads to an inexorable loss of the cognitive functions (memory, speaking ability, space-time orientation, etc.). Following the aging of the population, the prevalence of this syndrome has been growing. By this study is trying to establish some strategies of treatment, depending on the different stages of the disease. The study has been performed in the Oral Rehabilitation Clinic from Arad on the patients in the first stage of the illness and on the institutionalized people in advanced stages. The treatment for the patients in early stages is done following the ordinary precautions concerning the aging people. The treatment sessions must be short, maximum 45 minutes, as it possible in the morning. The complex rehabilitation has been done with the writing consent of tutors. In the final stages of the disease the accent should stick on the emergency dental treatments and oral hygiene, in close cooperation with the patient's relatives.

## Mechanisms of oxidative stress and maternal-fetal involvement

Ioana Maria Cioran Sgaverdea Vornic

Afilon Jompan

*„Vasile Goldis” Western University of Arad*

### **Abstract: Oxidative stress**

Oxidative stress is the phenomenon that occurs when there is an imbalance between the production and accumulation of reactive oxygen species in cells and tissues and the ability of a biological system to detoxify these reactive products. Reactive oxygen species are normally generated as by-products resulting from oxygen metabolism. They have several physiological roles, such as, for example, the role of signal molecules. But under certain conditions favored by environmental stressors and xenobiotics, there is a considerable increase in the production of reactive oxygen species, thus resulting in the imbalance that leads to damage to cells and tissues: oxidative stress.

If the production of SOR increases, harmful effects on important cellular constituents such as proteins, lipides and nucleic acids will begin to appear. There is significant evidence indicating that oxidative stress may be responsible, to varying degrees, in the emergence or progression of several diseases (cancer, diabetes, metabolic disorders, atherosclerosis, cardiovascular diseases).

The sources of generating free radicals are both endogenous and exogenous. Endogenous sources of SOR generation include activation of immune cells, inflammation, ischemia, infection, cancer, excessive exercise, mental stress, and aging.

When they are in excess, SOR give rise to the phenomenon known as oxidative stress. Oxidative stress occurs when there is an imbalance between the formation of free radicals and the ability of cells to eliminate them. For example, excess hydroxyl radical and peroxy nitrite can cause lipid peroxidation, resulting in damage to cell membranes and lipoproteins. Consequently, malondialdehyde (MDA) and conjugated diene will form, which are cytotoxic compounds and mutagens. Due to the fact that lipid peroxidation is a chain reaction, it will spread very quickly, affecting a large amount

of lipid molecules. Oxidative stress can cause protein conformational changes that could cause their enzymatic act to be lost or impaired.

Oxidative stress can also lead to DNA alterations.

Uncontrolled, oxidative stress can be responsible for inducing several conditions, both chronic and degenerative, can speed up the aging process and cause acute conditions (e.g., stroke).

Although SOR first came to the attention of biologists as potentially harmful byproducts of aerobic metabolism, it is now recognized that they play important roles as secondary messengers of several intracellular signaling pathways. (18) Finally, the concept of equilibrium draws attention to the fact that there will be a gradual response to oxidative stress. Therefore, minor balance disorders can lead to homeostatic adaptations in response to changes in the proximate environment, while major disturbances can lead to irreparable damage and cell death. The boundary between physiological and pathological changes is difficult to specify.

Oxidative stress manifests itself at the level of the maternal-fetal interface since the beginning of pregnancy. It has a role both in the normal development of the placenta and in the pathophysiology of complications: miscarriage, preeclampsia, intrauterine growth restriction (IUGR) and premature rupture of membranes. (35,36)

The human placenta is a unique organ since chorionic villi are initially formed over the entire surface of the chorionic sac. However, starting with the end of the first trimester of pregnancy, the villi on the superficial pole regress, thus shaping the permanent discoid placenta. Nowadays, oxidative stress is believed to play a central role in this process.

## **Pena Shokeir Syndrome**

Rujița Ciurea

*„Vasile Goldis” Western University of Arad*

**Abstract:** Rare diseases are those that affect less than five people in 10,000 inhabitants, for which there are not yet well-defined methods of diagnosis and treatment. These include Pompe disease, Niemann Pick disease, Gaucher disease, Pena Shokeir syndrome.

Pena Shokeir syndrome is described as a lethal syndrome characterized by arthrogyriposis and dysmorphism resulting from fetal akinesia.

It is classified in-Type I includes: Fetal akinesia / hypokinesia characterized by multiple joint contractions, facial abnormalities and pulmonary hypoplasia.

-Type II includes: Cerebro-oculo-facial-skeletal syndrome (COFS) which is characterized by a rapidly progressive neurological degeneration resulting in a cranial atrophy, characterized by intracerebral calcifications, cataracts, microcornea, optic atrophy, progressive joint contractures and retardation stature-weight.

The differential diagnosis is made with Trisomy 18 which may be accompanied by the presence of similar symptoms, especially craniofacial, intrathoracic abnormalities and limb pathology.

The prognosis is fatal disease, a significant number of affected fetuses are born prematurely and 30% of them survive. Most of them die in the first weeks of life. The leading cause of death is pulmonary hypoplasia and brain malformations. However, survival after 12 months of age has been reported.

The case presented in the paper is of a child of 1 year and 5 months known with Pena Shokeir Syndrome type II with severe visceral and skeletal malformations, severe stature-weight retardation, congenital cardiomyopathy under chronic treatment at home with Captopril, who is admitted to Pediatrie I with cough, dyspnea, fever (38.6) and eating disorders - vomiting from about 2 days.

The evolution in our clinic is favorable under etiological and symptomatic treatment, was discharged with a favorable clinical condition.

The subsequent death occurred at home following the decompensation of the existing cardiac pathology.

Keywords: Pena Shokeir syndrome, prognosis, diagnosis, evolution.

## **Acute ischemia of left lower limb and massive pulmonary embolism**

Florica Pop, Monica Puticiu, Alberto Radu Jipa

*„Vasile Goldis” Western University of Arad, Arad County Hospital,  
Emergency*

**Abstract:** Man of 47 years old is brought by ambulance with paraesthesia at the shank and left foot, sudden feels dizziness. He has no previous medical history. As risk factors we have: smoking, caffeine user, stress, sedentary (truck driver).

At primary evaluation in emergency department patient is conscious, responsive, AV = 98b / min, TA = 160 / 112mmHg, SaO<sub>2</sub> = 98% TC = 36.6C, slightly anxious. Secondary evaluation highlights at the examination of the left lower limb following items: local paleness, cold, lack of pulse in peroneal artery, posterior tibial artery, popliteal artery, femoral left artery and paresthesia. A few minutes after arrival clinical condition suddenly worsens, patient is showing : dyspnea, tachycardia (AV = 126b / min), paleness, TA = 120/104 mmHg, SaO<sub>2</sub> = 86% D-Dimer > 5ug / ml and EKG BRD with SI QIII, TIII. Patient receives 5000 IU intravenous heparin bolus and CT angiography with contrast agent is performed (thorax and abdomen with pelvis) that highlights the pulmonary artery trunk of 31mm caliber, APD and APS 26mm caliber. Endoluminal thrombus in the pulmonary arteries, extended at the level of superior lobar arteries that are completely obstructed, extended also to the bilateral lower lobar and right middle artery with their branch segments almost completely obstructed. Aorta and collateral branches permeable of normal size. Common iliac artery, internal and external permeable with calcified atheroma and segmental stenosis in the internal iliac. Right common femoral artery permeable in the incipient segment with parietal thrombus occluding in a proportion of about 30%. Left common femoral artery shows an intraluminal clot which completely obstructs. Retractable fibrous lesion in the right posterior sinus phrenic rib. Several nodules in the bilateral pulmonary area. Trachea and main bronchi free. Without fluid in the pleural cavity.

Conclusion: massive pulmonary embolism and acute ischemia of the left lower limb

Is administered intravenously thrombolytic (Actylise) with restore circulation in left lower limb and local,general and pulmonary symptom relief (warm skin; disappearance of paleness, paralysis, pain and mild paresthesia; SaO2 99-100%; without dyspnea and tachycardia). Patient is hospitalized in coronary intensive care for therapeutic and clinical monitoring.

## **Dissecting aneurysm of the abdominal aorta in politrauma**

Florica Pop, Alberto Radu Jipa, Monica Puticiu

*„Vasile Goldis” Western University of Arad, Arad County Hospital,  
Emergency*

**Abstract:** A 62 years old male is brought in by an ambulance after he has fell from approximately 9 meters (third floor). The family denies any previous pathology or medication taken by the patient. In the emergency department the patient is conscious, responsive, but with mild dyspnea, and bradycardia (46 b/ min), the skin is pale and sweaty. The secondary evaluation shows subcutaneous emphysema and bone cracking sounds on the right side of the chest. No breathing sounds can be heard on the entire right side of the chest and on the lower part of the left side of the chest. Immediately FAST is performed and the findings were: the absence of the pleural sliding on the right side of the chest, and a clear abdomen. Immediately right thoracic drainage is performed (through the tube air and blood is evacuated). The chest CT scan shows right hemo-pneumothorax, multiple rib fractures on the right side of the chest and left pneumothorax. Another tube is placed on the left side too and following that the respiration becomes normal, the respiratory effort diminishes. But in a few minutes the patient becomes again pale, sweaty, with enormous pain in the lower abdomen and the lower limbs, he loses sensibility in that area and also he cannot move he's lower limbs. Several possible causes of these symptoms are evaluated and hemodynamic support (crystalloids and drugs) is started. The contrast enhanced CT scan of the abdomen shows an Aortic aneurysm which extends from the renal artery towards the aortic bifurcation.

## **The role of corticosteroid therapy in the asthmatic patient during the Covid pandemic**

Paula Barata, Dana Olar, Gheorghe Nini

*„Vasile Goldis” Western University of Arad*

**Abstract:** Introduction: SARS-COV2 infection can cause extremely variable forms of the disease, from asymptomatic infections to severe forms with a possible fatal outcome. The ensuing delayed and strong adaptive immune response (high affinity IgM and IgG antibodies) causes severe inflammation and triggers a cascade of mediators (complement, coagulation and cytokine storm), leading to complications that often require intensive care and can lead to death. Contents: Asthma causes chronic inflammation of the airways, but the causes of this inflammation are not always known. It can occur due to allergies, stress, but can also be congenital (from childhood). In 2020, the WHO lists asthma as a pre-existing disease that complicates the course of COVID-19 infection, however, case studies in COVID hospitals contradict official data. In most studies, asthma was absent from a top 10 of the associated diseases suffered by patients who died of coronavirus, practically only 5% of them also had asthma among comorbidities. This appears to be due to different immune responses in those with asthma, differences in ACE2 expression, and the protective effect of inhaled corticosteroids. Although there is still controversy in this direction, it has been shown that in some cases the administration of corticosteroids (inhalers or systemic) influences the evolution of the infection with the new virus. Asthmatic patients who take this treatment for a shorter or longer period of time appear to be better protected from the severe course of COVID-19. This does not mean that I do not get the disease, but that I go through a milder form without the need for hospitalization and intubation. Conclusion: Viral respiratory infections are generally the most common cause of asthma attacks. Bacterial respiratory infections rarely cause asthma attacks, especially severe ones. Many patients discover asthma after developing pneumonia or a viral infection.

## Case presentation – Acute respiratory failure

Puticiu Monica Iuliana<sup>1</sup>, Dinu Alexandra Ana<sup>2</sup>, Beuca Mariana<sup>2</sup>,  
Noghiu Robert Caius<sup>2</sup>, Țapoș Gabriela Florentina<sup>1</sup>

<sup>1</sup>, „Vasile Goldis” Western University of Arad, <sup>2</sup>Arad County Clinical  
Hospital

**Abstract:** Acute respiratory failure is defined as the incapacity of exchange between O<sub>2</sub> and CO<sub>2</sub>. First sign of acute respiratory failure is dyspnea. Most potential deadly cause are: obstruction of the superior respiratory airways, tension pneumothorax, massive pulmonary embolism, fatty embolism, neuromuscular conditions and anaphylaxis. Management of acute respiratory failure in the Emergency Department must follow the ABCDE algorithm.

Obstruction of the respiratory airways both superior and inferior represent a vital emergency.

Through this presentation we wish to highlight one of the causes for the acute respiratory failure namely laryngeal and glottis stenosis. This stenosis is been caused most likely by tumors. The principal symptom of this stenosis is representative by stridor. The stridor may be associate with a variety of causes: primary airways injury's, tumors, inhaling food or an object, vocal cords diseases, infection diseases, neurologically diseases, metabolic disorders last but not least anaphylaxis.

This case particularity was a incomplete obstruction of the larynx and glottis, tracheostomy was safely delayed.

## **Anatomic-physiological and histological aspects of the placenta**

Ioana Maria Cioran Sgaverdea Vornic, Afilon Jompan, Gheorghe Furău, Cristina Pasare, Oana Bisorca, Laurentiu Luca, Noemi Csipkar, Ana Maria Ardelean

*„Vasile Goldis” Western University of Arad*

**Abstract:** The placenta is the highly specialized organ of pregnancy, which supports the normal growth and development of the fetus. The growth and functioning of the placenta are precisely controlled and coordinated so that, the exchange between the mother's circulatory system and that of the fetus, between the nutrients and the metabolism products to be removed, have maximum efficiency.

### **The structure of the chorionic villi**

The main functional units of the placenta are the chorionic villi, structures in which fetal blood is separated from maternal blood by means of 3-4 cell layers, layers that make up the placental membrane.

Taking into account the stage of development, the structure of villi, vascular branches, histological characteristics, and cellular components of vascular structures, at least five types of villi have been described.

- Stem villi
- Immature intermediate villi.
- Mature intermediate villi.
- Terminal villi.
- Mesenchymal villi

**Stem villi.** This type of villi attaches to the chorionic plaque and is characterized by a dense fibrous stroma containing both large and small-sized vessels. Stem villi develop vessels with smooth muscle and with central stromal fibrosis. The trophoblast layer of stem villi is partially replaced by fibrinoid as the pregnancy progresses. The function of stem villi is to support the structure of the villous "tree". Endocrine activity and maternal-fetal exchange at the level of stem villi are usually negligible.

**Immature intermediate villi.** They are continuous, peripheral, immature, bulb-like of stem villi. This type of villi exhibits a more

lax or reticular stroma and Hofbauer cells, more prominent vessels and a discontinuous layer of cytotrophoblast cells. The outer layer, the syncytiotrophoblast, remains continuously throughout the development. Immature intermediate villi are considered the centers of growth of the villous "tree". It is considered that at the level of these villi, the maternal-fetal exchange is mainly carried out in the first and second trimesters, until the terminal villi are differentiated.

**Mature intermediate villi**. Mature intermediate villi are peripheral, long, and thin branches. This type of villi does not present fetal vessels in the stroma. From the mature intermediate villi will arise terminal villi. The high degree of fetal vascularization and the large weight in the exchange area make them important for fetal-maternal exchange.

**Terminal villi.** They are related to stem villi by intermediate structures. Terminal villi have an appearance of grape berries, being characterized by a high degree of capillarization and the presence of much dilated sinusoids. In the case of the term placenta, the terminal villi are smaller, with less stroma, with a layer of discontinuous cytotrophoblast cells and have 4-6 fetal capillaries, per transversal section. In the terminal villi, the fetal capillary vessels and the syncytiotrophoblast are separated only by a thin basal membrane, which makes these villi the most suitable for maternal-fetal exchange. In the normal mature placenta, the terminal villi make up almost 40% of the villi volume of the placenta. Due to the small diameters, the sum of their surfaces makes up about 50% of the total villi area.(3) Terminal villi shall be considered as the functional unit of the placenta. It is at this level that the transfer of electrolytes, O<sub>2</sub>, CO<sub>2</sub> and nutrients between the mother and the fetus is carried out.

**Mesenchymal villi** are the most primitive type of villi, from the early stages of pregnancy. The stroma is lax, the capillaries discrete, two layers of surrounding trophoblastic cells, a layer of cytotrophoblast cells surrounding the center of the villi, and the syncytiotrophoblast arranged at the outside of the villous surface. Fetal capillaries are poorly developed and never show sinus dilations. The unvascularized extremities of the mesenchymal villi are called villi buds. The function of mesenchymal villi is particularly important in the first few weeks of pregnancy. They are the place of villous proliferation and perform almost all endocrine

activities. With the development of pregnancy, their main function is to support the villous growth. In the term placenta, mesenchymal villi are less than 1% of the total villi volume.

## **Type 1 Diabetes insulin dependent and COVID 19**

Elena Claudia Roman, Viorica Lazăr, Carmen Stănculeț, Carmen Cindea, Adeline Larisa Pangratie, Roxana Hreniuc, Simona Dumitra

*„Vasile Goldis” Western University of Arad*

### **Abstract: INTRODUCTION**

The relationship between SarsCov2 infection and insulin-dependent diabetes mellitus in children is a current topic, researched by pediatric diabetologists in the last 2 years. Many experts claim that the disease can trigger the onset of insulin-dependent type 1 diabetes even in children without risk factors.

### **OBJECTIVES**

To present 2 cases of inaugural insulin-dependent type 1 diabetes in the context of SarsCov 2 infection.

### **MATERIAL AND METHOD**

M.A, female, 13 years old, no hereditary-collateral history and no significant personal pathological history, accuses with 7 days prior to hospitalization polyuria with nocturia, weight loss (3 kg), fatigue, reason for which the mother finds, at home, glycemia - 510 mg / dl and presented at the UPU for specialized investigations, with the suspicion of an onset of insulin-dependent type 1 diabetes.

R.V, male, 14 years old, no hereditary-collateral history and no significant personal pathological history, addresses Upu Children with abdominal pain, weight loss (10 kg in 2 weeks), slowed intestinal transit (stool absent for 9 days). The analyzes performed show high blood sugar values, which is why it is decided to continue the specialized investigations, with the suspicion of an inaugural type 1 diabetes.

In both cases, considering the epidemiological context - COVID 19, patients are tested SarsCov 2 rapid Ag and SarsCov 2 RT-PCR, the test results being positive, later confirming the diagnosis of insulin-dependent type 1 diabetes.

### **CONCLUSIONS**

In pediatric patients, there appears to be a close link between SarsCov 2 infection and the onset of insulin-dependent type 1 diabetes, which has recently been confirmed in the literature.

Keywords: diabetes, SarsCov 2, children

## Meningitis TB

Carmen Stanculet, Claudia Roman, Viorica Lazar, Carmen Cindea,  
Adelina Pangratie, Roxana Hreniuc, Simona Dumitra

*„Vasile Goldis” Western University of Arad*

**Abstract:** MeningitisTB is a major problem in the pathology of diseases with a poor socio-economic level resulting in a high percentage of disability and death.

The aim of the study is to present the difficulty of a positive diagnosis, the complex orientation of a multidisciplinary team and the undulating evolution of a TB case.

CASE PRESENTATION:

CC 4 years old girl, from rural area, poor socio-economic background, comes for the evaluation of a prolonged fever syndrome for 3 weeks associated with headache in the last 3 days.

The corroboration of the clinical data, the poor clinical condition, the poor life condition, the young age and the vaccination status (unvaccinated) lead to a possible TB encephalitis, which is why it is decided to carry out a lombar puncture.

Dg of TB is confirmed by monocellular cellularity, high of level protein, negative cultures, positive BK genetic test.

Skull MRI shows ischemic lesions excluding basilar meningitis or an evolving tuberculoma.

Few hours after the diagnosis confirmation and the introduction of the specific therapy, patient had generalized tonical-clonical convulsions with a progressive deterioration of neurological state requiring patient transfer to IntensiveCare.

The patient returned to Pediatric unit II for continuing tuberculostatic therapy, evolution being mixed with feverish crochet hooks and underlying convulsions.

After 2 months of tuberculostatic therapy, patient was discharged with much improved general state, with a good cardio-pulmonary status, bradylalia, with right motor deficit and with the recommendation to continue the treatment, infection disease monitoring, pneumology follow up (TB) and control after 6 months.

Conclusions: persistent fever and headache in a child under 5 years old, unvaccinated, from a poor social background raises the suspicion of a TB meningitis.

The diagnosis is very difficult to establish and requires patient follow up and treatment under a multidisciplinary medical team.

TBM has a high disability potential even if it is early diagnosed.

Key words: fever, headache, MeningitisTB, lombar puncture

## **Correlations for diabetic and dermatologic patients- a 5 year retrospective study of patients admitted in Arad's County**

Roxana Furău, Denisa Todor, Cristian Furău

*„Vasile Goldis” Western University of Arad*

**Abstract:** Introduction. Diabetes mellitus represents a major healthcare problem and it is known to complicate other diseases as well. Skin lesions are also a very common pathology and their association with diabetes is rather under diagnosed, although diabetes can generate a poorer evolution for dermatological patients as well as the skin complications can aggravate the condition of a known diabetic patient. Material and method. 10520 electronic registries of patients admitted in the period 2014-2018 in the Arad Clinical County Hospital with diagnosis of diabetes or dermatological conditions were statistically retrospectively analyzed in order to determine patterns of patients presenting both conditions and to describe a profile of such a patient. Results. 6439 patients with diabetes and 4101 dermatological patients were found, 1188 presenting both conditions. Gender distribution revealed a female predominance (53.14% for diabetes and 51.21% for dermatology). The profile we obtained suggested for diabetes female, retired, with low to medium education, in her sixties coming from an urban environment, while for dermatological lesions the profile was very similar, except most where belonging to a rural environment. Conclusions. Lifestyle and poor medical education correlates with higher incidence of both diabetes and dermatological lesions. The common features revealed by profiling patients with both conditions can be used by healthcare providers to target specific population for prevention and early recognize and treatment of these conditions.

## **Diabetes mellitus and dermatological lesions association's impact on quality of life**

Roxana Furău, Denisa Todor, Cristian Furău

*„Vasile Goldis” Western University of Arad*

**Abstract:** Introduction. The quality of life requires a state of well referring to physical, mental and social status and not only the absence of disease. Diabetes mellitus, being a chronic condition that affects 425 million people worldwide, determines by its complications such as degradation of sight, kidney failure, aggravation of vascular disorders, diabetic leg, nerve impairment which all can contribute to a lowering of the self esteem, depression and social deprivation. Materials and method. We used the EPICES score and Beck Depression Inventory (BDI) to investigate the socio-economic and mental health perspectives and analyzed statistically the outcomes, focusing on socio-demographic data like: age, gender, residence, level of education, occupation, marital status in BDI, chronic illness if present. Results. 1081 subjects replied to both EPICES and BDI questionnaires between January-June 2019. The mean age was 42.27 (SD 14.666) and 56.8% were female. The BDI score mean value was 16.31, Standard deviation SD (SD 12.925), with extreme values 0-56. The EPICES score mean value was 50.12 (SD 17.09273) with extreme values 7.10-100. DM was present in 11.47% (n=124) and HTN in 26.27% (n=284) of the responders. Depression was prevalent in 40.76% (n=505) of our sample, which is worrying; chronic illness was prevalent in 37.74% (n=408) and 64.95% of them were depressed (n=265) compared to 35.66% (n=240) of non chronically ill subjects. Conclusions. Diabetes and deprivation is, no doubt, a twin problem in Arad County, for the DM patients being worse than for general population. A large part of the subjects having both diabetes and associated dermatological lesions present a mild to moderate form of depression.

## **Arad's Maternal and Infant Care Project for communities in poverty in Arad County**

Cristian Furău<sup>1</sup>, Ioana Vornic<sup>1</sup>, Oana Todut<sup>2</sup>, Cristina Pasare<sup>2</sup>,  
Loredana Roşu<sup>1</sup>, Casiana Boru<sup>1</sup>, Laurenţiu Luca<sup>2</sup>, Gheorghe Furău<sup>1</sup>

<sup>1</sup>, „Vasile Goldis” Western University of Arad, <sup>2</sup>Emergency Clinical  
County Hospital of Arad- Ob-Gyn Department

**Abstract:** Introduction: For the last 10 years we have been providing prenatal, natal and postnatal care for disadvantaged women from poor communities such as Marului and Checheci neighborhoods in Arad and a community from Siria- Arad County.

Objectives: provide medical care and education for mother and infants living in communities in poverty in Arad County

Methods: A cooperative group from midwife, GP and obstetrician from Arad Hospital and university together with Karoliska experts and Networks NGO developed a protocol for improving maternal and infant care

Results: We will present our 10 year outcome of cooperation. Besides a high probability in improving medical care, the data collected will be used for research and clinical improvements

Conclusion: The project our team developed should be reapplied in other regions and gain social sustainability.

## **Dermatological manifestations of pediatric multisystem inflammatory syndrome associated with COVID-19**

Ozden Turel

*Bezmialem Vakif University Hospital*

**Abstract:** A range of dermatologic findings such as maculopapular, morbiliform, urticarial, and vesicular may occur in patients with COVID-19. The first scientific reports about the relationship between acute COVID-19 and skin involvement in children were reported from China, Italy, and Turkey. Cutaneous manifestations of the patients were chickenpox-like vesicles, erythematous rash, and widespread urticaria.

Pediatrics multisystem inflammatory syndrome (PMIS) is an inflammatory condition in children, which usually involves fever and multiple organ failure associated with COVID-19. An erythematous polymorphic rash, erythema, and or firm induration of hand and feet, oral mucositis, and conjunctivitis accompanied by systemic laboratory and imaging findings of atypical Kawasaki disease were first described in a cohort of 10 Italian children.

In this presentation a review of MIS-C and case series with skin manifestations will be shared.

## Genetic testing in oncology - when and how!

Cristina Popescu, Valerica Belengeanu

*„Vasile Goldis” Western University of Arad*

**Abstract:** Genetic and genomic testing has developed rapidly over the last decade. Today we have fast and complete methods of genetic testing. Oncology genetic testing in oncology. Next-generation sequencing (NGS) combined with molecular pathology, which can also assess the immune status of cancer patients, as well as the introduction of immunotherapies, can significantly change the prognosis of cancer patients. The diversity of genetic tests available in medical analysis laboratories and not only, can make it difficult for the practitioner regarding the selection of patients and including the most suitable test in the given situation.

However, doctors in various specialties, especially clinical geneticists, have many ways in which they can distinguish patients with an indication for genetic testing: family history, relatively young age at the onset of the disease, or family multilocation in cancer. For a breast cancer patient, for example, at a young age, a positive BRCA test result has consequences for surgery and the progression of the disease, as well as the risk of cancer in his family members. Genetic testing can also change the health care needs of monogenic subtypes of colon cancer, cardiovascular disorders, etc. In this paper we exemplify what conditions must be met to indicate a genetic test, how this test is performed, how we can understand the test results and what are the recommendations in force for oncological patients and healthy carriers.

## **New aspects in asthma – GINA 2021 GUIDE (GLOBAL INITIATIVE FOR ASTHMA)**

Larisa Alexandra Rus, Camelia Ciacli

*„Vasile Goldis” Western University of Arad*

**Abstract:** Asthma affects about 300 million people worldwide. It is a serious global health problem that affects all age groups, with a growing prevalence in many developing countries with rising costs of treatment. Asthma continues to contribute to many deaths worldwide, including among young people.

The GINA Global Asthma Initiative was established by the WHO in 1993 to raise awareness of asthma among health professionals, public health authorities and the community, and to improve prevention and management through a coordinated global effort.

The 2021 update of the Global Strategy for Asthma Management and Prevention incorporates new scientific information on asthma, based on a review of the recent scientific literature by an international group of experts from the GINA Scientific Committee. This comprehensive and practical resource on one of the most common chronic lung diseases worldwide contains extensive citations from the scientific literature and forms the basis for other GINA documents and programs.

In this paper we aim to review the news in this guide, insisting on the important changes it brings in terminology, definition and treatment of this condition.

## Diagnosis and treatment challenges in angioedema

Camelia Anișoara Ciacli, Elena Lucchesini

*„Vasile Goldis” Western University of Arad*

**Abstract:** Angioedema is defined as the swelling of the deep dermis, subcutaneous or submucosal tissue, usually localized, due to increased vascular permeability and extravasation of intravascular fluid.

Data on the epidemiology of angioedema are limited, although it affects both adults and children, being not considered a rare condition. Females are more commonly affected than males, usually between the ages of 40 and 50.

The causes of angioedema are:

- 7% allergic ,
- 11% due to consumption ACE inhibitors,
- 25% due to acquired or inherited deficiencies of the protein C1-INH esterase,
- 3% due to infections and neoplasms,
- vibrations,
- 38% idiopathic.

The symptoms of angioedema can affect any part of the body, usually asymmetrically, but the edema most often affects the facial region (eyes, lips, tongue), genitals, hands and feet and less often the abdominal organs where it mimics the acute surgical abdomen. Many patients with angioedema (approximately 49%) also suffer from urticaria.

Angioedema is a major allergic emergency that can progress rapidly to the upper airways mucosa, causing hypersalivation, dysphagia, dysphonia, sensation of imminent death, hypotension, asphyxia, and death. Visualization by nasopharyngeal laryngoscopy should be considered in patients with stridor or hoarseness to assess the degree of laryngeal angioedema. The incidence of intubation increases with age.

In this paper we aim to present a life saver algorithm for emergency diagnosis and treatment of this potentially life-threatening and unpredictable condition.

## **Myocarditis associated with SARS COV2 infection- Clinical case presentation**

Vîlcea Anamaria, Borta Simona Maria, Puşchiţa Maria

*„Vasile Goldis” Western University of Arad*

**Abstract:** The COVID-19 pandemic has left a strong imprint on the medical system worldwide, with 526 million confirmed cases and more than 6 million deaths. Initially, it was thought that the infection had only pulmonary tropism due to the respiratory symptoms presented in infected population, but later these symptoms began to expand including as well cerebral, cardiac and immunological signs. SARS COV2 infection can be manifested through a variety of cardiovascular symptoms that can lead to postviral myocardial dysfunction. Infection with the new coronavirus is associated with an increased risk of developing acute heart failure, myocardial infarction, arrhythmias, cardiomyopathy and thromboembolism. SarsCov2 associated myocarditis is still under trial studies, but some research claims that up to 7% of deaths caused by COVID-19 have been attributed to postviral myocarditis.

Mechanisms of cardiac impairment in COVID-19 Studies to date have suggested the involvement of several mechanisms in cardiac impairment, suggesting that part of the severe systemic inflammatory response in severe COVID-19 is the release of high levels of cytokines (especially macrophages and CD4 + T cells) that may affect several tissues, including vascular endothelium and cardiac myocytes. Cardiac manifestations in Sars Cov2 infection are due to reduced ACE2 and concomitant increase in angiotensin, hypoxia and coagulation disorders. The inflammatory response plays an important role in myocarditis resulting from SARS-CoV-2 infection.

It's important to take a quick decision based on patient's clinical signs and paraclinic investigation, as postcovid myocarditis can lead to life-threatening hemodynamic changes in a short time.

## **Superior digestive haemorrhage in patients treated with anti-inflammatory, anticoagulant and antiplatelet agents**

Iulia Cristina Gazak, Eftimie Miutescu

*„Vasile Goldis” Western University of Arad*

### **Abstract: INTRODUCTION**

Superior digestive haemorrhage is a gastroenterological emergency, and in many cases it is associated with medication.

### **OBJECTIVES**

The purpose of this study was to evaluate the impact of anti-inflammatory drugs, anticoagulants (antivitamins K and direct acting anticoagulants) and anti-aggregants on the upper gastrointestinal tract.

### **MATERIALS AND METHODS**

We carried on a retrospective study of patients with upper digestive haemorrhage from the Gastroenterology Clinic of the Arad County Emergency Clinical Hospital. Between January 2019 and April 2019, 95 patients were hospitalized with digestive haemorrhage. Of these, 65 (68.42%) used drugs as follows:

### **RESULTS**

Non-steroidal anti-inflammatory drugs 33% Aspirin at low doses 25% Antiplatelet Agents Clopidogrel Plavix Trombex, Ticagrelor - Brilique (10%) Anticoagulants 18 of which antivitamin K (22%) Direct Anticoagulants (dabigatran) Pradaxa, (rivaroxaban) Xarelto, (Apixaban) Eliquis 10% Some of the patients used multiple types of drugs combining anticoagulants - antivitamins K with platelet antiaggregants or NSAIDs.

We have investigated the hemorrhagic lesions that have been endoscopically revealed, the type of treatment applied (endoscopic therapy, surgical treatment), the blood needed for transfusion.

### **CONCLUSIONS**

There we followed the lesions causing haemorrhage which have been made evident by endoscopy, the type of treatment applied (endoscopic therapy 7,5%, surgery, the necessary blood transfusion.

Administration of anti-inflammatory, anti-coagulant or antiaggregant/anticoagulating agents is associated with the occurrence of

higher digestive haemorrhage which complicates the progression of these elderly patients and frequently has comorbidities.

## **New treatment trends and antibiotic resistance in Helicobacter Pylori infection**

Claudiu Gheorghe Pantea, Eftimie Miulescu

*„Vasile Goldis” Western University of Arad*

**Abstract:** Helicobacter Pylori It is a gram negative bacterium responsible for most cases of chronic gastritis, dyspepsia, peptic ulcer and gastric cancer. Currently 1 in 2 people in the world is infected with this bacterium. Therapeutic alternatives such as prebiotics have been used over time, but the basic therapy in eradicating the infection remains the use of antimicrobials and antisecretory agents. The widely used standard therapy is still the combination of two antibiotics (clarithromycin and amoxicillin / metronidazole) and a proton pump inhibitor as a first-line treatment, but this current is losing popularity due to increasing antibiotic resistance, with a decrease in antibiotic resistance. the rate of eradication of the infection. This study aims to determine the rate of resistance to clarithromycin in both the general population and the population with proven gastric pathology and also aims to analyze new trends such as Vonoprazan in the treatment of eradication in the study population.

## Ventilatory support at COVID\_19 patients

Radu Tulbure<sup>1</sup>, Olariu Teodora<sup>2</sup>, Nicolescu Amalia<sup>2</sup>, Olariu Iustin<sup>2</sup>

<sup>1</sup>*Emergency Clinical County Hospital of Arad, <sup>2</sup>„Vasile Goldis” Western University of Arad*

**Abstract:** Introduction: Ventilatory support represent a method which spontaneous breathing is assisted or replaced, and this involves the use of a ventilator. According to the guidelines, the only indication for ventilatory support is respiratory failure, which can be acute or chronic decompensated. Acute respiratory failure is of two types: type I or hypoxic and type II or hypercapnic.

Mechanical ventilation is of two types: non-invasive and invasive ventilation.

Non-invasive ventilation is performed by devices like high flow nasal cannula or CPAP mask, and invasive ventilation is represented by oro or naso-tracheal intubation and mventilatory support.

Objectives: Identification of patients infected with SARS CoV-2 virus who required ventilatory support. COVID\_19 is a respiratory condition that affects the lungs and at the critically ill patients affects all the organs, most of patients require ventilatory support. The main purpose of ventilatory support at patients infected with SARS CoV-2 is to maintain adequate tissue oxygenation and to treat viral pneumonia.

Material and method: This study was performed on 586 patients infected with the SARS-CoV-2 virus hospitalized in ICU 2 unit of the Arad Emergency Clinical Hospital between 1st January – 7th June 2021 and 18th September – 31st December 2021. About 90% of these required mechanical, non-invasive or invasive ventilation.

Conclusions: Most of the patients infected with SARS-CoV-2 required oxygen therapy or assisted ventilatory support. Assisted ventilator support represents the main treatment in viral pneumonia caused by SARS-CoV-2 virus alongside drug therapy and a complete nursing.

Key words: Mechanical ventilation, SARS-CoV-2 viral infection, viral pneumonia.

## **Multidisciplinary approach of a patient diagnosed with SARS-COV-2 infection – Case presentation**

Tulbure Radu<sup>1</sup>, Olariu Teodora<sup>2</sup>, Nicolescu Amalia<sup>2</sup>, Subas Alexandra<sup>1</sup>, Olariu Iustin<sup>2</sup>

*<sup>1</sup>Emergency Clinical County Hospital of Arad, <sup>2</sup>„Vasile Goldis” Western University of Arad*

**Abstract:**Introduction: COVID-19 is a new disease that was discovered in 2019 and has not been previously identified in humans. The new coronavirus infection (COVID-19) is caused by the SARS-CoV-2 virus. Patients who are severely infected with the SARS-CoV-2 virus require specialist treatment in an intensive care unit. Due to the fact that COVID-19 disease not only affects the lungs but ultimately affects the whole body, a patient infected with SARS-CoV-2 requires a multidisciplinary approach.

Objective: Identification of appropriate therapeutic management in the treatment of patients infected with SARS-CoV-2 virus.

Material and method: Case presentation performed on a critical patient diagnosed with SARS-CoV-2 Infection, hospitalized in the ICU - ATI II clinic of the Arad County Emergency Clinical Hospital between 11.01.2022 - 29.01.2022.

Conclusions:Treatment of the severely infected patient with the SARS-CoV-2 virus is performed according to existing protocols. Also for the most part the treatment is symptomatic. Following the infection with the SARS-CoV-2 virus, there are many complications, both of the disease itself and of the complications given by the patients staying for longer in intensive care.

Key words: SARS-CoV-2 infection, viral bronchopneumonia, intensive care.

## Schizophrenia. Case presentation

Mariş Mariana, Ligia Piroş, Robert Almăşan, Alexandra Cozac

*„Vasile Goldis” Western University of Arad*

**Abstract:** A pathology that arouses much interest in the field of psychiatry, schizophrenia has undergone many changes over time in terms of taxonomy, diagnostic and treatment criteria. Although DSM 5 presents a new, longitudinal approach to schizophrenia, there are still difficulties and contradictions in making the diagnosis.

We present the case of a 30-year-old patient, diagnosed with paranoid schizophrenia in March 2015 and who was currently hospitalized in April 2022 for a relapse of paranoid psychotic model. The disease started suddenly, about 10 years ago, with an attempted suicide by defenestration. Subsequently, the symptoms escalated, appearing hallucinatory, disorganized behaviors, aggression and emotional symptoms, which is why it was decided to replace the neuroleptic with an atypical antipsychotic-Aripiprazole, with slow, slight improvement of the clinical picture. However, the parents decided to gradually reduce the doses of the specific medication, against the recommendations of the attending physician, the patient becoming catatonic after stopping the medication. The particularity of the case is represented by the late addressing in the psychiatric service, the low compliance of the parents to the treatment, the polymorphism of the symptoms contrary to the antipsychotic treatment.

Keywords: schizophrenia, aripiprazole, hallucinations

## **Treatment with convalescent plasma in SARS CoV-2 infection**

Nicolescu Amalia<sup>1</sup>, Olariu Teodora<sup>1</sup>, Tulbure Radu<sup>2</sup>, Olariu Iustin<sup>1</sup>,  
Lazar Viorica<sup>1</sup>

<sup>1</sup>, „Vasile Goldis” Western University of Arad, <sup>2</sup>Emergency Clinical  
County Hospital of Arad

**Abstract:** Introduction: In previous epidemics of coronavirus, of various infectious diseases, including measles, mumps and H1N1 influenza, convalescent plasma therapy has also been studied. At the beginning of April 2020, the European Commission issued the guide on the collection and administration of convalescent plasma, which was introduced in Romania in the treatment protocol for COVID-19. Convalescent plasma transfusion therapy is considered a possible treatment option in SARS CoV-2 infection. The history of successful use of this method against viral and infectious diseases has also suggested the possibility of efficacy for SARS-CoV-2 infection.

**Objective:** select the patients to study the feasibility and effectiveness of using this method of therapy in patients diagnosed with SARS CoV-2 Infection.

**Material and method:** We performed a retrospective study on a group of 111 patients diagnosed with SARS CoV-2 Infection, hospitalized on the ATI II clinical department, within SCJUA between 24.07.2020 - 31.12.2020, where convalescent plasma therapy was administered . The group of patients included in the study was followed by the distribution by age and sex, the amount of plasma administration, the associated co morbidities and the evolution of therapy.

**Conclusions:** The use of convalescent plasma as a viable therapeutic treatment may be a visible benefit in patients with COVID-19. However, this treatment can improve a patient's ability to recover.

**Keywords:** convalescent plasma, COVID-19, intensive care

## **The plasmapheresis treatment in case of Guillain-Barre syndrome - clinical experience of an ICU ward**

Cristian Nicolescu

*„Vasile Goldis” Western University of Arad*

**Abstract:** The plasmapheresis treatment has gained popularity in the recent years .It is considered an efficient approach of the patients with this pathology due to the removing of the auto-antibodies from circulation, beeing the single way of immunomodulation. It consists of five consecutive sessions ,each one has the goal to replace at least the entire plasma volume of the patient. The benefit and the side results of this therapy are presented in details based of the four years of experience in this field.

## **The new approaches in the rehabilitation in case of polinevrithis or poliradiculopathy**

Laura Nicolescu

*„Vasile Goldis” Western University of Arad*

**Abstract:** The main goal of the presentation is to reveals the objectives of the rehabilitation treatment, which are prevention and correction of deformations, re-education of paralyzed muscles, prevention of trophic and sensitive disorders.

The treatment of this pathology refers to pain and dysesthesia: analgesia electrotherapy CIF, ULS, US, prevention of bedsores: massage, postures, changes of position, correct bed postures to prevent equine foot, claw hand, hip flexion and knee orthosis.

The regular passive mobilizations of all affected joints, along the entire range of motion, up to the limit of pain, before thermotherapy , is also recommended along with muscle reeducation based on electrostimulation and a wide range of mobilizations with resistance.

# The use of Artificial Intelligence technologies in healthcare

Igor Vikhrov

*Tashkent Pediatric Medical Institute*

## **Abstract: Introduction**

Chatbots are the era of intelligent machines. Thanks to the progress and development of machine learning, deep learning and artificial intelligence, machines impersonate people. Conversational software agents based on natural language processing are known as chatbots. These chatbots are the best example of such machines. To lead a healthy lifestyle, it is very important to take care of your health. Nevertheless, it is not easy to consult an appropriate doctor for health problems. Our proposed solution to this problem is to create an artificial intelligence-based medical chatbot that can detect the disease, as well as provide the necessary information about any condition. The purpose of this chatbot is to minimize healthcare costs and increase the availability of medical knowledge. This chatbot will act as a medical reference that will help patients diagnose their disease as well as restore their health. A patient can only really benefit from a chatbot when the chatbot can accurately diagnose the disease as well as provide the necessary information about the condition. The text conversion bot engages people in discussions about their health issues and also provides a personalized diagnosis based on symptoms. Consequently, people will receive advice related to their state of health and receive the necessary security.

## **Objective of the project**

The main goal of this review is the use of chatbots in healthcare and will improve the medical service. In implementation, use with a chat bot in different areas.

## **Materials and research methods.**

During the global pandemic, the use of chatbots increased significantly. Data on the use of chatbots in the healthcare system have been researched. These terms have been reviewed and analyzed in professional journal articles, including PubMed, Springer Link, Journal of Medical Internet Research, and Google Scholar. The study included articles published in 2019-2021

**Results.**

The research conducted by the staff of the Innovation Center of the Tashkent Pediatric Medical Institute covers the period up to June-October 2021. As part of our research, COVID-19\_CHECKER Chatbot was developed to help Chatbot users make a differential diagnosis between cold and flu. We analyzed COVID-19, the most common symptoms of cold and flu, and took into account some signs and indications. Our chatbot includes 16 symptoms. Depending on the epidemiological situation, COVID-19 received the maximum score for symptoms such as fever, dry cough, loss of smell or taste, shortness of breath and fatigue. Vaccinations of users were also taken into account, which had an impact on reducing the likelihood of contracting COVID-19. In addition, recommendations were developed based on the respondent's percentage of likelihood of contracting COVID-19. The program, developed by the Agency for Intellectual Property of the Republic of Uzbekistan, received a copyright certificate (Certificate No. DGU12138 dated 07/09/2021). In total, in July-October 2021, 332 people took part in an online survey using the COVID-19\_CHECKER chatbot. According to the results of the Chatbot operation, the following data were obtained, out of 332 participants, 174 were women and 158 were men. Of these, COVID-19 - 153 respondents, flu - 68, colds - 54 and 57 participants are not sick.

**Conclusion.** The results show that at a time when the number of cases with Covid-19 is increasing, it is necessary to further increase the number of high-tech bots being developed in the healthcare system and ensure that they are perfectly developed and widely used in practice. In the Republic of Uzbekistan, digital solutions for tracking contacts with AI, including chat bots, are still under development. Although a number of options for mobile COVID-19 contact tracing applications have been proposed, they have not been able to find their place in the official anti-epidemic measures of the Uzbek government to combat the spread of infection. Nevertheless, the effective possibilities of such digital solutions for the epidemiological prevention of infection at the level of communities, cities and countries are beyond doubt.

## Early rehabilitation of patients with COVID-19 infections

Davron Muminov

*Tashkent Pediatric Medical Institute*

**Abstract: The purpose of research work:** to study the clinical and pathogenetic features of the early rehabilitation period of COVID-19 and determine the optimal management tactics for patients, taking into account the nature of the disorders.

**The object of the research work:** 500 case histories of patients with postcovid syndrome, 301 patients in the early rehabilitation period after suffered COVID-19, 20 practically healthy individuals.

**Scientific novelty of the study:** for the first time, on the basis of a retrospective analysis, it has been shown that in the early rehabilitation period in patients with COVID-19, along with respiratory syndrome, procoagulant, cardiovascular, autoimmune, neurological, dystrophic clinical and pathogenetic syndromes are noted; Based on a retrospective analysis, prognostic markers of the progression of fibrosis of the pulmonary parenchyma were determined and it was shown that BA increases the risk of progression of fibrosis of the pulmonary parenchyma by 1.83 times, COPD - by 2.46 times, obesity and steatohepatitis - by 7.22 times, thromboembolic events during the first month after discharge from the infectious diseases hospital - 9.39 times; for the first time it was found that the low functional status of patients on the PCFS scale is associated with a severe course of COVID-19, the presence of obesity, with a more pronounced violation of the structural and functional state of the myocardium, high levels of D dimer, ANA, ferritin in the peripheral blood; for the first time it was determined that the risk of developing endpoints and thromboembolic events in patients with postcovid depression increases with a low functional status of patients on the PCFS scale, with an increase in the concentration of D-dimer, and the presence of ANA in the blood.

**Implementation of the research results.** Based on the results of a scientific study to study the clinical and pathogenetic features of the early rehabilitation period of COVID-19 and determine the optimal management tactics for patients, taking into account the nature of the disorders approved methodological recommendations on the topic:

"Algorithm for managing patients in the early rehabilitation period of COVID-19" (approved by the Ministry of Health of the Republic of Uzbekistan No. 8n-r / 778 of 17.09.2021). These methodological recommendations contributed to a significant reduction in the complications of postcovid syndrome; methodological recommendations approved. A method for assessing the clinical condition of patients in the early rehabilitation period of COVID-19 using the PCFS test" (approved by the Ministry of Health of the Republic of Uzbekistan No. 8n-r / 779 of 17.09.2021).

These guidelines make it possible to assess the functional status of patients who have undergone COVID-19, as well as to identify patients with postcovid syndrome; The obtained scientific results of the study of the pathogenetic variants of postcovid risk syndrome and the determination of risk factors for adverse outcomes have been introduced into the practice of healthcare, in particular, the Navoi Regional Multidisciplinary Medical Center, the Multidisciplinary Clinic of the TMA, the Republican Scientific and Practical Medical Center for Therapy and Medical Rehabilitation (Conclusion of the Ministry of Health of the Republic of Uzbekistan dated 06.12. 2021 , No. 08-09/19187 ). The introduction of the research results into the practical activities of healthcare makes it possible to predict the risk of developing endpoints and thromboembolic events in the early rehabilitation period of COVID-19, the use of the developed algorithm for the administration of patients with postcovid syndrome makes it possible to reduce the risk of developing unfavorable endpoints by 2.56 times compared with empirical management.

## **Technological innovations in digestive endoscopy for our patients - Video Capsule Endoscopy – interdisciplinary approach**

Amelia Uzum, Oana Koppandi, Eftimie Miuțescu, Dana Iovănescu, Bogdan Totolici, Carmen Neamțu, Oana Maria Jigău, Sebastian Victor Grada, Andreea Iulia Papoi, Mădălina Blaj, Marius Belean, Florinel Cozma

*„Vasile Goldis” Western University of Arad*

**Abstract:Background:** VCE is an endoscopic technology that is readily available worldwide and capable of obtaining endoscopic images from the entire small bowel. VCE is easy, minimally invasive, safe, patient-friendly, and is the first-line diagnostic tool in imaging the small bowel for pathologies. With this realization, there has been rapid uptake and wide acceptance of this endoscopic technology for detecting small bowel abnormalities. VCE allows complete evaluation of the small bowel (from the duodenum to the ileocecal valve). Limitations of VCE include lack of biopsy or therapeutic capabilities, inability to perform endoscopic marking, inability to control movement of the capsule through the GI tract, and difficulty in localizing lesions. The main utility of VCE lies in its high positive (94%-97%) and negative (83%-100%) predictive values in the evaluation of GI bleeding. We can also achieve direct visualization of the colon with the PillCam® COLON 2 system which provides clear images of the colon to support detection of polyps with a non-invasive, patient-friendly device. Both VCEs are available in our clinic and have already been used in several cases by our interdisciplinary team composed of gastroenterologists and surgeons, mainly for patients with middle gastrointestinal bleeding.

**Methods and results:** We are presenting three case reports where we used the PillCam®SB, in female patients with middle gastrointestinal bleeding and one case report in which we used PillCam®Colon 2. The main findings were angiodysplasias, paraneoplastic ischemic lesions and polyps.

**SECTION III**

**INTERDISCIPLINARITATE ÎN CHIRURGIE**

**CROSS-DISCIPLINARITY IN SURGERY**

**Targeted therapy for advanced renal cell carcinoma**

Alexandru Neșiu, Cris Virgiliu Precup, Casiana Boru-Stănescu,  
Mihai Florin Șandor

*"Vasile Goldiș" Western University of Arad*

**Abstract:** Systemic therapy of advanced renal cell carcinoma was unsatisfactory because cytokine treatment showed limited efficacy and high toxicity.

As a result, a better understanding of the cellular signaling pathways involved in the development of renal cell carcinoma has led to the development of new therapies that specifically target abnormal pathways that help develop cancer.

Several genetic and epigenetic changes are involved in the pathogenesis of renal cell carcinoma.

Mutations in the von-Hippel-Lindau gene have been observed for the first time in hereditary renal cell carcinoma, and will be observed in 60-80% of sporadic renal cell carcinomas.

VHL protein is a tumor suppressor, which targets the HIF transcription factor, regulating important downstream targets such as PDGF, VEGF and GLUT1.

The mutant VHL gene causes the intracellular accumulation of HIF, which in turn leads to a massive stimulation of growth factors, favoring the growth and proliferation of tumors.

VEGF family ligands act through the vascular endothelial growth factor receptor to promote cell growth, proliferation, migration, and increase vascular permeability.

These mechanisms play a central role in the angiogenesis of cancer.

Thus, VEGF inhibition was investigated as a therapeutic strategy, initiating the development of several molecules, which entered the era of targeted therapy.

Keywords: combination therapy, VEGF inhibition, PDGF, renal cell carcinoma, VHL, systemic therapy

## **Rare causes of bleeding in the first trimester of pregnancy- Case report of a Chorionic bump**

Dieter Krutsch<sup>1</sup>, Adrian Popa<sup>1</sup>, Gheorghe Furău<sup>2</sup>, Cristina Onel<sup>2</sup>,  
Bianca Panda<sup>1</sup>, Casiana Boru<sup>2</sup>, Ioana Vornic<sup>2</sup>, Cristian Furău<sup>2</sup>

<sup>1</sup> *Emergency Clinical County Hospital of Arad-Ob-Gyn Department,*  
<sup>2</sup> *"Vasile Goldiș" Western University of Arad*

**Abstract:** Chorionic bump is a very uncommon ailment that occurs during the first trimester of pregnancy. It manifests as a protrusion in the gestational sac from the choriodecidual surface. There are currently no ultrasonography or clinical signs that are capable of predicting a difference in outcome.

A chorionic bump is a rather uncommon sonographic finding in the first trimester. It appears as an irregular, convex protrusion from the choriodecidual surface that protrudes into the gestational sac. The chorionic bump has limited range of information, and due to its low prevalence rate (estimated to be between 1.5/1000 and 7/1000 pregnancies), obstetricians may be unfamiliar with it. Although the cause is unknown, it may signify a hematoma. This condition might be asymptomatic or present with symptoms such as pelvic discomfort or vaginal bleeding. There was a substantial correlation between the existence of a chorionic bump and the use of ultrasonography to detect bleeding during the first trimester, thereby confirming the prevalent idea that bumps reflect hematoma. The biggest bump reported was 3.8 cm in diameter. Additionally, there has been no difference in pregnancy outcome according to the placement of the bump, that is, under or above the cord insertion. Additionally, it looks as if the number of chorionic bumps mattered more than their size. The majority of pregnancies recorded so far have resulted in a single bump.

We describe a case of a pregnant 22 year old women with no known disease history, who was diagnosed with a chorionic bump during the first trimester. Miscarriage occurred throughout the pregnancy. The chorionic bump's etiology and clinical significance remain unknown.

## **Irreversible contraception- an overview over the desire for tubal ligation during cesarean**

Cristian Furău<sup>1</sup>, Cristina Onel<sup>1</sup>, Oana Todut<sup>2</sup>, Roxana Furău<sup>1</sup>, Ionel Nati<sup>3</sup>, Loredana Roşu<sup>1</sup>, Ioana Vornic<sup>1</sup>, Gheorghe Furău<sup>1</sup>

*<sup>1</sup> "Vasile Goldiş" Western University of Arad, <sup>2</sup>Emergency Clinical County Hospital of Arad, <sup>3</sup>Obstetrics and Gynecology Clinic I Cluj Napoca*

**Abstract:** Introduction: Cesarean section represents probably the mostly performed obstetrical surgery nowadays, most of the times without a proper indication. The rationale for this is complex, but it can lead to subsequent consequences with increase morbidity for the mother and higher costs for the medical system. Also cesarean section is sometimes used for non reversible contraception by some couples. Objectives: To present the real situation of deliveries and especially the ones by cesarean section and also of the tubal ligations performed during the cesarean section in the Emergency Clinical County Hospital of Arad for a ten year period and to estimate the number of cesareans performed on request. Method: retrospective study using data received from Emergency Clinical County Hospital of Arad analyzing the number and indications of cesarean section and subsequent tubal ligations and other parameters. Results: The study shows a cesarean section rate increased constantly reaching a plateau in the last years at about 60-65%. By analyzing the data obtained so far we assess that about 50% of the cesareans performed have no clear indication for it. Tubal ligation usually occurs at the second cesarean section, but in the last years its rate have decreased. Conclusions: Cesarean section on request is an extremely important issue that needs to be addressed properly by the healthcare system as it rates need to decrease by a better medical education of the patients and promotion of natural delivery. Tubal ligation is considered a safe way for non reversible contraception at the moment of a cesarean section, with decreasing rates in the past years probably due to the availability of long acting reversible contraception methods.

## **Cesarean section on request- a myth or just reality**

Cristian Furău<sup>1</sup>, Ionel Nati<sup>2</sup>, Oana Todut<sup>3</sup>, Ioana Vornic<sup>1</sup>, Casiana Boru<sup>1</sup>, Laurentiu Luca<sup>1</sup>, Cristina Pasăre<sup>3</sup>, Gheorghe Furău<sup>1</sup>

<sup>1</sup>*"Vasile Goldiș" Western University of Arad*, <sup>2</sup>*Obstetrics and Gynecology Clinic I Cluj Napoca*, <sup>3</sup>*Emergency Clinical County Hospital of Arad*

**Abstract:** Introduction: The birth through the cesarean section has undergone in the last decades a remarkable ascent, becoming in some countries of the world the main method of finalizing the birth. This explosion of caesarean section is due to several factors that have contributed together to the changing of the perception of this procedure. The development of technology allows today a much more accurate diagnosis of cases at risk for vaginal birth, thus limiting fetal and maternal suffering to a minimum. Material and methods: In this study, we analyzed all the cesarean sections performed during 2016-2018 within the Obstetrics-Gynecology section of the Arad County Emergency Clinical Hospital. Results: By analyzing some parameters we wanted to make a concrete and clear radiography of the reality from the practice, insisting on the medico-legal aspects related to the caesarian section. Conclusions: The results shows us that the main factors that have led to an increase in the rate of caesarean section are: the social trend, the fashion, the fear of doctors due to the medical malpractice caused by the extent of the medical processes of recent years, the woman's desire to choose how and when to give birth.

## **About surgical management in FOURNIER`S gangrene**

Horațiu Sabin Papiu, Gigi Aiordăchioae, Andrei Korodi, Teodora Olariu, Daniela Moț

*"Vasile Goldiș" Western University of Arad*

**Abstract:** Fournier`s gangrene is a severe, flegmonous-necrotising infection of perineal soft tissues, appearing in immunosuppressed patients, mainly with diabetes mellitus. The process extends very rapidly, with septic shock occurring due both to aerobic and anaerobic germs. Methods. There was assessed a 13 patients lot admitted in our department in the last 5 years. Results. We performed in emergency wide incisions: perineal and scrotal incisions in all cases, inguinal in 3 cases, vulvar in 1 case, and one incision in left iliac fossa with drainage of preperitoneal space. Subsequent ischiorectal/pelvisubperitoneal debridements and necrosectomies were done in all cases. Subsequent incisions of abdominal soft tissues and even aponeurotic/muscular wall were performed in patient with properitoneal ascending extension of septic process. Both metabolic/electrolytic rebalancing and antibiotherapy were conducted in ICU. Postoperative evolution was long, with per secundam delayed healing. Death rate was 7%, encountered between 10-40% reviewed from literature. Outpatient survey revealed persistence of perineal fistula in almost all cases. Conclusions. Surgical management in Fournier`s gangrene has to be extremely aggressive, in emergency. Repeated wide incisions, debridements and necrosectomies have to be done, even at the level of abdominal wall or properitoneal space, when these interventions are required by clinical, ultrasonographic or CTscan findings.

## **Our experience in management of the periprosthetic femoral fractures**

Dan Fruja, Roland Fazakas, Paul Deme, Tamas Kovacs, Sergiu Tugui

*"Vasile Goldiș" Western University of Arad*

**Abstract:** Hip replacement represents one of the most successful surgical procedure for the hip arthrosis, with good clinical and functional outcome. In the orthopedic department of county hospital of Arad we perform about 150 hip arthroplasties per year with different types of hip prosthesis. One of the most important complication of hip replacement is periprosthetic femoral fractures, whom represent 1% of late postoperative complication. The management of this category of fractures includes conservative treatment or surgical stabilization with precontoured LCP plates. In our department, we had performed 25 osteosynthesis for periprosthetic femoral fractures in the last 5 years. Our experience revealed that this type of fracture needs a longer bone healing time compared to typical femoral fracture. We conclude that the association of hip prosthesis implant along with the regional bone deficiency leads to late bone heal or malunion. In our experience surgical stabilization of the periprosthetic fracture is superior to the conservative treatment and increases the chance of bone heal and good recovery.

## **Diabetes mellitus associated with pregnancy: management and complications**

Gheorghe Furău, Dora Adriana Igna, Anamaria Ardelean, Casiana Boru, Angelica Filimon, Cristina Onel, Dorina Burdan, Ana-Liana Bouroş-Tătaru

*"Vasile Goldiș" Western University of Arad*

**Abstract:** Introduction: Gestational diabetes mellitus is a common pathology that causes the transformation of a physiological pregnancy into one with high risk. Although over time, modern obstetrics has led to a decrease in mortality of both maternal and neonatal, this pathology remains a worldwide problem.

Material and methods: A retrospective study was conducted, on 35 cases of diabetes mellitus associated with pregnancy, hospitalized on the Obstetrics and Gynecology Department in Arad in 2021. The purpose of the study was to identify the frequency of this pathology and its management. Statistical data and the graphics and charts have been analyzed and drawn with Excel, IBM SPSS Statistic 20 and MedCalc.

Results: The frequency of this pathology in the period studied was 1.44% of the total births. The average age of patients with DZ associated with pregnancy was 31.8 years. Of the cases studied, 27 patients had gestational diabetes mellitus, 4 cases had type I diabetes mellitus, 4 cases of type II diabetes mellitus and one case was diagnosed with unspecified diabetes. The risk factors, complications of this pathology and the data of the newborns of these patients were analyzed.

Conclusions. The frequency of this pathology is closely related to risk factors. Good preconceptional and prenatal counseling is essential, thus preventing future both maternal and fetal complications.

## The management of preterm birth in Arad County

Ana-Liana Bouroș-Tătaru, Radu Nicolae Ceapă, Anamaria Ardelean,  
Casiana Boru, Angelica Filimon, Dorina Burdan, Ioana Vornic,  
Gheorghe Furău

*"Vasile Goldiș" Western University of Arad*

**Abstract:** Introduction Premature birth is the most important negative prognosis factor for the further development of the fetus, in terms of survival as well as quality of life. WHO defines preterm birth as a birth before 37 weeks of complete amenorrhea.

Material and methods: A retrospective study was conducted, on a number of 163 cases in 2021 in Arad County on the Obstetrics and Gynecology department in order to identify the frequency and management of premature birth in Arad County. Statistical data and the graphics and charts have been analyzed and drawn with Excel, IBM SPSS Statistic 20 and MedCalc.

Results: The incidence of premature births in Arad County is 6.6% of the total births in 2021. The average age of patients with premature birth was 27.34 years, and the average gestational age at which the birth took place was 34.73 gestational weeks, with a minimum gestational age of 26 weeks. The weight of newborns at birth was on average 2476g, and the newborns with the lowest weight weighed 800g. 93.79% of newborns were alive and 10 newborns were dead.

Conclusions. To reduce the incidence of premature births, it is imperative to identify the risk factors underlying this pathology and apply the appropriate management as early as possible in pregnancy.

## Management of genital prolapse in Arad County

Ana-Liana Bouroş-Tătaru<sup>1</sup>, Dragoş Florescu<sup>2</sup>, Anamaria Ardelean<sup>1</sup>,  
Loredana Roşu<sup>1</sup>, Cerasela Buzatu<sup>1</sup>, Casiana Boru<sup>1</sup>, Marius Furău<sup>1</sup>,  
Gheorghe Furău<sup>1</sup>

*<sup>1</sup> "Vasile Goldiş" Western University of Arad, <sup>2</sup> Cluj Napoca  
Rehabilitation Hospital*

**Abstract:** Introduction: Genital prolapse is a chronic condition with effects that lead to deterioration of normal function and significantly reduce the quality of life. Worldwide, this pathology is increasingly common, with 5,200 newly diagnosed cases annually, according to Globocan.

Material and methods: This retrospective study was conducted between January 2018 and May 2021 at the Clinical Hospital of Obstetrics and Gynecology in Arad, where 120 women were diagnosed and treated for genital prolapse. They were processed in the programs: Microsoft Office Excel, Graph Pad Software and Epi Info 7 in order to analyze and compare the results obtained with other data from the literature and other published studies on the subject.

Results: The youngest patient with prolapse was aged 35 years, and at the latest the case occurred was at the age of 79 years. The average of patients with prolapse was 64 years. Of the 120 patients with genital prolapse, most were diagnosed with Cystocele, 19 (15.83%) and uterine prolapse grade II/ III, 18 (15%). Patients with total genital prolapse were 14 (11.67%). Of the 120 patients diagnosed with prolapse, 57 underwent a total interanexial hysterectomy and 104 underwent a colporrhaphy.

Conclusions: Genital prolapse is a major public health problem in all regions of the globe, which has an impact both socially and economically on everyone. It is imperative to solve this difficulty through the most up-to-date methods in order to increase the quality of life and save the lives of patients.

## **Menopause and management of menopausal-induced pathologies**

Anamaria Ardelean, Jompan Afilon, Gheorghe Furău, Casiana Boru,  
Loredana Roşu, Marius Furău, Ana-Liana Bouroş Tătaru

*"Vasile Goldiș" Western University of Arad*

**Abstract:** Introduction: Menopause is a normal period in a woman's life and is characterized by a reduction in the level of ovarian hormones, which interrupt the menstrual cycle and cause the appearance of symptoms associated with menopause.

Materials and methods: It is proposed to carry out 2 types of studies: Retrospective, longitudinal, in which to research the existing data on women in the menopause and prospective studies, of questionnaire type, to analyze the pathologies associated with menopause, focusing on osteoporosis, cardio-vascular complications and aging of the female genital tract.

Results: The objectives of retrospective studies include Identifying risk factors for early menopause, Identifying the incidence of menopausal-induced pathologies (vascular disease, osteoporosis, anxiety/depression), evaluation of menopause treatment to reduce induced pathologies. For prospective studies, the following objectives are proposed: Identification of symptoms associated with menopause, Paraclinical investigation of the patients in the study to diagnose pathologies induced by menopause, Studying the management of induced / associated pathologies of menopause.

Conclusion: Menopause is a difficult period in women's lives, but through proper management, complications can be prevented, and the quality of life can be improved.

## Quercetin Impact on Colorectal Cancer

Bogdan Dan Totolici<sup>1</sup>, Carmen Neamțu<sup>1</sup>, Amina Alaya<sup>2</sup>, Eموke Mihok<sup>2</sup>, Teodor Andrei Maghiar<sup>3</sup>, Andreea Adriana Neamțu<sup>3</sup>, Endre Mathe<sup>1</sup>

<sup>1</sup> "Vasile Goldiș" Western University of Arad, <sup>2</sup>University of Debrecen (Hungary), <sup>3</sup>University of Oradea (Romania)

**Abstract:** : Colorectal cancer (CRC) represents the third type of cancer in incidence and second in mortality worldwide, with the newly diagnosed case number on the rise. Among the diagnosed patients, approximately 70% have no hereditary germ-line mutations or family history of pathology, thus being termed sporadic CRC. Diet and environmental factors are to date considered solely responsible for the development of sporadic CRC; therefore; attention should be directed towards the discovery of preventative actions to combat the CRC initiation, promotion, and progression. Quercetin is a polyphenolic flavonoid plant secondary metabolite with a well-characterized antioxidant activity. It has been extensively reported as an anti-carcinogenic agent in the scientific literature, and the modulated targets of quercetin have been also characterized in the context of CRC, mainly in original research publications. In this fairly comprehensive review, we summarize the molecular targets of quercetin reported to date in in vivo and in vitro CRC models, while also giving background information about the signal transduction pathways that it up- and downregulates. Among the most relevant modulated pathways, the Wnt/ $\beta$ -catenin, PI3K/AKT, MAPK/Erk, JNK, or p38, p53, and NF- $\kappa$ B have been described. With this work, we hope to encourage further quests in the elucidation of quercetin anti-carcinogenic activity as single agent, as dietary component, or as pharmaconutrient delivered in the form of plant extracts.

## Management of olecranon fractures

Roland Fazakas, Dan Fruja, Grațian Damian

*"Vasile Goldiș" Western University of Arad*

**Abstract:** This paper is based on a retrospective statistical study, carried out within the Arad Emergency County Clinical Hospital, on the Orthopedics - Traumatology Clinical Section. This ward is composed of 65 beds, it is a University Clinical ward, so our study could be carried out on a relatively large number of patients. We analyzed retrospectively a number of 88 patients hospitalized with the diagnosis of Olecranon Fracture, for a period of 5 years, on this ward, during the period from 01.01.2017 – 31.12.2021.

To conduct this study, we analyzed several criteria such as: Emergency sheets attached to hospitalized patients; Observation sheets of hospitalized patients; Pre - and post-operative X-rays of hospitalized patients; Operating protocols; Patient discharge sheets; Consultation registers in the Orthopedics Ambulatory at SCJUA Both in SCJUA and in other University clinics, the olecranon fracture is a fracture produced in popular terms, right in the "tip" of the elbow.

This sharp segment of the bone is part of the proximal third of the ulna, which is one of the three bones that join together to form the elbow joint. Olecranon fractures are quite common in Arad County. Although they usually appear as single fractures, without any other injuries, they can also be part of a more complex elbow injury.

Treatment for a fracture of olecranon depends on the severity of the lesion. Some simple fractures can be treated with the help of a splint until the bone heals. However, in most fractures of the olecranon, pieces of bone, fracture fragments, move out of place when the injury occurs. For these fractures, the medical team of the SCJUA, prefers surgery to restore both the normal anatomy of the elbow and the movement of the joint.

## Therapy and care of the terminally ill critical patient with Covid 19

Teodora Olariu<sup>1</sup>, Iustin Olariu<sup>1</sup>, Amalia Niculescu<sup>1</sup>, Horațiu Papiu<sup>1</sup>,  
Victor Toma<sup>2</sup>, Ioana Toma<sup>3</sup>, Radu Tulbure, Mirela Bălan<sup>4</sup>

*<sup>1</sup> "Vasile Goldiș" Western University of Arad, <sup>2</sup> Emergency Clinical  
County Hospital of Arad, <sup>3</sup> Victor Babes University of Timisoara, <sup>4</sup>  
The Order of the Nurses from Arad*

**Abstract:** Introduction: Covid 19 is an infectious disease caused by the SARS COV-2 virus. This virus causes mild, moderate, or severe respiratory infections such as Severe Acute Respiratory Syndrome (SARS). A large number of patients infected with this virus presented serious forms, which became critical patients and which required hospitalization and treatment in the Intensive Care Units.

The aim of this paper is to show the need for complex therapy as well as the nursing of these patients who have reached the terminal state and have died.

Material and method: In 2021 in the ATI 2 section of SCJU Arad, 587 critical patients with Covid 19 were hospitalized, out of which 425 in a percentage of 72.525% died. Of the total number of patients who died, 395 (92.941% ) required assisted mechanical respiration. All patients received complex drug therapy according to the protocols. An extreme feature that impressed all the medical staff in the department is the way they died, their suffering but also their desire to live. In addition to drug treatment, the need to care for these terminally ill patients, the interaction of the medical staff with the patient, the satisfaction of psychological needs, the solidarity of the staff with the patient, the rejection of abandonment and respect for life, which is a moral therapy.

Conclusions: Drug therapy and end-patient care are not intended to end death, but view death as a normal part of life. Multidisciplinary work teams: doctors, nurses and others, must respect all terminally ill patients, not abandon them but give them respect for life and death

Keywords: Covid 19, SARS-COV-2, terminal condition

## SECTION IV

### PREZENT ȘI VIITOR ÎN STOMATOLOGIE PRESENT AND FUTURE IN DENTISTRY

#### Conditioning of the gingival groove, source of errors and constraints in the fixed prosthesis

Valeria Covrig, Teodora Eva Lucaciu Lupulescu, Otilia Stana,  
Adelina Berari

*„Vasile Goldis” Western University of Arad*

**Abstract:** Summary: One of the key moments of the fixed prosthesis is the impression, and in it, the conditioning of the gingival groove is a step that should not be taken by any practitioner. Over time, several methods and materials have been proposed and used for this purpose, but none have proved ideal. On the contrary, some of them were even torturous for both the doctor and the patient, and the results were not adequate. Research has continued on this idea. The result is currently the Expa- Syl product, which is at least theoretically close to the requirements of a gingival duct conditioning material. It remains for time to confirm this and turn the imprint into a routine element.

**Keywords:** prosthesis, impression, conditioning material, gingival groove.

## **Method of simultaneous imprinting of the entire prosthetic field for fixed prosthesis**

Valeria Covrig, Teodora Eva Lucaciu Lupulescu, Otilia Stana, Diana Marian

*„Vasile Goldis” Western University of Arad*

**Abstract:** Summary: The impression for the fixed unidentary or partial fixed prosthesis is usually taken in the standard spoon. The antagonistic arch and the occlusion are marked separately. It is a very important stage of fixed prosthesis that takes time because it requires several phases. At the same time, we may not have the right spoon to do this.

This paper presents a new technique for obtaining such a fingerprint, using three spoons that stand together. At the same time, the antagonistic teeth are imprinted and the occlusal relations are registered. The method can also be used for temporary prosthesis. **Keywords:** impression, prosthesis, occlusion, temporary prosthesis.

## **Combining chlorhexidine with fluoride - a stronger weapon in the fight against gingivitis and carious lesions**

Teodora Eva Lucaciu Lupulescu, Valeria Covrig, Călin Mancaș,  
Adelina Berari, Diana Marian, Radu Elisei

*„Vasile Goldis” Western University of Arad*

**Abstract:** Summary: The aim of this study is to determine whether the combination of chlorhexidine (CHX) with fluoride (F) has a stronger inhibitory effect on the acidic production of bacterial plaque and thus a reduction in gingival inflammation than when used separately.

It has been shown that when the two substances are used topically in the same vehicle, neither the presence of free fluoride ions nor the availability of chlorhexidine have been reduced below the therapeutic level.

Therefore, chlorhexidine and fluoride, when used in regular oral hygiene practices, can be combined without losing their individual properties. For people at high risk of developing caries, this phenomenon is essential and its application becomes even more indispensable for oral health. Keywords: chlorhexidine, fluoride, bacterial plaque, gingival inflammation, caries.

## **Protection of the patient's psyche in dental therapy**

Teodora Eva Lucaciu Lupulescu, Valeria Covrig, Otilia Stana,  
Mihaela Adomnicăi, Gabriela Elisei

*„Vasile Goldis” Western University of Arad*

**Abstract:** Summary: Stress is an important risk factor in the determinism and evolution of many psychosomatic or organic diseases.

It is known that the dental act is a stress for the patient. But the situation is sometimes stressful for the doctor as well, the need for adaptation being reciprocal.

For the patient, suffering or the thought of a future suffering is the stressor, the emotional reaction being fear. Because of this, the patient has an ambivalent behavior, so close to the doctor, which can help him, but also rejection because it could aggravate his suffering.

For the doctor, the stress is generated by the professional responsibility that covers two aspects: the desire to help, on the one hand and the rejection on the other hand, which is based on the difficulties he sees in relation to the patient.

The doctor must control the stressful situation both in his case and in the patient's case through self-control, professional safety, emotional interference, suggestion, etc.

## Bioactive materials in endodontics

Diana Marian, Andreea Boboc-Gusman, Andreia-Amalia  
Dabuleanu, Oana Suiu, Diana Stefanescu

*„Vasile Goldis” Western University of Arad*

**Abstract:** Conservative pulp therapies are therapeutic maneuvers that allow the conservation of tooth vitality, such as indirect pulp-capping, direct pulp-capping, and pulpotomy. All these therapies aim essentially at maintaining pulp vitality and inducing formation of tertiary dentin. However, preservation of the dental pulp depends on its condition, such if this is healthy, inflamed or necrotic. Conservative therapies can be performed on tooth with reversible or irreversible pulpitis, but not in pulp with necrosis process. These characteristics are clinically evaluated. The bioactive materials will be used in direct contact with dental pulp are basically calcium hydroxide and bioceramic materials, such as calcium silicate-base materials. This chapter discusses the response of pulp tissue caused by these materials and shows a series of studies that evaluated this response, with the aim of guiding the clinician in the choice of materials for conservative treatments of vital tooth pulp.

The tooth structure is a mineralized tissue where several clinical procedures are performed in order to repair problems caused by trauma, caries and congenital defects . Indeed, the need to replace damaged parts of the body in order to restore their physiological functionality has always been the driving force which has supported research into the design of new biomaterials. Biomaterials are natural or synthetic materials used in contact with biological systems with the purpose to replace tissues, organs or functions of the body, in order to maintain or improve patient quality of life. Biomaterials can be classified by three different generations.

The first generation includes those who exercise maximum biochemical/biological inertness in contact with body fluids and whose focus is not to provoke foreign body reaction in the organism.

The second generation concerns the bioactive and biodegradable materials which are able to promote a positive response of the living organism through the formation of a strong tissue-implant bond. The third-generation materials are responsible for stimulating cellular responses at molecular levels through the genetic activation of specific cell pathways. In dentistry, new products are constantly launched in the market. Such products are used in close contact with biological tissues such as dentin, pulp, periodontal tissue and alveolar bone. In this way, biomaterials should be used with caution and indication should always be well evaluated, considering clinical and ethical criteria. For this, there is a need for the Dentist to know the characteristics and properties of biomaterials. Currently three classes of materials are used in dentistry –metals, polymers and ceramics, with only ceramic materials has bioactivity. Some dental materials have only a reconstructive function aiming at the recovery without however binding to the dental surface. Bioactivity is related to the cellular effects induced by the release of biologically active substances and ions from the biomaterial. A bioactive material is defined as a material that stimulates a beneficial response from the body, particularly bonding to host tissue. Bioactivity of dental materials relates to their potential to induce specific and intentionally desired mineral attachment to the dentin substrate.

## **Periodontal disease. Systemic factors**

Ioana Ilyes, Tiberiu Hosszu, Paul Freiman, Ion Corlan, Ioana Lile,  
Roxana Radu, Otilia Stana, Diana Marian

*„Vasile Goldis” Western University of Arad*

**Abstract:** Periodontal disease is considered to be one of the most common inflammatory conditions in the oral cavity, inflammation occurs in the tooth support tissues, destroying the periodontal ligament and the alveolar bone in response to the presence of specific microorganisms.

The periodontal disease sums up all the pathological manifestations that are relevant to the periodontium pocket, having a plurifactorial etiology, having a chronic evolution, requiring complex and long-term treatment.

Systemic factors have the role of decreasing the resistance of periodontal tissues and of causing tissue response, increasing their predisposition to disease in the presence of local factors. Of these, the most notable are: smoking, diabetes, cardiovascular diseases, obesity, medication (antihypertensive, sedative, antihistamine, some tranquillizers, contraceptives, bisphosphonates), stress, osteoporosis, diet and immunodeficiency. It is important to understand the etiology of these factors to recognize their role in periodontal disease.

## **Initial Periodontal Therapy in Patients with Periodontitis**

Ioana Ilyes, Paul Freiman, Tiberiu Hosszu, Ion Corlan, Ioana Lile,  
Roxana Radu, Teodora Lupulescu, Mihaela Adomnicai

*„Vasile Goldis” Western University of Arad*

**Abstract:** The treatment for the periodontal disease follows the elimination of the factors causing, maintaining and increasing the gingival inflammation and speeding the resorption of the deep structures of the periodontium. If the patient presents systemic factors also, then these have to be taken into consideration.

The inceptive therapy is the therapeutic stage that tracks the patient's education and training in plaque control (as this is the main cause of the periodontal disease), diet supervision, emergency treatment, cavities and endodontic lesions treatment, Scaling and Root Planing, elimination of the inappropriate prosthetic works and their temporary replacement, minor orthodontic treatment, mobile teeth contention, preliminary occlusal polishing and reevaluation of the periodontal status in order to determine the appropriate future treatment measures.

## Teeth whitening, esthetic aspects

Adelina Berari, Ioana Lile, Diana Marian, Paul Freiman, Tiberiu Hosszu, Gabriela Elisei, Carolina Cojocariu Hoge, Radu Elisei

*„Vasile Goldis” Western University of Arad*

**Abstract:** Treatment of tooth discoloration is currently one of the most common therapeutic approaches in dental offices. Patients require such procedures due to the demands of modern society because social integration is tributary to a pleasant appearance. In office vital bleaching method satisfy patients in terms of rapidity, and the effectiveness of treatment, given that the selection of cases is adequate and working principles fully respected.

Whitening lamp technology is the result of extensive research regarding light technology, chemical reactions for opening the tooth shade and years of experience in traditional bleaching. Combining this property with specially designed light gel based on hydrogen peroxide bleaching results in a system that dramatically reduces the time required to obtain a more open shades.

Dental whitening is a technique classic older bear fruit in terms of achieving the desired shades of white, but involve risks raising some teeth.

Key words : classic whitening, bleaching lamp efficiency

## **Resolution of the esthetic function through by making ceramic crowns**

Adelina Berari, Ioana Lile, Diana Marian, Ciprian Pașca, Tiberiu Hosszu, Gabriela Elisei, Carolina Cojocariu Hoge, Radu Elisei

*„Vasile Goldis” Western University of Arad*

**Abstract:** Purpose: This scientific paper seeks to create a systematic approach in choosing the right ceramic system according to the clinical situations. Material and method: The clinical cases are : one male patients and two female patients, between ages of 20 and 44, presenting coronary lesions and small partially edentations that required aesthetical and morpho- functional restorations by fixed ceramic prostheses manufactured according to standard protocols. Results: Following the choosing criteria for the ceramic system mainly suited to the clinical situation, led to obtainment of aesthetic and functional ceramic fixed prosthetics restorations, to the patients delight and satisfaction of the technician-dentist team. Conclusions: Choosing the proper ceramic systems depends on the minute evaluation of the patient's occlusion, decisions taken favoring aesthetics, resistance, bonding requirements and parafunctional situations, than on a preferred system. Dentists will select ceramic crowns by using hierarchical approach.

**KEY WORDS** full-ceramic, metal-ceramic, aesthetic, resistance

## **ART techniques for restoring temporary teeth without rotary instrumentation**

Tamara Gorcea, Alida Marcovici, Diana Marian

*„Vasile Goldis” Western University of Arad*

**Abstract:** The study entitled ART techniques for restoring temporary teeth without rotary instrumentation, addresses the attitudes and treatment methods of dental professionals treating children and adolescents during and after the COVID-19 pandemic, with reference to the international rules of global restrictions.

It also aims to analyse minimally invasive treatment alternatives for the restoration of carious lesions, minimising the risk of viral cross-infection.

All published submissions focused on the choice of treatment alternatives such as non-aerosol generating dental treatment procedures (non-AGDP). Patient triage is mentioned through virtual platform appointments that help in taking patients' general medical and dental histories to reduce doctor-patient contact time.

This study describes minimally invasive treatment (MID) techniques, clinical applications and its indications in anxious children. ART, one of the MID concepts, is presented as an effective alternative to conventional methods for treating and preventing carious lesions. The principles and working protocol are described. The modified ART technique (M-ART), necessary instrumentation and working protocol are presented.

Chemomechanical methods Carisolv, Papacarie, Brix3000 are presented in a short history, their development over time, chemical composition and working protocol.

Filling materials that can be used without generating aerosols CIS, compomer, SDF (silver diamine fluoride) application are mentioned.

Also reported is the Hall technique (HT), a non-surgical/non-invasive method used for the restoration of temporary molars with carious lesions but asymptomatic and without pulpal pathology.

In the final part, a review of the articles concerning the COVID-19 pandemic pedodontic implantology is presented. The use of non-AGDP procedures and case-based selection of non-invasive or minimally invasive dental treatment methods is recommended.

## **Prosthetic therapeutic solutions in case of deciduous dentition**

Tiberiu Hosszu, Ioana Lile, Paul Freiman, Diana Marian, Ioana Ilyes, Adelina Berari, Carolina Cojocariu Hogeia, Catalena Szekeres

*„Vasile Goldis” Western University of Arad*

**Abstract:** Because to us the prevention is still a distant dream and crown restorations by direct methods have limitations, prosthetic therapy became necessary not only in adults but also in children and especially teens. Unlike adult prosthetics, many times the child is addressed an oral cavity whose development must not disturb more than this kind of prosthetic therapy after therapeutic solutions must allow adult viable future.

The frequency and intensity of carious processes, trauma through accidents, playground, dental anomalies of number, shape and volume, keeping the results of the orthodontic treatment or complete this, requires the provision of prosthetic therapy at this age.

Prosthetic therapy in children and adolescents has more features than that of adults. Of these, the following are remarkable: it is addressed to patients whose oral cavity is under development and must not influence the solutions adopted have to allow the adoption to others in the future when the child becomes a teenager, then adult.

Fixed prosthetic restorations, especially those single-tooth practiced quite frequently in children and young people. They may have a transient or lasting. However, they are outdated quantitative by the movable prosthetic restorations.

## **Orthodontic-prosthetic and implantological treatment in case of frontal tooth anodontia**

Tiberiu Hosszu, Paul Freiman, Ioana Lile, Diana Marian, Teodora  
Lucaciu Lupulescu, Otilia Stana, Gabriela Elisei, Radu Elise

*„Vasile Goldis” Western University of Arad*

**Abstract:** The most frequent cases of hypodontia involve the upper lateral incisors and often require a multidisciplinary treatment approach, targeting the management of maintaining, closure and redistribution of space. The treatment options discussed in the literature are: orthodontic space closure, tooth-supported prosthodontic treatment and implant-supported crowns.

The term hypodontia is used when one to six teeth are missing, while the term oligodontia is used when more than six teeth are absent.

Anodontia is an extreme case of tooth agenesis, denoting complete absence of teeth. Tooth agenesis is one of the most common dental developmental abnormalities which occurs as a result of disturbances during the initial stages of tooth formation. Tooth agenesis has an unclear etiology and may occur isolated (familiar or sporadic) or as a part of a syndrome.

Orthodontic treatment can be an effective treatment option in patients with congenital hypodontia, favouring the redistribution of space, teeth alignment and the correction of malocclusion. The interdisciplinary treatment approach was essential in order to maintain the stability of the orthodontic treatment outcome and to improve aesthetics.

## **Late eruption of immature permanent teeth, etiology and therapeutic solutions**

Tiberiu Hosszu, Ioana Lile, Paul Freiman, Mihaela Adomnicai,  
Liviu Gavrilă-Ardelean, Ciprian Pașca, Otilia Stana, Iustin Olariu

*„Vasile Goldis” Western University of Arad*

**Abstract:** When children's permanent teeth come in substantially later than average, it is called delayed tooth eruption. We argue that delayed tooth eruption does not normally indicate a medical problem. Instead, numerous sociological, lifestyle and genetic factors affect when a child's permanent teeth arrive. We note that extreme delays in tooth eruption frequently do indicate an illness, so if you are concerned that your child's teeth have not yet arrived.

Genes play an important role in numerous developmental factors, including tooth eruption. Some children's genes may tell their permanent teeth to come in later than other children. The teeth of malnourished children erupt later than those of their peers. In the industrialized world, the overwhelming majority of children are sufficiently nourished to develop normally. If, however, your child is an extremely picky eater, her nutritional status may affect permanent tooth development. Socioeconomic factors also play a role in tooth development. Children of poor parents tend to develop teeth later than children of middle class and wealthy parents. This is likely due to subtle differences in nutritional quality, environmental toxins and stress.

## Modern endodontic instrumentation using the Trunatomy System

Alida Marcovici, Tamara Marcovici, Diana Marian

*„Vasile Goldis” Western University of Arad*

**Abstract:** This thesis aims to examine both the effectiveness and new features of the TruNatomy system (Dentsply Sirona).

In modern endodontic therapy the preservation of root canal anatomy has become a necessity for successful treatment.

The long-term maintenance of the endodontically treated tooth is correlated with the amount of remaining tooth tissue and the quality of the restoration after root canal filling.

Current trends in endodontics are: preservation of dental hard structure and minimally invasive treatments.

Based on these goals, Dentsply Sirona (Dentsply Sirona, Ballaigues, Switzerland) launches the new TruNatomy minimally invasive preparation system, which, as its name suggests, aims to faithfully respect the root anatomy of the tooth and remove the minimum necessary dentin, thus preserving more dental hard substance. The new system offers an innovative, effective and complete relief of root canal treatment. Its range has products for every step of endodontic treatment: Orifice Modifier, Glide Path, Shaping Files, paper cones, Conform Fit™ gutta-percha cones, flexible irrigation needles.

The manufacturer states that the Trunatomy system provides superior performance with increased respect for the natural anatomy of the canal while maintaining the structural integrity of the tooth.

We conducted a comparative study of the TruNatomy endodontic preparation instruments with the ProTaper Next system. This study was based on 20 endodontic blocks, 10 of which were prepared with the TruNatomy system and the other 10 with the ProTaper Next system. Analysis of the instrumented endodontic blocks was performed both by visual analysis, in which we examined debridement at each third of the root canal, and by percentage analysis of the root canal surfaces where the contents were not

completely removed. From the study we found that the TruNatomy system instruments were able to more effectively remove root canal contents in a limited time frame.

## **The role of plasmapheresis in Guillan-Bare syndrome -clinical experience of an ICU ward**

Cristian Nicolescu

*„Vasile Goldis” Western University of Arad*

**Abstract:** The plasmapheresis treatment has gained popularity in case of patients with Guillan-Bare syndrome . Along with the immunoglobulin treatment it represent an option for the immunomodulation , the clinical evaluation of these patients is favorable after only two or three sesions ..Our experience in this field consist of seventeen patients who underwent this technique over the last three years and we would like to share this experience with other medical staff.

## **Clinical- therapeutic aspects of cleft lip and palate**

Carolina Cojocariu Hoge, Tiberiu Hosszu, Paul Freiman, Ioana Lile, Szekeres Catalena, Adelina Berari, Ion Corlan, Gaby Elisei

*„Vasile Goldis” Western University of Arad*

**Abstract:** Cleft lip and palate is a medical problem due to the uncertain etiology, variety of clinical forms, and associated functional disorders, but especially through the special treatment, they need.

The therapeutic management of these patients is complex and takes place over a long period of time. They can occur in genetic syndromes or they can be isolated, not associated with another disease.

Many patients with cleft lip and palate have limited maxillary growth, but there is controversy about the cause that restricts this growth, is it the result of an intrinsic deficit is not a single factor, as evidenced by studies performed on unoperated patients and those operated on for cleft palate.

Dental abnormalities in patients with clefts occur more frequently than in those who do not suffer from these conditions. These abnormalities include inclusions, dental agenesis, supernumerary teeth, hypodonts, and changes in shape.

The treatment includes in the first phase both a surgical and an orthodontic stage which consists of the application of prefabricated or individually made appliances. These devices must be applied as early as possible and readjusted as the child grows.

The completion of the treatment will be done with a fixed appliance that will correct the dental alignment and the orthognathic surgery from the end of the growth will establish the occlusion and will correct the aesthetic appearance.

## **Inclusion of maxillary canines**

Carolina Cojocariu Hogeia, Paul Freiman, Tiberiu Hosszu, Ioana Lile, Catalena Szekeres, Adelina Berari, Ion Corlan, Diana Marian

*„Vasile Goldis” Western University of Arad*

**Abstract:** Maxillary canines have the longest period of development the deepest area of formation and the most difficult part of all teeth. The permanent maxillary canine is considered important by its place in the functional occlusion scheme and its contribution to facial appearance.

A deviated path of eruption of the maxillary canine can lead to its impact, in which case the tooth can no longer erupt in a normal position within the dental arch.

Most cases of included teeth are asymptomatic and are found during routine clinical or radiological examinations. The information required to determine the orientation of the impacted tooth can be obtained by periapical occlusal, or panoramic radiographs however, they cannot always provide complete data on the three-dimensional relationships of the impacted teeth opposite the teeth and adjacent structures, CBCT provides a three- dimensional view for its exact location in sagittal and transverse planes, without overlaps.

The statement solution consists in creating space at the level of the arch, surgical discovery, application of an intraoperative attachment, and its mechanical traction.

Patients must go through an extensive initial assessment of malocclusion to locate the position of the included maxillary canines and make a decision on the prognosis of their alignment on the dental arch, 3D CBCT imaging is advantageous in the management of impacted maxillary canines.

## **Mobile prostheses adapting process**

Liviu Gavrilă-Ardelean, Otilia Stana, Adelina Berari, Iustin Olariu,  
Gabriela Elisei, Teodora Lupulescu-Lucaciu, Tiberiu Hosszu

*„Vasile Goldis” Western University of Arad*

**Abstract:** Many people adjust to new dentures straight away, for others it can take few months to get user to the fit. Dentures can become loose because of wear or naturally bone resorption. The patients may experience some mild discomfort, which should decrease as gums adjust to the new dentures and graduated they can get back to feeling like themselves again. Regular doctor visits are important in order to adapt sooner.

## Refitting complete denture

Liviu Gavrilă-Ardelean, Tiberiu Hosszu, Otilia Stana, Iustin Olariu,  
Gabriela Elisei, Teodora Lupulescu-Lucaciu, Adelina Berari

*„Vasile Goldis” Western University of Arad*

**Abstract:** If you're missing a tooth due to tooth extraction, gum disease, or injury, the jawbone in the area of loss no longer receives stimuli, osteoblasts will no longer prioritize rebuilding the bone structure there. When resorption happens at a higher rate than it can be replaced, it can lead to a decrease in your bone mass and put you at higher risk for fractures and breakage. New bone will still form, but at a slower rate than the bone that is being destroyed. Wearing dentures may increase the rate at which the bone deteriorates. If you wear dentures and they've become loose, it may be a result of bone loss, and they may require refitting.

## Dental veneers

Stana Otilia Lavinia, Stana Ademir Horia, Radu Roxana, Hosszu  
Tiberiu

*„Vasile Goldis” Western University of Arad*

**Abstract:** Dental veneers are prosthetic works that have the role of partially or completely exposing the tooth in order to eliminate animated aesthetic defects such as cracks in the enamel, unpleasant color or other similar conditions.

The dental veneers have the shape of a thin shell that has the shape and color of the tooth to be similar to the rest of the teeth. Of course, there are situations in which all teeth are completely covered with these prosthetic works, which means that it will be possible to completely change both the length and size of the teeth and their color.

Dental veneers can be made of different types of material, each with its own advantages and disadvantages. For example, ceramic veneers are the most commonly used and best mimic the natural reflection properties of natural teeth.

## Dental Implants

Stana Otilia Lavinia, Stana Ademir Horia, Lile Ioana, Hosszu  
Tiberiu

*„Vasile Goldis” Western University of Arad*

**Abstract:** Dental implants are currently the most modern and effective way to replace lost teeth without sacrificing dental substance (teeth adjacent to the edentulous space). Given that dentistry has risen sharply in recent years, we still face a large number of teeth lost due to poor hygiene, tooth decay, periodontal disease and accidents.

In the past, the only available treatment options for adults were fixed single-tooth or multi-tooth restorations or mobile or mobilizable prostheses, but now dental implants are the best solution.

Patients who benefit from good quality dental implants can continue their daily activities and lifestyle because artificial teeth will behave exactly the same as natural teeth.

## **The importance of tooth loss**

Otilia Lavinia Stana, Ademir Horia Stana, Ioana Elena Lile, Valeria Covrig, Teodora Eva Lucaciu-Lupulescu

*„Vasile Goldis” Western University of Arad*

**Abstract:** The loss of one tooth leads to changes in the other remaining teeth, of the temporomandibular joint, muscles and jaw bones.

Throughout life, the teeth undergo positional migrations to find stability through occlusal contact with neighboring teeth but also with their antagonists on the opposite arch.

If a tooth is absent, the others try to compensate for the gap created by the inclination towards edentation and the eruption of the antagonist towards the free space.

These changes in the position of the remaining teeth will lead to:

- occlusal and joint problems, masticatory disorders due to abnormal contacts
- increase the sensitivity and susceptibility to caries of the remaining teeth
- periodontal problems, gingival inflammation and even periodontal disease

Patients also experience these disorders and emotional imbalances, often influencing their lifestyle.

## **Principles of dental preparation in prosthetics**

Otilia Lavinia Stana, Ademir Horia Stana, Paul Freiman, Valeria Covrig, Teodora Eva Lucaciu-Lupulescu

*„Vasile Goldis” Western University of Arad*

**Abstract:** Dental tissues, compared to other tissues in the body, do not have the ability to regenerate, but structures lost for various reasons, such as enamel and dentin can be replaced with various biocompatible materials, in order to restore lost morphology and function. In order to allow the artificial restoration of the lost dental structures, we will have to prepare the remaining dental structures. The dental preparations are not made at random; they are based on the knowledge and observance of some fundamental, basic principles.

The principles that govern dental preparation are:

biological: aims to ensure the health of oral tissues.

mechanical: refers to maintaining the integrity and durability of long-term restorations

aesthetic: aims to ensure the physiognomic aspect.

The biological principle has the following objectives:

- preservation of the dental structure
- correctly outlined cervical edges
- harmonious occlusal ratios
- tooth strengt

The mechanical principle has the following objectives:

- ensuring the form of retention
- ensuring the form of resistance
- preventing the formation during operation

The aesthetic principle presupposes the following objectives: the minimum display of the metal, the maximum thickness of the ceramic, ceramic occlusal surfaces, subgingival edges

## **Reconstruction of Atrophic Maxilla with Zygomatic Implants**

Emrah Soylu

*Erciyes University Faculty of Dentistry*

**Abstract:** Dental implants are commonly using in the reconstruction of the total or partial edentulouism. However, dental implants are inadequate in the reconstruction of the severely atrophic or hemi- or total resected maxilla.

Branemark was firstly introduced the Zygomatic Implants (ZIs) in 1988 and provided an alternative method for the prosthetic treatment of severely atrophic or hemi- or total resected maxilla.

Long-term follow up studies showed that ZI has a success range between 82% and 100% and can be used as an alternative to bone grafting to reconstruct the maxilla. Proper patient selection and proper surgery together with the accurate indications and prosthetic planning are among the factors that increase the success of ZIs.

## **Cariology Concepts : A Trip Through Time**

Hamdi Hamama

*Faculty of Dentistry, Mansoura University*

**Abstract:** Cariology is a highly dynamic branch of dental sciences. Caries is from the Latin word that means “rotteness. The scope of this branch is to study the aetiology, histopathology, epidemiology, prevention and management of dental caries. The ultimate goal of this branch is to achieve maximum conservation of natural tooth substrate.

In early ninetieth century, Webb & G.V. Black introduced the fundamentals of tooth preparation based on the available scientific knowledge about nature of the disease. However, due to rapid development in dental adhesive strategies and caries detection methods, most of Black’s principals are no longer existing.

In this lecture, we will have a trip through the current caries assessment methods and principals. In light of the rapid development of early-caries detection methods, many recent caries assessment and detection methods are recently introduced. One of these new systems is The International Caries Detection and Assessment System (ICDAS). A new conservative philosophy called “minimally invasive dentistry” (MID) is more acceptable nowadays. The main purpose of MID is to achieve maximum preservation of dental tissue. In cariology field, MID includes early-detection of dental caries, assessment and control of caries-risk factors, remineralization of early caries lesions, restriction of the excavation to the caries-infected areas and application of advanced dental adhesion concepts

**Characterization of Healthy and Tumor Oral Cell Lines of Human Origin -The preliminary stage in the assessment of relevant chemical compounds**

Ion Virgil Corlan

*„Vasile Goldis” Western University of Arad*

**Abstract:** The present study was aimed to evaluate the confluence of three oral cell lines, namely primary gingival keratinocytes (PGK), primary gingival fibroblasts (HGF) and tongue squamous cell carcinoma (SCC-4). All cells have been monitored at different passages for 21 days.

The cells were cultured in the specific culture environment as follows -primary gingival keratinocytes (PGK) were cultured in Dermal Cell Basal Medium supplemented the keratinocyte Growth Kit, primary fibroblasts (HGF) in Fibroblast Basal Medium, supplemented with the specific Growth Kit and SCC-4 cells in DMEM F12 Medium supplemented with fetal bovine serum - 10%. All cells were kept in standard conditions -humidified atmosphere with 5% CO<sub>2</sub> at a temperature of 37 Celsius degrees and passaged every 2-3 days.

Evaluation of confluence percentage reveals the fact that primary gingival keratinocytes and tongue squamous cell carcinoma at small passages require a period of about two weeks to reach the confluence of approximately 80%, while for the gingival fibroblasts a period of about three times smaller is satisfactory.

The confluence percentage is determinant in conducting experiments and plays a key role in accurate assessment of test compounds

## The Influence of Some Synthesis Compounds on Healthy and Tumoral Oral Cell Lines :PGK, HGF and SCC4

Ion Virgil Corlan

*„Vasile Goldis” Western University of Arad*

**Abstract:** This present study aimed to asses the influence of different chemical compounds which are commonly found in the composition of products used for oral hygiene on primary gingival keratinocytes, human gingival fibroblasts and tongue scuamous cell carcinoma behaviour.

Chlorhexidine (Chx) , Aspartame (Asp), Xylitol (Xyl ) and sodium bicarbonate (NaB) were evaluated in an -in vitro- research regarding cell morphology and cytotoxicity .

Primary gingival keratinocytes (PGK) and fibroblasts (HGF) treated with different concentration of the tested compounds did not show significant changes , nor related to morphology nor related to viability at the lowest concentrations used -less than 25 microM .

In contrast , the tumor cells were affected by the test compounds , especially Xylitol and Sodium Bicarbonate , both in terms of morphology and cytotoxicity at concentrations higher than 50 microM Chemical compounds , like disinfectants and artificial sweeteners are currently classified as safe for consumption in various products by many international regulatory institutions , while some of them are still classified to be used ‘with caution ‘ in some countries The present study serves to provide further information on the possible effect these agents have on mammalian cells , however further studies will have to be performed to clarify what exactly these effects might be

## Changes in global DNA methylation and hydroxymethylation in oral mucosa according to tobacco smoke exposure

Gabriela Avram<sup>1</sup>, Anca Marcu<sup>2</sup>, Alexandra Moatar<sup>2</sup>, Corina Samoila<sup>2</sup>, Angela Podariu<sup>2</sup>, Edward Seclaman<sup>2</sup>, Catalin Marian<sup>2</sup>

<sup>1</sup>„Vasile Goldis” Western University of Arad,<sup>2</sup>”Victor Babes” University of Medicine and Pharmacy Timisoara

**Abstract:** This study tries to comparatively investigate the effect of tobacco smoking on global methylation and hydroxymethylation in the epithelial cell of the oral mucosa. Buccal cells from the inside of the cheeks were collected from 47 individuals. DNA was extracted using dedicated kits. The methylated and hydroxymethylated DNA fractions were measured using ELISA-type assays. The levels of methylation and hydroxymethylation were compared among groups using the unpaired two tail t-test or Mann-Whitney test and a threshold of 0.05 was considered for statistical significance. Results reveals that there is no statistically significant difference between the average number of cigarettes in smoker and former smoker groups. Although the methylation levels are lower for smokers (3.1%) and former smokers (2.16%) compared to the never smoker (4.16%), they are not statistically significant. There is a two-fold increase in hydroxymethylation status in never smokers versus smokers.

**Conclusions:** Our study aimed to quantify the genome-wide methylation and hydroxymethylation levels in oral epithelial cells exposed to tobacco smoke. Our findings suggest that smoking leads to a decrease in both 5-mC and 5-hmC levels, a decrease influenced by the intensity and length of exposure to tobacco smoke.

## Submaxilectomy

Radu Elisei, Gabriela Elisei, Elisabeta Vasca, Gabriela Avram, Ioana Lile, Roxana Radu, Tiberiu Hosszu, Teodora Lupulescu

*„Vasile Goldis” Western University of Arad*

**Abstract:** This surgical procedure consists of the total or partial removal of the SUBMAXILAR GLAND, depending on the type of disease.

The submaxillary gland is singular on each side of the neck. It is found below the jaw and towards its lateral portion. Its function is to produce saliva, which helps in chewing, swallowing and speech.

The incision for the submaxilectomy is transversal and made below the jaw. On average, it has a length of 3-5 cm, but may vary in each case.

This procedure is performed under general anesthesia. It is always necessary to leave a drainage tube for 2-5 days to avoid the accumulation of postoperative fluids. The procedure is ambulatory in most cases, and depending on the type of technique used the stitches will not need removal

## The proportion of gold in dentistry

Gabriela Elisei, Radu Elisei, Berari Adelina, Ioana Lile, Tiberiu Hosszu, Carolina Cojocariu Hoge, Teodora Lupulescu, Iustin Olaru

*„Vasile Goldis” Western University of Arad*

**Abstract:** The Golden Ratio has appeared since the Renaissance. More precisely, it is the number 1.61803399 represented by the Greek letter Phi and considered to be truly unique by its mathematical properties, by its prevalence throughout nature and by its potential to render a perfect aesthetic composition.

This preference of the people for Golden Ratio is a biological one - predefined, explained by the fact that we find the proportion of gold everywhere. From the shell of a simple snail, the seeds of the sunflower to the shape of our galaxy.

The main purpose of the golden ratio is the aesthetic one - for thousands of years it has been recognized as a symbol of ideal beauty. And this harmony of proportions is found not only in the works of famous artists such as Leonardo da Vinci or Michelangelo, but also in the logos of modern brands and more in the symmetry of our body and features.

Since its formulation in antiquity, the "golden number" has attracted the attention of artists and researchers, and its aesthetic value, relative to the size of the human body, has been widely debated and later illustrated by Leonardo da Vinci.

The applicability of the "golden number" in dentistry was first mentioned by Lombardi and later developed by Levin, who used a template with invariable opening (according to the proportion of gold). It provides very interesting and very useful information. for:

- aesthetics from the anterior area;
- dentures;
- positioning of angles and dental axes;
- gingivectomy.

## Oro-sinus communication

Radu Elisei, Teodora Lupulescu, Elisabeta Vasca, Iustin Olariu,  
Roxana Radu, Gabriela Avram, Ioana Lile, Gabriela Elisei

*„Vasile Goldis” Western University of Arad*

**Abstract:** The oro-sinus communication, or maxillary sinus opening, represents in medical terms the presence of a continuity solution between the maxillary sinus and the oral cavity. The most common type of communication location is at the level of the alveolar ridge, but the sinus opening can also be in the buccal vestibule or hard palate.

Oro-sinus communications occur by the removal of a bone fragment from that level, mostly due to dental extractions. Opening of the maxillary sinus due to tooth extractions with sinus ratio is a frequent cause of chronic odontogenic maxillary sinusitis.

Oro-sinus communication resulting from the pushing of root remnants, with or without penetration of the sinus mucosa, should be treated after a mandatory radiological examination, then extraction of the remaining roots should be performed by a technique similar to apical resection. If the sinus mucosa has been penetrated and is inflamed, a radical cleaning of the maxillary sinus will be performed afterwards.

## **Dentistry aesthetics of composite resin restorations**

Gabriela Elisei, Radu Elisei, Berari Adelina, Ioana Lile, Tiberiu Hosszu, Carolina Cojocariu Hoge, Mihaela Adomnicai, Liviu Gavrilă Ardelean

*„Vasile Goldis” Western University of Arad*

**Abstract:** The adhesion of diacrylic composite resins (rdc) to the hard dental structures and the intrinsic properties of these materials make possible not only the restoration of the teeth, but also their fundamental change (within certain limits); In addition, diacrylic cements allow the adhesive fixation of aesthetic, intra- and extra-coronary prosthetic restorations, thus decisively influencing not only the quality of the "cementation", but also the technical methods of carrying out the treatments (adhesive bridges, adhesive veneers).

In establishing the therapeutic indication, the goal we are pursuing must be taken into account: obtaining aesthetic remedies, or just the simple restoration of the defect? the more important the aesthetic goal, the more extensive treatment should be considered; therefore, when the tooth (or teeth) have a large defect or the overall aesthetic aspect leaves much to be desired, it is good to consider indirect techniques (ceramics, polishing).

A decisive factor in the therapeutic option is the patient's age - the younger the patient, the more important it is to minimize the loss of enamel and dentin; from this point of view, composite diacrylic resins (applied by direct technique) represent the most conservative solution in aesthetic dentistry.

## Algorithm of therapy in dental emergencies

Iustin Olariu<sup>1</sup>, Teodora Olariu<sup>1</sup>, Ramona Amina Popovici<sup>2</sup>, Victor Toma<sup>3</sup>, Ioana Ruxanda Toma<sup>4</sup>, Elisabeta Vasca<sup>1</sup>, Renate Liane Bran<sup>5</sup>, Horațiu Papiu<sup>1</sup>

<sup>1</sup>, „Vasile Goldis” Western University of Arad, <sup>2</sup> Victor Babes University of Timisoara, <sup>3</sup> Hospital of Arad, <sup>4</sup> Timisoara Municipal Hospital, <sup>5</sup> Postliceal School of Arad

**Abstract:** Introduction: A dental emergency is a medical emergency that involves injuries to the components of the oral cavity such as: teeth and their supporting structures (gums, lips, cheeks, tongue). When pain occurs, it means that there is an injury that can progress causing severe problems that can affect both the areas adjacent to the oral cavity and the general condition, this means that the morphofunctional balance is affected.

Aim of the paper: Study and analysis of patients who addressed the dental emergency department within UPU-SMURD in Arad in 2021  
Material and method: the study was performed on a number of 2600 patients aged between 2 and 89 years, from urban, rural and other countries

Results: The most common emergencies were acute apical periodontitis, acute serous pulpitis, cellulitis, abscesses, chronic acute apical periodontitis and bleeding. Most of the patients' symptoms were pain, bleeding, and maxillofacial trauma. Patients with maxillofacial emergencies were delayed and sent to the Maxillofacial Surgery Department.

Conclusions: The results of the study showed that most of the patients had poor oral hygiene, lack of dental control, fear of the dentist, lack of funds. After the patients' emergencies were resolved, they were instructed to continue treatment at a private dental office.

Keywords: acute apical periodontitis, acute serous pulpitis, dental emergencies, UPU-SMURD

## Evaluation of dental status in dental students

Simona Leu, Loredana Lazar, Eleny Antulatos, Diana Marian,

*„Vasile Goldis” Western University of Arad*

**Abstract:** Oral health is an important part of overall health, with an impact on quality of life. It creates a state of well-being throughout the body, so it is important to follow the rules of dental hygiene in order to have the physical and mental comfort it offers. Oral hygiene depends a lot on everyone's lifestyle and the knowledge that each person has about how to sanitize the oral cavity.

Starting with 1990, the new approaches in the field of oral health promotion, established in 1986 by the Ottawa Charter for Health Promotion, began to be known in Romania, respectively: the elaboration of public health policies, the creation of a favorable environment, the intensification of community action, developing individual skills and reorienting health services in order to prevent illness.

Population strategies have been successfully applied to high-incidence diseases, including tooth decay and periodontal disease, which are generally linked to quasi-generalization of lifestyle, characterized by high carbohydrate consumption (especially refined double sugar), an unbalanced lifestyle, which disrupts the rhythm of healthy food consumption and does not ensure hygienic conditions after every meal, the stress that induces haste and negligence for personal hygiene. The pattern and evolution of odonto-periodontal diseases is constantly changing and, for this reason, the goal is to constantly discover methods and resources for evaluation and diagnosis, prevention and treatment.

The aim of this study was to assess the dental health of 145 students in the fifth year, through the WHO file. The applied methods obtained data on the oral health of future dentists and the need for treatment to improve oral hygiene, and the aim was to assess the prevalence of carious lesions in the same students.

The study led to the following conclusions:

- The prevalence of dental caries was 14.8%, higher than the prevalence of dental caries in the same age group in other countries

- The frequency of caries-free subjects was 4.8%, low compared to other countries
- Most missing teeth have been lost due to carious lesions and the loss of the 6-year-old molar predominates.
- Some students have partial or total sealing on the occlusal faces of the molars and premolars, which suggests that they have followed the preventive treatment of carious lesions.
- The oral health of the examined students must be improved by preventive and curative dental treatment.
  - The results of the study show that there are correlations between sexes, the environment of origin and caries lesions.
  - Students have a fairly high level of knowledge of oral hygiene, methods and techniques for maintaining oral health, although there are differences depending on gender and background. The identification of risk factors is important in preventing the progression of lesions, which is why it is necessary to establish a protocol for the prevention and monitoring of the evolution of various carious lesions.

## Depression and periodontal disease

Diana Bandac, Larisa Suciuc, Paul Freiman, Tiberiu Hosszu, Ioana Duma

*„Vasile Goldis” Western University of Arad*

**Abstract:** Periodontal diseases are common chronic inflammatory diseases caused by pathogenic microorganisms colonising the subgingival area and inducing local and systemic elevations of pro-inflammatory cytokines resulting in tissue destruction. Apparition and evolution of periodontal diseases are influenced by many local or systemic risk factors. Psychological stress has been suggested as one of them and may negatively influence the outcome of periodontal treatment. However, mechanisms explaining the possible relationship between stress and increased susceptibility to periodontal disease remain poorly understood. Several stress markers are found in blood and saliva of patients with periodontal diseases and influence the development of periodontal diseases by several mechanisms including modifications of the inflammatory response and changes in the composition of the dental biofilm.

An extensive body of experimental and clinical evidence documents the negative impact of chronic psychological stress and depression on the immune system and health. Chronic stress and depression can result in general dysregulation of the immune system, of both cellular and humoral pathways, which may contribute to pathogenic infection and concomitant periodontal tissue destruction. In general, the evidence is consistent with the hypothesis that stress can modify the host defense and progression of periodontal infections in patients susceptible to periodontitis. However, substantial evidence also indicates that these conditions can mediate risk for disease, including periodontitis, through changes in health-related behaviors, such as oral hygiene, smoking and diet. The unequivocal interpretation of studies has also been hampered, in part, by issues related to conceptualization of stress and depression, as well as commonly associated comorbidities, such as diabetes, that can modify the onset and progression of periodontal disease. In addition, stress and depression appear to fall into a spectrum, ranging from mild to

severe, involving a complex interaction of genetic background, coping strategies and environment. Differences in the conceptualization of stress and depression are probably important in assessing associations with other biologic and clinical measures.

Several mechanisms have been proposed to explain the mechanism by which depression plays a causal role in the in the aetiology of inflammatory periodontal disease:

Depression determines cortisol and adrenal disturbances, as well as immune dysfunction and excessive secretion of proinflammatory cytokines. Through these processes, depression might affect progression of periodontal infections in patients susceptible to periodontitis and might be associated with a worse treatment outcome through a delay of wound healing. Moreover, animal studies have demonstrated that various classes of antidepressants can reduce levels of oxidative stress markers, increase several endogenous antioxidants and also decrease the periodontal disease severity.

Changes in health-related behaviors, such as oral hygiene, smoking, diet, alcohol consumption that occurs in depressed patients can also be related to the occurrence of periodontal disease

Moreover, the antidepressive medication may also lead to xerostomia, alterations in gingival circulation and changes in saliva composition that might result in an exacerbation of periodontitis. However, further research is required in this area as some studies have found a causal relationship between reduced salivary flow and periodontal disease, whereas not in others.

Finally, stress and depression may be associated with periodontal destruction through behavioral and physiologic mechanisms. Addressing psychologic factors, such as depression, may be an important part of periodontal preventive maintenance.

## **Digital smile design. The key to predictability in esthetic cases**

Bogdan Faur, Adelina Berari, Elisabeta Vasca, Gabriela Elisei,  
Radu Elisei

*„Vasile Goldis” Western University of Arad*

**Abstract:** Digital dentistry refers to the use of dental technologies or devices that incorporates digital or computer-controlled components to carry out dental procedures rather than using mechanical or electrical tools. The use of digital dentistry can make carrying out dental procedures more efficient than using mechanical tools, both for restorative as diagnostic purposes. Used as a way to facilitate dental treatments and propose new ways to meet rising patient demands. The 'father' of digital dentistry is the French professor François Duret, who invented dental CAD/CAM in 1971. Some of the tools that technology provides us today in dentistry are: CAD/CAM technology, digital smile design, intra-oral scanners, extra-oral scanners, 3D printing, colour matching devices, occlusion and TMJ analysis devices, diagnosis of caries devices, etc.

A fundamental objective of an aesthetic treatment is the patient's satisfaction and that the outcome of the treatment should meet the patient's expectation of enhancing his/her facial aesthetics and smile. A patient constantly doubting the end result of the treatment, which is an irreversible procedure, can be motivated and educated through Digital Smile Designing (DSD) technique. Cosmetic dentistry is increasingly becoming an issue of concern to patients who hope to improve their smile. A systematic and comprehensive dentofacial analysis must be performed before commencing esthetic treatment. Several computer software programs have been developed for digital smile design (DSD) to assist clinicians in this process. DSD is a technical tool which is used to design and modify the smile of patients digitally and help them to visualize it beforehand by creating and presenting a digital mockup of their new smile design before the treatment physically starts. It helps in visual communication and involvement of the patients in their own smile design process, thus ensuring predictable treatment outcome and increasing case acceptance.

Digital smile design may be the first step of the treatment in a complete digital workflow and for that reason it can influence the rest of the treatment and the patient experiences. Some of its benefits are:

- Patients comfort (they can see and validate our esthetic proposal)
- We can determine the best tooth proportion according to the facial parameters
- We can determine if we need gingival zenith line correction and plan a new one
- We can determine the smile line and its position
- There are now DSD software which are relatively cheap and no time consuming

One of the DSD systems available now is SmileCloud, made by Florin Cofar in Romania. In most of the cases it requires only one photo and 4 steps to do a digital smile design:

1. Select and adjust the photo
2. Mark lip contour
3. Determine the smile line and tooth proportion
4. Choose tooth's from the smile cloud library

Some of the best parts of the Smile Cloud are that the doctor with the patient can easily choose together the best smile, and both the doctor and the patient can see the design proposal through smilecloud app on the mobilephone at home, and also communicate through it. The app can store all the photo documentation and designs for every patient and the tooth library is made from real tooth designs.

## Oral rehabilitation using prosthesis with special attachments

Victor Moraru, Bogdan Faur, Mihaela Velicovici, Ioana Lile,  
Adelina Berari

*„Vasile Goldis” Western University of Arad*

**Abstract:** Prosthesis with special attachment systems (studs) is a method with increased retention and elevated esthetics that allow patients to experience better comfort. It is used when there are few remaining teeth in compromised edentulous ridge patients. These teeth provide support to the prosthesis. It also offers many advantages as preservation of of alveolar bone resorption, psychological advantage of preserving natural teeth and improved chewing efficiency as compared to conventional complete dentures. Stud devices are among the simplest of all attachments. The male part (patrx) of the unit consists of a stud shaped projection soldered to the diaphragm of a dowel-retained restoration. The female part (matrix) fits over the male unit and is embedded withing the denture base of the prosthesis. The main advantage of using attachments instead of clasps is the prolonged vitality of the device, superior retention, lower rate of caries and 100% compliance.

Stud attachments are classified as:

- rigid stud units
- resilient stud units
- extraradicular units
- intraradicular units

There are more types of stud attachments:

Dalbo stud attachments have a ball and socket unit and provide vertical and rotational movement.

Rotherman eccentric attachment- a button shaped attachment where the patrx is an eccentric cylinder with undercut or groove and the matrix presents a clip or clasp arm. It activates by bending the clasp arm towards center.

Zest anchor attachment- an intraradicular funnel shaped tube that reduces vertical space requirement and transfers the forces more apically.

Gerber attachment- a resilient attachment consisting of a threaded post (patrx) and retention spring and ring (matrix)

All stud attachments must be parallel to each other to provide ease of insertion and removal and reduce wear potential.

Clinical and technical particularities:

- stud attachments are very small in size
- are composed of 2 parts that have precise shapes required in order to assemble.
- between the 2 parts there are friction forces which determine its function
- its made from hard alloys
- the patrix is made from a harder alloy than the matrix
- friction forces lead to wear
- due to its position and small size, it restores physiognomy
- 

studs consist of a crown-root device, where the root stump presents a retentive sphere. The device fixates on the prepared substructure. The skeletal device has a stump that allows the engagement of the abutment and guarantees retention.

In order to reduce wear which leads to stability loss and sometimes causes irreversible damage to the device, it is necessary for the prosthesis to be conceived with elements that ensure periodontal support. This type of denture is recommended for patients with a good oral hygiene and respecting a periodical maintenance program

## Endodontic preparation using ProTaper Ultimate system

Diana Marian, Mihaela Velicovici, Gabriela Elisei, Mihaela Adomnicăi, Elisabeta Vasca, Adelina Berari

*„Vasile Goldis” Western University of Arad*

**Abstract:** Since its introduction two decades ago, each generation of ProTaper from Dentsply Sirona has stood for a trusted, reliable, and predictable preparation method that enables excellent clinical outcomes for patients worldwide.

ProTaper Ultimate is the latest generation of the world famous ProTaper family developed by Dentsply Sirona in collaboration with international endodontic leaders. The solution combines the latest generation of ProTaper Files, enhanced disinfection, and dedicated obturation to seamlessly support your workflow.

The ProTaper Ultimate Solution offers the versatility to predictably treat a full range of anatomies. This is an endodontic treatment solution that combines consistency, precision, and convenience for a day-to-day practice.

ProTaper Ultimate family includes: The ProTaper Ultimate Slider, ProTaper Ultimate Shaper, ProTaper Ultimate Finishers, ProTaper Auxiliary Finishers, ProTaper Ultimate Conform Fit Gutta-Percha Points, ProTaper Ultimate Absorbent Points, ProTaper Ultimate Manual Files, ProTaper Ultimate SX.

With ProTaper Ultimate, the company is now introducing a technologically driven fourth generation system. The treatment concept is based on three pillars: shaping, 3D cleaning and filling root canal systems. The standard sequence of the shaping pillar includes 3 file type, namely: slide, shaper, and finishers.

The ProTaper Ultimate Solution offers extensive options: The cleaning pillar is focused on eliminating pulp, bacteria, debris, and breaking down products, when present. To facilitate cleaning, a highly flexible, polymer canula with a bifid apical flow channel can safely deliver irrigant deep into the apical portion of the preparation.

The SmartLite Pro platform offers three attachments: namely, the SmartLite Pro curing light, the transilluminator, and the

EndoActivator. Finally, the obturation pillar will enable dentists to successfully fill and seal the root canal system thanks to predictable shaping and cleaning. The ProTaper Ultimate Solution also includes dedicated gutta-percha master cones based on the unique Conform Fit concept and technology. Jointly used with a Conform Fit gutta-percha master cone, the new AH Plus Bioceramic Sealer will help ensure filling root canal systems where the sealer bonds to the cleaned dentin walls to ensure healing.

Six cardinal rules for an appropriate use of ProTaper ultimate are:

- Always start with the Slider;
- Always shape the coronal two-thirds of restrictive dentin with the Shaper;
- Always finish radicular preparation with the Finisher that cuts apically;
- Always cone fit after Ultimate flutes are filled with apically carved dentin while the canals are still wet;
- Always use EDTA, then NaOCl 3D cleaning protocol with EndoActivator (Dentsply Sirona) or SmartLite Pro, after cone fit;
- Always obturate at the time of shaping unless the patient is symptomatic or if you first want evidence of healing, such as sinus tract closure or endo-perio improvement.

The ProTaper Ultimate is a big step in dentistry, because it solves one of the most frequent problems that lead to tooth loss: an inadequate endodontic treatment.

Until the present, “root canal words” such as “tranquil,” “bliss,” and “fun” would never have found their way into mainstream endodontic language. But now, endodontics has evolved and the probability of failure has decreased dramatically, due to this new, efficient system: ProTaper Ultimate.

## **Modern methods of preparation and finishing of prosthetic abutments**

Catalina Banciu, Loredana Lazar, Ioana Duma, Georgiana Barbatei,  
Zsolt Covaci

*„Vasile Goldis” Western University of Arad*

**Abstract:** Various authors [1,2] have recommended specific tools to prepare teeth properly. The preparation of dental abutments can be performed using diamond cutters attached to a sonic, ultrasonic device or high speed rotary tools with diamond or tungsten carbide cutters. The action of conventional high-speed tools used for dental preparation has been widely investigated. Some authors [3,4] state that the morphology of the tooth surface of prepared teeth is influenced by the type of cutter used for preparation. When rotating diamond tools are used, the abrasive particles pass over the tooth surface and form gutters on the surface of the substrate. The structure of the teeth is expelled before the abrasive particles and the surface is transformed into a series of ridges and gutters that run parallel to the direction of the moving particles. The resulting roughness of the walls can influence the wettability and adhesion quality of the adhesives[5] .

The oscillating instruments perform an elliptical three-dimensional motion with longitudinal and transverse components. There are certain advantages to using oscillating sonic milling cutters over conventional high speed milling cutters: minimal damage to the marginal periodontium, less noise and longer durability of the milling cutter itself. By preparing the teeth using oscillating systems compared to conventional rotary ones, they produce similar changes in the intrapulp temperature[5] .

The study carried out in the special part of the paper aims at analyzing the roughness, the degree of finishing and the scanning accuracy of the dental abutments, finished with sonic oscillating instruments, ultrasonic and with conventional diamond instruments.

Literature studies have shown that the tooth surface prepared and finished with oscillating sonic instrument increases the total bonding surface, this favoring the wettability and retention of the final

prosthetic restoration. For these reasons, dental abutments finished with sonic oscillating instruments will have a lower degree of microinfiltration at the level of the transition between the edge of the preparation and the dental crown due to the increase of the prepared surface and the superior finish[6] .

Characteristics of the sonic oscillating diamond instrument used in the study[6]:

- performs an elliptical three-dimensional movement with longitudinal and transverse components
  - minimal damage to the marginal periodontium.
  - longer durability of the cutter itself
  - less noise than conventional turbine milling cutters
  - the preparation made with both oscillating and rotary cutters produces similar changes in the intrapulp temperature
- Characteristics of the diamond-coated ultrasonic instrument (UDT) used in the study[23]:
- UDTs have a cylindrical profile with a rounded tip.
  - They must be used in conjunction with a piezoelectric handpiece connected to a generator that operates at vibration frequency, amplitude and power range that have already been shown to be clinically acceptable when used in contact with soft tissues.
  - UDTs must be effective in cutting dental hardness.

Ultrasonic prosthetic abutment instrumentation has been successfully introduced and applied in periodontics, endodontics, prosthetics and more recently, implantology and oral surgery. Ultrasonic tips have demonstrated two essential qualities: tactile common sense, which allows the operator to perfectly control operational performance and respect the integrity of peripheral soft tissues[6].

## Frontal oral rehabilitation- clinical case

Simona Leu, Loredana Lazar, Eleny Antulos, Alexandru Ciurea

*„Vasile Goldis” Western University of Arad*

**Abstract:** The patient came for an oral rehabilitation, the main reason was an aesthetic inconvenience represented by a frontal edentation. In terms of personal pathological history the patient is suffering from high blood pressure and he is a chronic smoker with alternance in alcohol consuming.

I performed the general clinical examination in wich it was found that the patient is mentally balanced and cooperative after I ve continued with the examination of the cephalic extremity. From frontal inspection the appearance of the skin was normal, the geniomandibular groove was accented and from lateral inspection the patient had straight profile and the upper lip exceeded the lower one. The inspection of the temporomandibular joint had a normal opening with symmetrical excursion of the condils.

The diagnostics were the following : the odontal diagnostic was uncomplicated carious lesions; the periodontal diagnostic was internal resorbtion and gingival retraction at the right upper central incisor; edentulous classification was Kennedy class III, occlusal diagnostic was occlusal disharmony, functional diagnostic was masticatory and physiognomic disfunction.

The treatment plan included teeth cleanings, dental restaurations and chirurgical treatment including the extraction of right upper central incisor and replacement with a dental implant with gingival grafting. In surgical approach the right upper central incisor was extracted and continued with bone grafting and tissue grafting for inserting the dental implant. After surgical approach it was recommended to consume soft or liquid food, to avoid that particular zone and to apply cold sterile compresses. After 7 days the patient returns to remove the suture threads and after 4 months it was recommended to perform a CT scan and to recome for a consultation and if everything was in good condition to insert the dental implant after 5 or 6 months to replace the right central upper incisor. After extraction of the incisor the remaining edentulous space was filled with a temporary

prosthesis attached to right upper cuspid and left central upper incisor. After 6 months postoperatively it was inserted a Megagen implant in the space occupied by the right upper central incisor. Before inserting the dental implant it was performed a retroalveolar radiography. After another 2 months from the integration, the neighboring teeth were polished and an impression was taken for preparing a temporary prosthesis for 1.3-2.1 and for gingival conformation. After another 3-4 months an impression was made to perform the final prosthesis. The dental rehabilitation consists of one piece of ceramic unidentar prosthesis attached to the implant, another piece including 2 elements attached to the right upper cuspid. The final indications consisted in keeping a good oral hygiene including brushing 2-3 times per day, dental flossing, oral irrigations and mouth wash and periodical stomatological controls.

## Oral disorders that direct the patient to the geneticist

Belengeanu Valerica, Diana Marian, Teodora Lucaciu Lupulescu,  
Gabriela Avram

*„Vasile Goldis” Western University of Arad*

**Abstract:** In the professional experience of any dentist there are patients with genetic abnormalities. To guide these patients towards a genetic evaluation in case they are not yet monitored is an obligation of any practitioner.

Genetic counseling is the process by which persons affected by a genetic disease or at risk for affection that may be hereditary genetic or not are informed about the diagnosis, consequences, probability of passing on the offspring, means of treating or to avoid malformation or disease. Genetic counseling in common conditions is often given by a family doctor, pediatrician or obstetrician. Recognizing that a multitude of health problems have a major hereditary component, counseling is currently being done in specialized centers that also offer the possibility of a paraclinical diagnosis through laboratory tests. Genetic counseling aims to provide the family with complete and accurate information about genetic disorders.

By specifying the diagnosis of a person, one can appreciate and what is the risk for the rest of the family members the precise diagnosis of an affected individual brings data on the risk to other family members

In most cases, genetic counseling does not provide therapeutic healing alternatives but supports the affected individual and the family to make a decision and take appropriate action. When a woman is pregnant, prevention is through therapeutic abortion, and for a new pregnancy donation of gametes.

An accurate diagnosis of the disease is necessary for proper genetic counseling and for assessing evolution and prognosis, but also for a correct management of the existing genetic situation. An accurate diagnosis may be impeded by the complexity of genetic diseases, considering that particularities such as genetic

heterogeneity, variable expression, the de novo mutation considerably complicate the algorithm to address genetic diseases.

## **Update on the techniques for approaching post-extraction oro-sinus communications**

Elisabeta Vasca<sup>1</sup> Diana Marian<sup>1</sup> Elisei Radu<sup>1</sup> Virgil Vasca<sup>1</sup> , Olariu  
Justin<sup>1</sup> Adalia Foldes<sup>2</sup>

<sup>1</sup> Faculty of Dental Medicine „*Vasile Goldis*” *Western University of Arad*, <sup>2</sup>*Clinica Dunca Baia Mare*

**Abstract:** *Keywords:* maxillary sinus, symptomatology, diagnosis, update, approach techniques

Oro-sinus communication is an unnatural communication between the oral cavity and the maxillary sinus. These complications occur most frequently during the extraction of the upper molar and premolar teeth (48%). The major reason is the anatomical feature or projection of the roots in the maxillary sinus.

Other causes of COS include tuberculous fracture, dento-alveolar / periapical infections of the molars, dislocation of the implant in the maxillary sinus, trauma, presence of maxillary cysts or tumors, osteo-radionecrosis, flap necrosis, dehiscence after implant failure, and sometimes as a complication. Caldwell-Luc procedure.

In the absence of any maxillary sinus infection, defects smaller than 2 mm can heal spontaneously after blood clots form and secondary healing.

Therefore, a positive and early diagnosis of COS is mandatory to allow its successful closure. Also, the management of oro-antral communication to promote healing must be done within 24 hours. In cases with higher oro-sinus communications and in patients with a history of sinusoidal disease, surgical closure is indicated.

Among the surgical techniques for closing a COS we mention several variants of flaps (Rehrmann vestibular flap, Moczair flap, palatal flap).

Autogenous grafts are indicated to fill important COS of more than 5 mm, with the need for bone reconstruction for prosthetic rehabilitation or in case of failure of conservative techniques.

These techniques, however, require removal of the bone graft, which involves a longer time and higher risks of complications.

Prosthetic rehabilitation therapies can be performed in case of a major COS to fill a large bone defect. Swallowing, phonation, chewing are recovered and nasal regurgitation of liquid and solid foods is avoided. The type of major rehabilitation in the case of COS performed in the dental office is the obturator prosthesis.

In the practice of dental surgery, the occurrence of COS is common. Thus, the practitioner must have the necessary knowledge to predict the risk of developing COS by looking for etiological factors as well as accurate clinical and radiological examination and, where appropriate, knowledge of how to apply the treatment. She may also face old, persistent COS, against which she will have to adapt her treatment methods.

## **Clinical-statistical study in osseointegration of implants in elderly patients**

Elisabeta Vasca<sup>1</sup> Diana Marian<sup>1</sup> Elisei Radu<sup>1</sup> Raluca-Iuliana Munteanu<sup>3</sup> , Olariu Iustin<sup>1</sup> Adalia Foldes<sup>2</sup>

<sup>1</sup> Faculty of Dental Medicine, "Vasile Goldis" Western University of Arad, Romania, <sup>2</sup> Clinica Dunca Baia Mare, <sup>3</sup> Hyperclinica Genesys MedLife

**Abstract:** *Keywords:* osseointegration, surgical techniques, objectives, stability, implant

The aim of this paper is to present the new implanted surfaces currently available on the market and to study whether they actually lead to a reduction in bone healing time and osseointegration, osseointegration-friendly surgical techniques and the maintenance of osseointegration.

In osseointegration, the bone is tightly bound to an inert, biocompatible material. Titanium, with excellent biocompatibility, chemical characteristics and ideal mechanical properties, has proven to be the material of choice in clinical implantology. The surface morphology has undergone numerous changes over the years, in order to obtain a favorable cell adhesion and, therefore, an optimal integration of bone cells. From the processed surfaces developed by Brånemark, other surface topographies emerged: the rough surface and then the mixed surface. These surface changes are intended to improve bone healing.

Achieving and maintaining the stability of the implant are therefore two essential conditions for the long-term functional success of bone-anchored prostheses. However, this stability also depends on other factors, such as the implant, the host, and the clinician. After primary healing, secondary stability is determined by the biological response to surgical trauma, healing conditions, and implant material. Finally, bone formation and reshaping at the implant interface leads to a larger contact surface of the bone implant.

In the process of osseointegration, two factors play an important role: the primary stability (mechanical stability) and the secondary stability (biological stability after bone remodeling) of the implant in the bone.

As soon as an implant is placed in the jaw, certain areas of the implant surface are in direct contact with the bone. This contact is called primary or mechanical stability and depends on the shape of the implant, the quality of the bone and the preparation of the implant site. Primary stability gradually decreases during the bone remodeling process.

During the healing process, the bone is reshaped and forms new areas of contact with the implant surface. This new bone contact is called secondary or biological stability. Once the healing process is complete, the initial mechanical stability is completely replaced by biological stability.

**SECTION V**  
**MEDICAMENTELE MODERNE – DE LA**  
**NATURĂ LA BIOTEHNOLOGIILE**  
**MODERNE**

**MODERN MEDICINES – FROM NATURE**  
**TO MODERN BIOTECHNOLOGIES**

**Natural bioactive compounds useful in the fight against**  
**antibiotics multi-resistance**

Neli-Kinga Olah, Elisabeta Chișe, Adriana Dărăban, Viviane-  
Beatrice Bota, Endre Mathe, Violeta Turcuș

*„Vasile Goldis” Western University of Arad*

**Abstract:** The mechanisms by which the human body fights infections with various pathogens with the help of substances called antibiotics are well known. Excessive use, sometimes without judgment, of antibiotics has led to the development by microorganisms of new mechanisms of resistance to these substances. The problem of increasing morbidity and mortality has culminated in the problems facing the health system today, with serious nosocomial infections. The genes involved in the mechanisms of resistance and those involved in the synthesis of compounds with antibiotic action are similar and close, which, according to some scientists, explains the explosion of multidrug resistance. The mechanisms of antibiotic resistance of bacteria involve molecular modification by adapting to signals received from the environment or molecular infidelity because they are capable of rapid mutations under the influence of stressors. The almost natural answer to this problem was the return to nature, to phytochemicals that have a proven antibacterial effect: alkaloids, phenolic

compounds, organosulfur compounds, coumarins or terpenes in thousands of species that grow near us. Polyphenols have a proven antimicrobial effect, sensitize to antibiotic-resistant pathogens, inhibit microbial proliferation and biofilm formation, and last but not least can be considered agents of reversal of resistance. Another class of phytochemicals with proven antibacterial effect is terpenes or volatile oil compounds. Volatile oils are well known for their antibacterial activity. These compounds with potential antibacterial effect also exist in gemotherapeutic extracts, therefore these extracts can be used to reduce the antibiotic resistance effects of pathogenic bacteria.

## Natural bioactive compounds with potential protective effect on human DNA

Elisabeta Chișe, Neli-Kinga Olah, Adriana Dărăban, Viviane-Beatrice Bota, Endre Mathe, Violeta Turcuș

*„Vasile Goldis” Western University of Arad*

**Abstract:** It is known that oxidative processes and radiation, including the weakest UV radiation, can damage the DNA chain. The compounds of plant origin that have been shown to have a protective effect have been named PHYTOANTIMUTANGES. Mutations in the human genome can occur spontaneously, but there are also many physical, chemical and biological agents that can induce such damage or modification of DNA in the body which results in dysfunctions at the cellular level leading to morbidity and mortality. There are several mechanisms by which antimutagens, including phytoantimutagens, achieve their purpose. A first direct mechanism is the chemical or enzymatic inactivation that takes place at the level of synthesized proteins or enzymes or those involved in the mutation process. Another anti-mutagenic mechanism is the prevention of the formation of reactive species, species that are known to be very aggressive and lead to the destruction of various molecules resulting in dysfunction at the cellular, tissue and apparatus, organs, systems. Apparent antimutagens can neutralize, especially food mutagens, by binding or adsorption. Neutralization of free radicals, as is the antioxidant effect, leads to the protection of DNA. But there is also a class of substances that have a dual activity in terms of mutagenicity. These substances are called Janus mutagens. The researchers were able to demonstrate the antimutagenic effect in over 25 chemical structural classes and over 500 natural substances, which are generically called phytoantimutagens. The main classes are vitamins, polyphenols with subclasses: flavonoids, tannins, coumarins and other phenols, anthra- and naphtho-quinones, carotenoids, diterpenoids, sterols, saponins, halogenated compounds of marine origin, organosulfur compounds, alkaloids or triterpens. In addition to the antimutagenic effect, these substances have been shown to have other pharmacological effects also. There are many natural solutions to protect the human body, and gemmotherapy and herbal medicine are accessible to all.

## Research regarding the Silver nanoparticle applicability

Svetlana Trifunsi<sup>1</sup>, Melania Florina Munteanu<sup>1</sup>, Elena Narcisa Pogurschi<sup>2</sup>

<sup>1</sup> „Vasile Goldis” Western University of Arad, Faculty of Pharma,

<sup>2</sup>University of Agronomic Sciences and Veterinary Medicine of Bucharest

**Abstract:** Using alternative solutions to the classic therapies and medication, represent a likely answer for the future medicines around the world. The purpose of this review is to show the new methods to synthesize nanoparticles from plants, fungi, and bacteria. The nanoparticles have a large area of application such in the food industries or biotechnology. They are used with large success as a medicine with a preventive suggestion but in a curative (therapeutic) use too. The high antimicrobial resistance context to antibiotics became a public health phenomenon. Taking this into consideration, Silver nanoparticles synthesized not only from plants represent the most important challenge for the pharmaceutical industry.

## **Potential increasing of immunity by using vegetal products rich in vitamin D**

Claudia Crina Toma

*„Vasile Goldis” Western University of Arad*

**Abstract:** Lower immunity level is a general health problem of this century. Specially now, because of the SARS COV-2 pandemy, different deseases starting by immune causes are considered extremmelly dangerous. The lower level of D vitamin is one of the important causes of continous immunity decrease.

The vegetal products could be an important source of biodisponible D vitamin, used frequently in the traditional medecine of the Caras-Severin county. From the ancient times the traditional practiciens used that sources in order to correct this lower level of D vitamin starting by the most important local job of the people from Anina region: mining worker.

## **The role of the pharmacist in oncology**

Luana Florina Drăghiță, Liliana Bartok Popa, Claudia Crina Toma

*„Vasile Goldis” Western University of Arad*

**Abstract:** Our presentation is about Oncology Pharmacy and the role that pharmacists play in providing evidence-based, patient-centered medication therapy management and direct patient care for individuals with cancer, including treatment assessment and monitoring for potential adverse drug reactions and interactions. We will present the different classes of chemotherapeutic agents used in the treatment of cancer and we will provide information about 3 of them. We will also talk about the national oncology program and some of the natural components used to fight this disease.

## Safety of Dabigatran versus Acenocoumarol in Older Patients with High Risk for Thromboembolism

Simona Conea<sup>1</sup>, Călin Pop<sup>2,1</sup>, Sorana Bolboacă<sup>3</sup>, Cristina Mogoșan<sup>3</sup>, Tudor Călinici<sup>3</sup>

<sup>1</sup>„Vasile Goldis” Western University of Arad, <sup>2</sup>County Hospital, Baia Mare, <sup>3</sup>“Iuliu Hațieganu” University of Medicine and Pharmacy, Cluj

**Abstract:** Aim. The aim of this study was to assess the safety of dabigatran vs. acenocoumarol in clinical practice in patients with high thromboembolic risk.

Material and methods. A cross-sectional study was conducted on patients above 65 years treated with dabigatran etexilate or acenocoumarol. Thrombo-embolic events, bleeding, and other adverse reactions (ADRs) were calculated in incidence rate (IR), an epidemiological parameter. Frequency of bleeding and other ADRs were also calculated in percentage.

Results. Out of the 57 eligible consecutive outpatients from the Cardiology Department, 35 were treated with acenocoumarol and 22 received dabigatran etexilate. Both drugs were mostly prescribed to patients having atrial fibrillation. Thrombo-embolic events occurred only in the acenocoumarol group (IR 2.90 per 100 person-years, 95% CI (1.10 to 7.61)). Bleeding occurred in 54.3% patients from acenocoumarol group and in 13.64% patients from dabigatran group. Bleeding occurred four times more in the acenocoumarol (RR = 3.98, 95% CI = 1.37 to 16.07, p = 0.0021) (IR: 13.76 per 100 person-years, 95% CI 9.06-20.89) than in the dabigatran group (IR: 10.37 per 100 person-years, 95% CI 3.55 to 30.28). Other ADRs were mostly gastro-intestinal disorders, 17.14% in acenocoumarol group and 27.27% in dabigatran group, In patients reporting bleeding, acenocoumarol was mostly associated with trimetazidine, acetylsalicylic acid, rilmenidine, and pentoxifylline, whereas in dabigatran group, bleeding was reported in combination with acetylsalicylic acid.

Conclusions. Our study showed that the risk of thrombo-embolic and bleeding complications in patients treated with acenocoumarol is higher than in those treated with dabigatran etexilate.

## **Tridimensional hydroxyapatite structures for drug delivery applications**

Alexandra Ioana Bucur, Bogdan Ovidiu Taranu, Mihai-Cosmin Pascariu, Cristina Mosoarca, Raul Alin Bucur, Corina Orha, Radu Banica

*INCEMC Timisoara, Romania*

**Abstract:** Hydroxyapatite (HA) is known as useful in drug delivery applications, as well as in dental and osseous restorations. In this work we present tridimensional HA structures, intended to be used for drug delivery therapies. These were obtained by freeze-drying: some specimens were fabricated using precipitated HA powder, and some specimens were obtained from precipitated and hydrothermally-crystallized HA powder. The powders were dried and used in the form of aqueous suspensions. The freeze-drying procedure employed here was performed using an equipment designed and patented by some of the authors. After precipitation and hydrothermal treatment, the powders were dried and characterized by XRD, SEM and FTIR. After freeze-drying, the specimens were studied by XRD and SEM. In all cases, no crystalline phase other than HA was present. In case of precipitated powders, a flat morphology of crystals is observed, while for hydrothermally crystallized powders acicular crystals with high aspect ratio are present. Due to the good crystallinity, low density and porosity they present, the 3D specimens obtained from precipitated and hydrothermally crystallized powders offer improved characteristics for drug delivery applications, but they may represent a point of interest for other applications as well.

This work was supported by the National Program NUCLEU, Project Code PN 19 22 01 01, Contract No. 40N/2019.

## **Increasing the reproducibility of flash-type luminescence ATP determination**

Alexandra Ioana Bucur<sup>1</sup>, Mihai Cosmin Pascariu<sup>2</sup>, Cristina Mosoarca<sup>1</sup>, Ioana Ramona Ciopănoiu<sup>2</sup>, Raul Alin Bucur<sup>1</sup>, Radu Banica<sup>1</sup>

<sup>1</sup> *INCEMC Timisoara, Romania,* <sup>2</sup> *„Vasile Goldis” Western University of Arad*

**Abstract:** Firefly luciferase, a 62000 Dalton protein, is widely used in genetics and for pharmaceutical screening. This enzyme catalyzes D-luciferin oxidation in the presence of adenosine triphosphate (ATP), dioxygen and magnesium ions, producing chemical luminescence, and thus can also be used in routine ATP measurements. Available laboratory kits allow two types of ATP determinations: flash and glow-type. While flash-type luminescence generally offers an increased analytical signal, a distinct disadvantage is its high reaction rate and sensibility towards physical parameters, which lowers its reproducibility. Our current interest involves biomass growth on seashell exoskeletons with applications in pharmaceutical industry effluent processing. Because one quantitative indicator of biomass growth is the ATP amount, in this work we present some results from a range of tests meant to optimize the flash-type ATP measurement method.

This work was supported by a grant of the Romanian Ministry of Education and Research, CNCS - UEFISCDI, project number PN-III-P1-1.1-TE-2019-2116, within PNCDI III.

## Analysis of salicin in some willow bark food supplements

Lădaşiu Călin. Alina Cata, Mariana Stefanut, Ioana Ienascu

*INCEMC Timisoara*

**Abstract:** The bark of the willow has been known since ancient times to possess medicinal properties. Preparations containing willow bark extract are popular herbal remedies and have been used for anti-inflammatory, anti-rheumatic, antipyretic, antihypertensive, analgesic, antiseptic and astringent properties. The medicinal properties of willow bark can be attributed to the presence of salicylic glycosides, mainly salicin and salicortin. Salicin is the metabolic precursor of salicylic acid and has a similar action in the human body. The pure crystalline form of salicin was obtained by the French pharmacist Henri Leroux in 1829 and was then used as a treatment for rheumatism [1,2,3].

The main objective of this study was to investigate the presence of salicin in some commercially available food supplements (willow bark for tea, capsules containing willow bark, capsules and tablets containing willow bark extract). Salicin content in five *Salix* supplements, was quantified through HPLC-DAD analysis. According to the information provided by the manufacturer, for only two of the selected food supplements the content of salicin is specified. A gradient program was used at 1 ml/min flow rate. The salicin detection wavelength was 266 nm. The retention time was  $9.094 \pm 0.004$  minutes. Prior to analysis, all products were extracted with methanol. The highest salicin content was observed in capsules of *Salix alba* extract (Rotta Natura) .

## **Biological properties of some Romanian Brassicaceae Extracts**

Ioana M.C.Ienaşcu<sup>1</sup>, Mariana N Ştefănuţ<sup>2</sup>, Adina Căta<sup>2</sup>, Delia Muntean<sup>3</sup>, Valentina Buda<sup>3</sup>, Corina Danciu<sup>3</sup>, Monica Licker<sup>3</sup>, Raluca Pop<sup>3</sup>

<sup>1</sup>, „Vasile Goldis” Western University of Arad, <sup>2</sup> INCEMC Timisoara, <sup>3</sup> University of Medicine and Pharmacy “Victor Babes” Timişoara

**Abstract:** Some Romanian Brassicaceae species (cabbage, acclimatized broccoli, black radish and cauliflower) were subjected to microwave extraction in 70% ethanol. The extracts were analyzed using DPPH assay and Folin–Ciocalteu method and showed good antioxidant activity and rich phenolic content. The Romanian Brassicaceae vegetables proved to be sources of nutritive microelements (Fe, Cu, Zn, Mn). No toxic metals were registered. The four extracts exhibited good antibacterial activities against some Gram-positive and Gram-negative bacteria, including strains with known resistance to antibiotics, but no inhibition on the fungal strains. Thus, some alcoholic extract formulas of cabbage and black radish can be considered as new therapeutical options even for resistant bacteria.

## Vitamins in Self-Medication

Adriana Dărăban<sup>1</sup>, Aurelia Hulbăr<sup>1</sup>, Ioana Ramona Ciopănoiu<sup>1</sup>,  
Elisabeta Chișe<sup>1</sup>, Ruxandra Tarcevschii<sup>2</sup>, Elena Moroșan<sup>3</sup>

<sup>1</sup>„Vasile Goldis” Western University of Arad, <sup>2</sup>KRKA, <sup>3</sup>Carol Davila University of Medicine and Pharmacy, Bucharest

**Abstract:** This paper is based on the idea of conducting a survey on self-medication with fat-soluble vitamin supplements among the population, which has access "over the counter" to their consumption, but also the presentation of relevant cases among children.

This survey was conducted in retail outlets, pharmacies, shops with natural products in urban and rural areas and was intended to include a number of 500 questionnaires.

As for the data, they were collected through self-administered questionnaires by the heads of the commercial units, in a number of 27 retail distribution units of nutritional supplements, pharmacies and health food stores, during their operating hours, for a period of 3 months.

In response to the patients' desire to take responsibility for their own health, the study of the questionnaires concludes that the perspective on the phenomenon of self-medication must be changed, in the sense of evolution, but also to encourage a controlled and responsible self-medication.

Correct information to patients could be achieved through a conscious and sustained effort by the body of pharmacists, who are directly responsible for the release of OTC products and food supplements to the population, by referring patients to family doctors and specialists before make the decision to self-medicate. It is also possible to work on increasing the time allocated to patient counseling, this being targeted from the perspective of pharmacovigilance.

In other words, patient awareness could also be achieved through regulatory legislation for manufacturers, which could bring some additions to the leaflets or labels of OTC products and nutritional

supplements, to be accompanied without warning of the danger of self-medication.

## Polysaccharides modified at the reducing end: synthesis and characterization

Carolina Cojocariu Hoge<sup>1</sup>, Alina Serb<sup>2</sup>, Ramona Novaconi<sup>2</sup>, Marius Georgescu<sup>2</sup>, Eugen Sisu<sup>2</sup>, Nicolae Dinca<sup>3</sup>, Flaviu-Calin Lădaşiu-Ciolacu<sup>4</sup>, Mihai Cosmin Pascariu<sup>1,4</sup>

<sup>1</sup> „Vasile Goldis” Western University of Arad, <sup>2</sup> “Victor Babes” University of Medicine and Pharmacy Timisoara, <sup>3</sup> “Aurel Vlaicu” University of Arad, <sup>4</sup> INCEMC Timisoara

**Abstract:** Polysaccharides or glycans form the class of carbohydrates which include the most widespread natural biopolymers. They are found in plants, animals, bacteria and fungi, having various properties and essential roles for sustaining the living organisms. Such polysaccharides obtained from nature are important precursors in the pharmaceutical industry, being used not only for drug production but also to improve existing ones. For example, in various formulations, they can change the rate of assimilation of active ingredients, can increase the shelf life or can greatly improve the product's stability. This paper presents the results obtained by derivatizing the reducing end of some glucans, as well as the characterization of the obtained products using different methods: acid-base titrimetry, infrared spectroscopy, differential thermal analysis, and mass spectrometry. Maltodextrins of different molecular weights were oxidized at the reducing end to give maltodextrin lactones. The characterization by mass spectrometry of maltodextrin lactones has not been reported in the literature to date. The maltodextrin lactone with the lowest molecular weight was then coupled with an amine component to change the polarity of the reducing end. The product obtained after coupling was completely characterized by mass spectrometry.

**Acknowledgement:**

Part of the research was done at the Center of Genomic Medicine from the ‘Victor Babes’ University of Medicine and Pharmacy of Timisoara, POSCCE 185/ 48749, contract No.677. Special thanks towards senior researcher dr. Gheorghe Iliu from the Institute of Chemistry Timișoara of Romanian Academy.

## SECTION VI

### NOI TENDINȚE SI EVOLUȚII ALE ECONOMIEI MONDIALE

### NEW TRENDS AND EVOLUTIONS OF THE WORLD ECONOMICS

**Empirical study on economic efficiency and managerial performance in EU companies operating in the plastics industry**

Delia David, Ștefania Amalia Nicoară

*„Vasile Goldis” Western University of Arad*

**Abstract:** In the period 2016-2019, the plastics industry has faced a rapid evolution, with numerous upward trends. The changing landscape of the sector includes interesting developments such as: the increasing use of the Internet of Things and the progress of innovations in polymers and additives. Improved automation and factory connectivity also support significant growth in the plastics industry. The aim of this study is to analyze the economic efficiency and managerial performance of EU companies operating in the plastics industry as well as the financial implications of the automation process in this area. For this purpose, a descriptive research is used and the tools applied are observation, case study, comparison, analysis and synthesis.

## **Does financial development, globalisation and institutional quality drive the income convergence in the Central and Eastern European Union Countries**

Olimpia Neagu<sup>1</sup>, Teodora Porumbăcean<sup>2</sup>, Andrei Marius Anghelina<sup>1</sup>

<sup>1</sup>, „Vasile Goldis” Western University of Arad, <sup>2</sup>Babeş-Bolyai University of Cluj-Napoca

**Abstract:** Central and Eastern European (CEE) countries are struggling with internal and external macroeconomic and social factors in their catching-up strategies to be closer, as economic wealth, to the Western developed European countries. In these ex-communist countries, institutional factors could be seen as critical for success in narrowing the income gap. The paper proposes an analysis of the impact of economic and financial development and globalisation on income gap in 11 Central and Eastern European (CEE) countries (Bulgaria, Croatia, Czechia, Estonia, Latvia, Lithuania, Poland, Romania, Slovak Republic and Slovenia) for the period of 1996 to 2019, taking into consideration institutional factors. The study analyses the variables: transition coefficient as proxy for income gap, GDP per capita, KOF Financial Globalisation Index, Financial Development Index and World Bank Institutional Indicators in a panel approach methodology and estimation of FMOLS and DOLS equations. The paper's findings show that all considered factors have a significant contribution to the income gap in the examined period of time. Economic and financial development as well as institutional quality is positive associated with the closing income gap, while globalisation has a negative influence. It is also revealed the direction of causality relationship between the considered variables: from economic and financial development, globalisation and institutional quality to income gap. These findings suggest some policy recommendations in support of continuation of the European integration process.

## The impact of automation on the US labor market

Doru-Puiu Ioan Ardelean<sup>1</sup>, Arpad Kerti<sup>2</sup>, Vasile Lucian Lazăr<sup>1</sup>

<sup>1</sup>, „Vasile Goldis” Western University of Arad, <sup>2</sup>Freie Universität  
Berlin

**Abstract:** The future of employment and the future of labor markets continuously concerned humankind. Articles that appeared after 1990 considered the massive disappearance of some professions or even economic sectors as imminent. It seems that only modifications of tasks will take place and not the complete elimination of some professions or economic sectors. At the same time, it seems that new professions will not emerge suddenly. However, various authors speculate that some economic sectors may radically be transformed in the long run.

Sometimes automation is contained within the frame of technological developments, other times it is considered to only be the use of information and communication technology (ICT) systems, either as software or physical devices (e.g. robots). However, automation also focuses on artificial intelligence (AI), robotics or virtual or augmented reality (VR/AR).

In this paper we intend to study the impact of automation on the number of employees from four economic sectors, two considered "easy to automate" - Manufacturing, Transportation & Warehousing, and two "hard to automate" - ETALT & Social Assistance, Other Services (Except Public administration)

## The value of money in time

Vasile Mare

*„Vasile Goldis” Western University of Arad*

**Abstract:** The principle of the value of money over time reflects the view that a sum of money held today is worth more to investors than the same amount of money that will be collected in the future. The argument is that the human nature values an immediate reward than what it would receive in the future, and inflation erodes the purchasing power of a monetary unit over time if it is kept in liquid form (if not invested).

In view of the above-mentioned principle, from the point of view of financial technique, in order to compare the value of the sums of money obtained at different points in time, it is necessary to use conversion techniques that take into account the investment opportunities of these sums of money. In conclusion, the sums of money to be collected at different points in time cannot be summed up, without being brought to a common denominator, a value which is called present value. The main financial procedures used to compare and sum up the financial flows obtained at different times are:

The composition also known as the compound interest technique, which is used to calculate the future value of financial funds currently held

The update, used to calculate updated value of a sum of money that will be collected at some point in the future

Capitalization, used to calculate the present value of a series of constant or steadily increasing cash flows that will be obtained in the future.

Present value - represents the amount of money that must be invested in the present to produce financial effects in the future, taking into account the interest rates currently recorded on the market, a predetermined amount.

## **The evolution of railway transport infrastructure in Romania after 1990**

Andrei Anghelina, Olimpia Neagu, Alexandru Claudiu Haiduc,  
Stefania Nicoara

*„Vasile Goldis” Western University of Arad*

**Abstract:** The purpose of this paper is to analyse the evolution of the Romanian railway infrastructure based on data extracted from EUROSTAT. The timeframe chosen for this study has been between 1990 to 2019, from the fall of the communist regime, through 2007 when Romania became a member of the European Union, until the beginning of the Covid - 19 pandemic. The Romanian railway infrastructure is analysed and compared with those from other European countries, thus, finding that it is one of the largest railway networks in Europe but one of the most economically inefficient. Having transported decreasing amounts of goods over time, it is not well managed and the high number of victims each year makes it one of Europe's most unsafe railway networks. There is great potential in a positive impact on the country's economy if the Authorities would implement a strategic investment and development plan in order to bring the Romanian railway infrastructure to a level of reliability that would attract businesses and stimulate the movement of goods. The geographical location of Romania could accelerate such development since it could be an important logistics hub linking the Black sea to the European market. Empirical results show that the length of railway network is negatively correlated with income and negatively associated with the volume of transported goods in Romania over the period of 2004-2019, underlying the importance of quality in this sector. The paper includes recommendations for public policies regarding the transport infrastructure sector.

## On the stability of the semilinear equations

Magnolia Tilca

*„Vasile Goldis” Western University of Arad*

**Abstract:** The article investigates the stability of the semilinear equations in metric spaces endowed with a graph.

**Considerations regarding the change of the population  
consumption structure during the pandemic (analysis 2016-  
2021)**

Mircea Constantin Teodoru

*„Vasile Goldis” Western University of Arad*

**Abstract:** The period of the pandemic was initially characterized by the feeling of panic of the population that there would be a shortage of products, especially food. This has led to a significant increase in sales of food and non-food necessities (especially personal hygiene). Among the indicators whose evolution has influenced the consumption of the population are: GDP, GNP, the ratio between the export and import of goods and services, consumer prices and implicitly inflation, income and purchasing power of the population. In this sense, an analysis of the relationship between income levels, prices, expenses and consumer behaviour is required.

**Principles for determining the level of the nominal salary.  
Inequalities between the public and private sectors in Romania**

Anamaria Tohătan

*„Vasile Goldis” Western University of Arad*

**Abstract:** The debates related to the issue of the nominal salary level are not exhausted, they do not become obsolete, but on the contrary, they always remain current.

This is due to the fact that the salary is the most common form of income appropriated by a significant number of people in an economy. The salary is both the object and the cause of the individual employment contract. It is the price of labor deposited in economic activity.

The principles underlying the establishment of the salary level are provided in the Labor Code. Most of the local legislation in the field of pay refers to the budget sector, but with frequent references to the private sector. Hence, the major differences that appear in the amount of nominal salaries in the budget sector compared to the private one.

In the present research I propose a balanced approach, based on theoretical and statistical arguments on how to apply the principles of establishing the level of nominal wages in the public and private sector in Romania.

## **Jordan economy:development,challenges and opprtunities**

Hamad Kasasbeh

*Alzaytooneh University of Jordan*

**Abstract:**the presentation is talking about jordan economy :development, challenges and apportunities. The major conclusion is that:

Jordan has faced the uncertainties and challenges of the past with excellent performance and there is no reason to believe that it will not continue to make the same performance in the future.

Jordan's economic performance is strongly influenced by the regional economic and political developments.

Thus, the sufficient and necessary conditions for Jordan's economic sustainable growth are:

- 1- Resolutions to regional problems and uncertainties
- 2- Continuous real efforts towards implementing comprehensive reforms
- 3- Regional cooperation that considers Jordan's national interests and priorities.

## **Performance during crisis in Eurozone versus Non-Euro countries**

Lavinia Mustea

*West University of Timișoara*

**Abstract:** The public sector topic gains interest in academia, especially during periods of economic recessions, when this sector plays the most crucial role in a country's economy, namely its recovery. In this unique environment (crisis, pandemic), on the one hand, governments needed to become more inventive in adopting measures to survive in the "bad periods" and then sustain and revive the economy. On the other hand, the citizens began to examine and demand accountability for government actions. This paper investigates public sector performance for 28 European countries during the 2018 – 2020 crisis, with special attention to Eurozone versus Non-Euro countries. We apply cluster analysis to investigate changes before and after the crisis in one's country's position. Our results present the level of public sector performance, not from a financial perspective but by focusing on variables such as bureaucracy quality corruption, law and order, government stability, socioeconomic conditions, and investment profile. Furthermore, as robustness, we performed a similar analysis considering the 2008-2010 crisis for a better understanding of how crises influence performance.

## **Challenges for the Accounting Profession in the New Technologies Times**

Ciprian Dan Costea

*„Vasile Goldis” Western University of Arad*

**Abstract:** The new technologies like the artificial intelligence or the blockchains, are already present in our lives for a few years. The pandemic accelerated the process of adoption of such new technologies - which are called by some professionals disturbing technologies – in the daily activities of companies and institutions. The accounting field, as a central vector in the decision-making process, is probably one of the most impacted fields within the economic disciplines. The accountants are adapting themselves to the new realities much more quickly than other professionals, and as a consequence, this noble profession is becoming more important for the top-level executives and board of director’s members.

## **E-commerce trends in Romania in the context of the COVID-19 pandemics**

Tania A.Lazăr<sup>1</sup>, Vasile L.Lazăr<sup>2</sup>

<sup>1</sup> *Technical University of Cluj-Napoca*, <sup>2</sup>, *„Vasile Goldis” Western University of Arad*

**Abstract:** In an attempt to deal with the COVID-19 pandemic, companies have been forced to take a number of measures, such as working from home, social distancing at work, developing online activity, and focusing on e-commerce.

E-commerce allows companies and individuals to buy and sell products and services over the Internet, 40% of internet usage is for online shopping. According to Statista Research Department report - “E-commerce in Romania - statistics & facts” ([The study aims to analyze the changes that took place in e-commerce during the COVID-19 pandemic in Romania and also to find if e-commerce will become a substitute source of traditional marketing or not.](https://eur05.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.statista.com%2Fstatistics%2F1129868%2Fromania-e-commerce-revenue%2F&data=05%7C01%7Cscientometrie%40uvvg.ro%7C6ca8a3b0cee94fa1604d08da3becae3b%7Cba4cad59d74f46928cfe927326689fd6%7C0%7C0%7C637888184955493757%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ikk1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&data=876FsjKt4fC6Gb2FiAQYTmcF1CQO1UeW1cDifSIYOoc%3D&reserved=0) - “in 2020, because of social distancing measures, lack of mobility and teleworking, e-commerce sales in Romania represented the most important growth pillar of the retail sector.... The total e-commerce revenue in Romania in 2020 amounted to approximately 5.6 billion euros. This represented an increase of 30 percent compared to the revenue achieved in 2019.”</p></div><div data-bbox=)

## **Influence of the Supreme Audit Institution on the performance of the management of resources**

Nicolae Paul Virag

*„Vasile Goldis” Western University of Arad*

**Abstract:** Supreme audit institutions can help improve a public institution by conducting a performance audit in the area of interest to decision makers.

What is a performance audit? It is a tool designed to answer two questions:

Did it work correctly? Was done the right thing?

The performance audit examines the extent to which the criteria established for the implementation of an entity's objectives and tasks are reliable for achieving the intended results.

It generally focuses on the results obtained, characterized by determining the three E's, namely economy, efficiency, effectiveness.

## **Learning from Chinese Management**

Eugen Florin Remeș<sup>1</sup>, Florin Lucian Isac<sup>2</sup>

<sup>1</sup>„Vasile Goldis” Western University of Arad, <sup>2</sup>„Aurel Vlaicu”  
University of Arad, Romania

**Abstract:** China is one of the fastest growing economies and has gained a leading position in terms of production or exports. China's managerial and business practices are influenced by its traditional cultural values. The article investigates, along with the influences of these values on management, the points of interest of the Chinese management model for other cultures.

## SECTION VII

### NOI TENDINȚE ÎN SILVICULTURĂ, AGROTURISM, GEOGRAFIE ȘI INFORMATICĂ

### NEW TRENDS IN FORESTRY, AGRITOURISM, GEOGRAPHY AND COMPUTER SCIENCE

#### Methods for seedbed preparation in forestry nurseries

Nicușor Boja, Petru Darău, Florin Boja, Corneliu Maior, Vidrean  
Dan

*„Vasile Goldis” Western University of Arad*

**Abstract:** This paper presents the results of our research regarding the six methods for seedbed preparation in nursery of the West of Romania. This methods are: Vibrocombinator equipped with Gama type active organs (Vibro\_Gama), Vibrocombinator equipped with Delta1 type active organs (Vibro\_Delta1), Vibrocombinator equipped with Delta2 type active organs (Vibro\_Delta2), Disc harrow (Disks), Cultivator (Cultivator) si Rotary harrow (Rotary harrow). In order to evaluate the most efficient method of preparing the germination bed, the following physical-mechanical properties of the soil were determined: moisture, bulk density, total porosity and soil compression degree and water retention. In order to carry out the research, we settled a nursery of the West of Romania so that we could have six methods for seedbed preparation. From each profile was collected soil samples in three steps of 5, 10 and 15 cm. For each sample six repetitions were performed (N = 6). We started by

measuring the particle size distribution (granulometric composition) and the main physical properties of the soil. The advantages of using vibro-combinators are: perfect preparation of seedbed in difficult working conditions and preservation of soil moisture. Such important factors can ensure fast, uniform and early germination of seeds, these requirements standing at the basis of abundant harvests. The research investigated the soil tillage performances and the environmental impact of several active elements, at certain soil depths.

## **Antonio Mocioni de Foeni a predecessor of sustainable hunting management**

Corneliu Maior, Petru Darău, Florin Boja, Mihai Brad, Nicușor Boja

*„Vasile Goldis” Western University of Arad*

**Abstract:** KING CAROL II, passionate of hunting asked for Parliament's approval for the hunting fund in the area of Chisineu Cris-Socodor-Padureni.

For its conception and arrangement he case the baron ANTONIO MOCIONI DE FOENI, whide became the great master of the royal hunters.

Heraldy and same documents of the Mocioni found from National archives prove that they had important hunting scientific achievements, whid is why he gaimed a national and international recognition.

Key words: game fauna, heraldy, sustainable mangement

## Adventive woody plants in the flora of Arad County

Ioan Don, Cornelia Doinița Don, Dan Vidrean

„Vasile Goldis” Western University of Arad

**Abstract:** Among the adventive woody plants that have acclimatized to us and have a high ability to spread being considered invasive, we mention: *Acer negundo* L., *Ailanthus altissima* (Mill.) Swingle, *Amorpha fruticosa* L., *Lycium barbarum* L., *Malus domestica* Borkh., *Morus alba* L., *Parthenocissus inserta* (A. Kerner) Fritsch, *Prunus cerasifera* Ehrh., *Robinia pseudoacacia* L..

With a lower spreading capacity in the flora of Arad County are: *Aesculus hippocastanum* L., *Celtis occidentalis* L., *Elaeagnus angustifolia* L., *Fraxinus americana* L., *Fraxinus pensylvanica* Marshall, *Gleditsia triacanthos* L., *Juglans regia* L., *Maclura pomifera* (Raf.) C.K. Schneid., *Mahonia aquifolium* (Pursh) Nutt., *Prunus domestica* L..

Rarely found in Arad County are: *Broussonetia papyrifera* (L.) Vent., *Buddleja davidii* Franch., *Catalpa bignonioides* Walter, *Gymnocladus dioicus* (L.) K. Koch, *Juglans nigra* L., *Koelreuteria paniculata* Laxm., *Morus nigra* L., *Parthenocissus quinquefolia* Planch., *Prunus serotina* Ehrh., *Ptelea trifoliata* L., *Rhus typhina* L., *Styphnolobium japonicum* (L.) Schott.

## Cyber Security Awareness

Alin Titus Pîrcălab

*„Vasile Goldis” Western University of Arad*

**Abstract:** To be conscious is to have knowledge or discernment about something. Being conscious implies knowledge acquired through one's own perceptions, but also from external sources. Cyber Security Awareness is not just about knowledge. It is not enough to know the state of cyber security or its level. To know does not imply and to act. Or, to act is absolutely necessary to ensure cyber security. Cyber Security Awareness is knowledge combined with action, attitude, proactive behavior. Being cyber security aware means knowing and understanding the risks from cyberspace and taking action to prevent them.

## Assessing the tourist potential of Arad county

Patricia Dorli Dumescu<sup>1</sup>, Dana Monica Dănoiu<sup>2</sup>, Florin Dumescu<sup>3</sup>,

<sup>1</sup>*”Victor Babes” University Of Medicine And Pharmacy Timișoara,*

<sup>2</sup>*Agency For Environmental Protection Arad, <sup>3</sup>„Vasile Goldis”*

*Western University of Arad*

**Abstract:** The authors aim to identify in this paper the possibilities for improvement of the tourist activity by measuring the indicators for the tourist accommodation capacity by using the primary data received from the County Directorate for Statistics, the authorities of the Ministry of Tourism and items gathered during the on-site trips. It results from research carried on until now that the way of approaching the selected topic is a premiere, at least for Arad County.

## **Jordan from Sky**

Ali Al Dahoud

*Al Zaytoonah University of Jordan*

**Abstract:** Presenting ZUJ in the means of Internationalization, and presenting Jordan as historical place

## Aspects regarding some Dynamical Systems

Ciobanu Monica, Obădeanu Virgil

*„Vasile Goldis” Western University of Arad*

**Abstract:**In the paper we consider first and second order dynamical systems, to which we associate some geometric objects and structures.

## SECTION VIII

### NOI TENDINȚE ÎN DREPTUL CIVIL ȘI PENAL EUROPEAN

### NEW TRENDS IN EUROPEAN CIVIL AND EUROPEAN CRIMINAL LAW

#### Reinventing Terror Online

Alin Titus Pîrcălab,

*„Vasile Goldis” Western University of Arad*

**Abstract:** Due to its scale and form of manifestation, terrorism has become a global problem, being one of the most serious threats, both to the stability and internal public order of states, and to international peace and order. With the expansion of the Internet and the accelerated development of information technology, cyber terrorism has become a real threat to society. Much of the world's infrastructure is increasingly based on IT resources.

## **The supreme financial control exercised by the Romanian Court of Accounts**

Gheorghe Stîngu

*„Vasile Goldis” Western University of Arad*

**Abstract:** The Romanian Constitution states in art. 140 that the supreme body of financial control is the Court of Accounts, control that is exercised over the way of formation, administration and use of the financial resources of the state and of the public sector.

The Court of Accounts operates in accordance with Law no. 94/1992 subsequently amended and supplemented, as an autonomous public authority, subordinated to the Romanian Parliament, unlike other forms of financial control, most of them being incorporated into the Ministry of Finance.

This control with constitutional and parliamentary support, also called external control, is exercised in an unlimited, competent and specialized way, representing the way in which the legislative power is involved in the action of protecting public interests by supervising the executive in the budgetary process.

**The administrative contentious in the light of the new New  
Administrative Code**

Paul Valentin Neamț

*„Vasile Goldis” Western University of Arad*

**Abstract:** The legal reform in Romania begun with the New Penal Code and the New Penal Procedure Code, The Civil Code and The the Civil procedure Code, continued with new New Administrative Code of 2029(OUG57/2019)

## **Children's rights - an integral part of the human rights system**

Anca Florina Moroşteş

*„Vasile Goldis” Western University of Arad*

**Abstract:** Respect for the fundamental rights of human beings and also of the child has become the subject of global regulations, only in the second half of the last century, the belief of the states of the world regarding the promotion and encouragement of respect for human rights, being reaffirmed with the adoption of the Charter. UN since 1945.

## **Application of certain principles in civil trial**

Daniela Cristina Creț

*„Vasile Goldis” Western University of Arad*

**Abstract:** Any civil process requires compliance of essential principles. These include the principle of celerity and the principle of the exercise of procedural rights in good faith. In the following we will analyze the aspects related to certain particularities of their application in the civil trials.

## **Civil law. Obligations. Tortious Civil Liability. Fortuitous Event and Force Majeure. Administrative-Territorial Authority**

Cristian Alunaru

*„Vasile Goldis” Western University of Arad*

**Abstract:** The matter analyzed by us is regarding a grave accident, when because of a crash of a rotten tree two people were harmed, but even graver a female person deceased who was in a kinship relationship with the two applicants: one person's wife and the other's mother.

The matter is regarding two legal institutions specified in the Art. 1351 of the New Civil Code: the force majeure and fortuitous event. The two institutions are expressly analyzed in the Civil Code but much too brief therefore I have appealed to the legal literature.

Like in the old Civil Code the „legal guard“ of a good attracts the civil responsibility in the absence of any guilt of the legal guardian: How can you, after invoking several legal texts which provide the inutility of any of the defendant's guilt as it is an objective responsibility, bring forward other arguments, totally different and contrary, based on a special law ( Law no 24/2007) regarding the regulation and the administration of spaces which demand the existence of the guilt?

**"The Consent", an essential condition for the processing of  
personal data by data controllers**

Cosmin Cernat

*„Vasile Goldis” Western University of Arad*

**Abstract:** For the protection of personal and adjacent property rights, any controller of personal data must, prior to the processing of such data, request the consent of those who transmit personal data to them in order to benefit from the services provided by the controller. The consent must be expressly expressed in writing after prior notice which will detail the purpose for which the data will be processed and what are the rights of the person transmitting this data to the controller.

**”Theory of national interest” - exception to the application of personal law in private international law**

Daniel Berlingher

*„Vasile Goldis” Western University of Arad*

**Abstract:** In the Romanian Civil Code, through the provisions of art. 2579 para. 1, the romanian legislator establishes an exception from the application of the competent national law regarding the capacity of the natural person, an exception known as ”the theory of national interest”. According to these legal regulations, in romanian international private law, a person who according to his national law or the law of domicile is deprived of capacity to exercise or has restricted capacity to exercise, cannot oppose this cause of invalidity to the one who considered him, in good faith, as fully capable in accordance with the law of the place where the deed was drawn up. Also the Civil Code establishes the necessary conditions for ”the theory of national interest” to be invoked.

## **Release, power and membership**

Anda-Ienei Nedelcu

*„Vasile Goldis” Western University of Arad*

**Abstract:** The rotating six-month presidency of the EU Council (PRES FR), taken over by France on 1 January 2022 from Slovenia, has a new motto: "Release, power and membership". Member States / Member States holding the Presidency of the Council operate in "trios" under the Lisbon Treaty of 2009. The current trio consists of France from January-June 2022, the Czech Republic (July-December 2022) and Sweden (January 2022) - June 2023). The Council's 18-month Trio program has an ambitious agenda for the European bloc. The priorities presented by Emmanuel Macron in December 2021 focus on a "true sovereign Europe" that defends its values and its own interests; A "stronger Europe in the world" more united, more sovereign and more democratic; a "reform of the Schengen area", the "Maastricht criteria for a new budgetary framework and the addition of the European post-COVID-19 recovery fund".

The three main areas around which the French Presidency of the EU is built are: digital, ie enabling digital platforms; ecological transition, the creation of a carbon price at the borders of the European Union for imported products and the social area, ie a social Europe by establishing European legislation on the minimum wage.

## **Impact of Covid - 19 measures on respect for human rights in ECHR case law**

Georgeta Sabău

*„Vasile Goldis” Western University of Arad*

**Abstract:** The crisis caused by the COVID-19 pandemic has had a number of implications, especially during the state of emergency, with the state having to focus not only on managing the crisis strategically and economically, but also on ensuring and protecting fundamental human rights.

In this context, the jurisprudence of the ECHR has shown that fundamental rights continue to be applied even in emergencies, and the measures adopted in the context of the pandemic have often been unprecedented, such as restrictions on the movement of persons - lockdown, quarantine, isolation, social distancing, measures that limited or even restricted fundamental rights and passed the proportionality test.

The article aims to present part of the ECHR case law in relevant cases, which arose in the context of the COVID-19 pandemic.

**Considerations regarding combating consumption substances  
with psychoactive properties**

Liviu Tăut

*„Vasile Goldis” Western University of Arad*

**Abstract:** The fight against is one of the main priorities of the EU  
duet o the ampleness of trafficking and consummation and the  
prejudices these phenomena cause to society.

As a result there is an increase in criminality and negative effects on  
health and social marginalization of the consumers.

## The party that won the case. Disputes over the award of costs

Ștefan Lucaciuc

*„Vasile Goldis” Western University of Arad*

**Abstract:** At present, neither the law nor the case law seems to accept that an appeal can only be allowed in part. However, there are enough situations in practice where the effect of allowing the appeal leads to a symbolic modification of the first instance judgment, regarding to the claims and requests of the appellant and the provisions of the judgment remaining unchanged. In such cases, the courts of judicial review are required to examine whether, in practice and in relation to the limits of the admissibility of the appeal and the changes to the judgment under appeal, the appellant/appellant can be considered to be the party which has actually won the case within the meaning of Article 453(1) of the Code of Civil Procedure or, on the contrary, the respondent is the party which, within the meaning of the same legal provisions, should be said to have won the case even on appeal.

On the other hand, the award of costs to the successful party on appeal cannot be ordered where the decision is provisional and has the effect of continuing or resuming the court proceedings. In such a case, after the resumption of the proceedings, the courts are obliged, on the occasion of the retrial of the case, to award costs to the successful party, taking into account all the costs incurred by the successful party in all previous stages of the proceedings, even if, at those stages of the proceedings, the judgments delivered were unfavourable to it, which is irrelevant since those judgments were eventually set aside/ set aside.

## Consumer information and counselling obligations

Alin Drăgan

*„Vasile Goldis” Western University of Arad*

**Abstract:** The consumer's right to information is a fundamental right and an essential factor in the development of fair competition. Better informed, the consumer can choose those products and services that meet his requirements and expectations, knowing the selling price and their characteristics. The obligation to advise, often perceived as a mere appendix to the obligation to inform, is a duty of the professional to guide the consumer's choice when it comes to products or services of high technicality or which have far-reaching economic consequences for him.

## **The right not to incriminate oneself of the persons interviewed as a witness to abusive conduct. Case study**

Pavel Palcu, Anca Moroşteş

*„Vasile Goldis” Western University of Arad*

**Abstract:** The criminal cases solved recently at the level of the Prosecutor's Office attached to the Arad Tribunal or of the local prosecutor's offices brought into discussion and there were various opinions regarding the opportunity to hear as a witness, during the criminal investigation, the persons who could later acquire the quality. suspect or defendant and whether this statement can be used against him. This is because the legislative solution found in art.118 CPC does not enshrine the right of the witness not to give a self-incriminating statement and to benefit from the assistance of a lawyer in this case, while lacking the obligation of judicial bodies to warn the person heard in this capacity on the stated rights. .

Judicial practice has shown that the sanction of obtaining such statements is illusory and that there is a possibility of using illegally obtained evidence in criminal proceedings.

In developing this preliminary thesis, we will focus on the content of the right not to incriminate oneself, the shaping of the sphere of persons who should benefit from this right, as well as the identification of an appropriate procedural remedy, in case of violation of the analyzed right. the need to expand the scope of application of the norm found in art.118 CPC.

It has been accepted in classical Roman law that no person may be held liable for criminal charges, by way of giving accusatory statements or producing evidence against him, the fundamental rule being that no one is required to testify against him. *contra se*), conditions in which no person may appear as a witness in his own case (*nemo testis idoneus in re sua*) and may not be compelled to adduce evidence against himself (*nemo cogitur edere contra se*).

**This paper aims to offer an overview of the vicarious liability regime in English law**

Petru Ciacli, Bogdan Ciacli

*„Vasile Goldis” Western University of Arad*

**Abstract:** This paper aims to offer an overview of the vicarious liability regime in English law. It will analyse the way its two-limbed test developed by the common law changed during different historical periods, highlighting the consequential changes of principles underlying the regime. It will then discuss two recent caselaw developments that highlight a potential enlargement of vicarious liability. Finally, it will draw conclusions about the impact of the latest caselaw as well as the shifting theoretic basis on the future development of this type of liability. The paper will be published in three parts.

## **Vacancy of the presidential office and interim office**

Mihaela Narcisa Stoicu

*„Vasile Goldis” Western University of Arad*

**Abstract:** The term of office of the President of Romania is five years and runs from the date of swearing in until the newly elected President is sworn in.

The term of office of the President of Romania shall end at the end of its duration unless circumstances arise that determine the end of the term of office and the occurrence of a vacancy in the office of the President, under the conditions provided for in Article 97 of the Constitution.

The office of President is vacant in the event of resignation, dismissal, death or definitive impossibility of exercising the functions of the office. The Constitutional Court is competent to establish the existence of situations leading to the vacancy of the office of President, and will communicate its findings to Parliament and the Government with a view to organizing elections for a new President.

Article 98 of the Constitution stipulates that the interim office of President of Romania is held by the President of the Senate or the President of the Chamber of Deputies. If the President of the Senate is also unable to assume the office of President, the President of the Chamber of Deputies shall be the President of Romania during the interim period.

## Reparation of the moral prejudice requested in labor disputes

Radu Nicolae Stoian

*„Vasile Goldis” Western University of Arad*

**Abstract:** Civil liability for moral damages has been outlined in the realm of crime since Roman Law.

Attempts to harmonize national laws at present may provide enhanced protection against the violation of the right to health and bodily integrity and the provision of minimum standards of protection.

## SECTION IX

### ABORDĂRI INTERDISCIPLINARE ÎN ȘTIINȚE SOCIALE ȘI UMANISTE

### CROSS-DISCIPLINARY APPROACHES IN SOCIAL SCIENCES AND HUMANITIES

#### **Existential psychotherapy. Existential anxieties and fundamental worries in life and in the profession**

Sorin Nica

*„Vasile Goldis” Western University of Arad*

**Abstract:** In this paper we will explore the principles outlined in the framework of existential psychotherapy, to be applied to everyday life, on a personal and professional level. Irvin D. Yalom found meaning, despite - thanks - to the suffering around him. His life's work has resulted in the therapeutic approach called existential psychotherapy, which paved the way for us to know the meaning through fundamental concerns (death, isolation, freedom, the meaning of life) as the foundation of our existence. However, Yalom has stated from the beginning that existential anxiety is a prerequisite for finding meaning in our lives. By this he meant that when we are anxious because those fundamental concerns, we have the ability to find the meaning of the situation.

There is a crisis of meaning today. Many people feel that they are missing something. They feel overwhelmed, lonely and unfulfilled. In general, they feel completely disconnected and not involved in their lives or work. Death, isolation, freedom and the meaning of life are constantly present in a direct or hidden form in all the contents of daily life. For this reason, the existentialist

psychotherapist will talk very little about these topics directly. Depression is on the rise and many people simply cannot keep up with the changes imposed by technological, cultural and social transformations. The relentless pursuit of pleasure and other short-term escapes only led to a bigger goal. We are told to pursue "happiness," but happiness is an illusion for many, because it does not take into account the flow or natural rhythms of life - its ups and downs, its joys, its sadness, its good times and its worst.

## Nehemiah Grew's inquiries into the "anatomy of plants"

Oana Matei

*„Vasile Goldis” Western University of Arad*

**Abstract:** Nehemiah Grew (1641-1712) devoted more than ten years of his activity to the building of a science of plants, a project that, as I argue in this paper, is a bottom up oriented endeavour based on observation (many times undergone at a microscopical level) and experiments. Grew's starting point was the collection of a natural history of plants concerned with their anatomical structure and functioning but, as I suggest, he aimed at using the observations and experiments for the construction of an experimental science of vegetation interested in the causes and principles of this fundamental process of nature. Apart from the study of the structure of plants, they were also treated as instruments where different chemical operations were taking place (such as filtration, digestion, fermentation, separation of particles of matter). At a methodological level, the science of vegetation is a project based on experimental comparisons, variations, and extensions that, in some cases, lead Grew to the revision of his explicative hypothesis.

## **Emotional and Spiritual Freedom—the Freedom to Be Who We Are**

Delia-Mariana Ardelean

*„Vasile Goldis” Western University of Arad*

**Abstract:** New research in the field of biochemistry and neurology of happiness has confirmed that acceptance means taking control over what is real and over what really makes us happy. A positive attitude correlates, to some extent, with biological inheritance, so some people are naturally more optimistic than others. This does not imply that people who are not by nature optimistic cannot change their attitude and show increased optimism in certain life circumstances. This change is based on an internal logic and it is not only related to attitude, but also to a spiritual duty of each of us. People must decide on what “optimism” and “a positive attitude” mean for themselves.

## Zarand County in the first half of the 16th century

Sorin Bulboacă

*„Vasile Goldis” Western University of Arad*

**Abstract:** Based on the consultation of sources and specialized literature, we reconstructed the social and political history of Zarnad County in the first half of the 16th century. It is a difficult time, of crisis, in the context of the collapse of the Kingdom of Hungary under the attacks of the Ottoman Empire. Between 1552 and 1566, the western, plain half of Zarand County was occupied by the Turks, and the Ottoman administration was established.

## Dr. Vasile Lucaciu (1852-1922)

Claudiu Porumbăcean

*„Vasile Goldis” Western University of Arad*

**Abstract:** Personalitatea cea mai proeminentă și mai reprezentativă a luptei pentru emanciparea națională, politică și culturală, din partea de nord-vest a țării, preotul greco-catolic dr. Vasile Lucaciu s-a născut în localitatea Apa (comitatul Satu Mare) la 22 ianuarie 1852. După absolvirea gimnaziului pleacă la Roma, unde va sta timp de 17 ani, urmând și colegiul „De Propaganda Fide”. Intrând în conflict cu autoritățile locale din Satu Mare, va fi mutat în parohia Șișești. În septembrie 1887 va fi condamnat pentru calomnie și întemnițat la Satu Mare timp de 1 an și jumătate. În mai 1892 face parte din delegația memorandistă de la Viena. În ianuarie 1893 are un nou proces la Satu Mare, fiind apărat de avocatul Iuliu Coroianu. În timpul procesului intentat la Cluj, în mai 1894, este condamnat la închisoare pe 5 ani și jumătate dar va sta în temnița din Seghedin doar până la 15 septembrie 1895. Odată cu izbucnirea războiului trece în România, apoi pleacă în Italia, S.U.A. și Franța, militând pentru cauza dezrobirii naționale a românilor ardeleni. Revine la Satu Mare în 1919, fiind însă bolnav. Aici se stinge din viață la 28 noiembrie 1922, dar va fi înmormântat, potrivit dorinței sale, în biserica din Șișești, ctitorită de el după modelul bazilicii Sf. Petru din Roma. În ultimii ani petrecuți la Satu Mare, a avut satisfacția de a se plimba pe o stradă centrală ce-i purta numele (actuala stradă Horea din municipiul Satu Mare).

# The psycho-social stress felt by employees during the pandemic covid

Oana Morcan

*„Vasile Goldis” Western University of Arad*

**Abstract:** The COVID-19 pandemic is associated with threats to the health and lives of people around the world. It also leads to changes in daily functioning, many of which are perceived as negative. In this paper we study "The psycho-social stress felt by employees during the pandemic". In the context of a pandemic that has grown at such a fast pace, registering psycho-socio-economic disorders among the majority of the population, there have been various responses regarding the pandemic. A number of control strategies have been put in place in many countries to reduce social activities, such as the closure of schools, kindergartens and nurseries, distance work and traffic restrictions. Stress during an outbreak of an infectious disease can cause many disorders (2019), including stress at work.

The aim of the research is to analyze the stress perceived by employees in an organization, as well as highlighting methods of managing stress in employees. The research aims at three major objectives: identifying differences, if any, between employees who are older than those who are newcomers, who have less work experience, stress on gender differences, and what ways employees use to coping with stress at work.

The findings of the research draw attention to the need for a thorough understanding of the stressors that most influence mental health, as stress has a greater impact on individuals in general at this level and in fact still persists.

The results showed that there are no significant differences in perceived employee stress based on seniority and that they feel stress, regardless of their seniority, that there are no significant differences in terms of seniority. perceived stress between women and men and that they feel almost equal the same level of stress and respond in the same way

**Reframing - therapeutic means for the integration of children separated from the family, in a new private family system (NGO) 90-2020**

Oana Morcan

*„Vasile Goldis” Western University of Arad*

**Abstract:** Reframing - therapeutic means for the integration of children separated from the family, in a new private family system (NGO) - family type houses, in the period 1990-2020

The entrustment of the child for a certain period to certain institutions, period in which the relations with the child are maintained (more or less), generates the state of frustration and vulnerability manifested by crises of affection (crying, anger, aggression), vindictive attitudes (jealousy, passivity, regressions, behavioral - finger sucking, rocking), refusal to communicate, minimization of personal value, with repercussions on his psycho-social development.

With this "transfer" of responsibility for the care and upbringing of the child from the family to a care institution, in fact, the parents transfer the responsibility for the upbringing and care of the child to this institution, but the major problem remains unresolved, namely: the symptom of loss experienced by child.

NGOs, as private institutions, come to the aid of children who do not have the opportunity to grow up with their parents, offering them a family model, a model that brings with it, emotional balance, harmonious physical, mental and social development.

Children learn how to accept their past, understand their present, and are supported in their future endeavors. "You can't change the past, you can change the relationship with the past," said Hugh Jenkins. of separation.

In this context of a "new beginning" that the child is "forced" to accept, reframing is an important / essential technique to give the child the comfort and security he needs to mobilize his resources to cope. changes.

Cropping - therapeutic means

One of the most effective techniques in systemic therapy is reframing.

According to strategic therapists, solution-centered therapy, cropping is a technique restructuring that offers a new meaning and a positive dimension, valuing a situation or a behavior. This involves “changing the conceptual and / or emotional context of a situation or the perspective from which it is lived, placing it in another framework, which corresponds as well or even better to the “facts” of this concrete situation, the meaning of which, therefore, changes completely (Dafinoiu Ion , 2001, pg. 129, Watzlavick, Weakland and Fisch, 1975, p.126).

The intention of the crop is not to provide patients with glasses with pink lenses, with which to look at reality and discover the full side of the glass; problems do not go away spontaneously, but the more complete our picture of them and the more alternatives we have for approach, the more the possibility of solving them increases.

Crop types:

Cropping - This type of cropping is often done with the help of therapeutic metaphors.

The method can be used to solve relational, emotional, emotional, work, and in problem solving.

Cropping content - The history of each of us is not made up of facts, events, but of the meanings we attribute to them. For example, a failure can be experienced as a dramatic defeat, or it can be a “lesson” to guide us in our future actions (Dafinoiu Ion, 2001, p. 131).

The results of the case study show that the relocation did not change the situation, but with its help a positive goal was formulated, in relational terms in which the child felt accepted along with his life history, and the repetition of the metaphor during the 18 years had in order to balance the system, each of them should understand their own role

## **Socialization and functionality of society**

Aurora Lupaş

*„Vasile Goldis” Western University of Arad*

**Abstract:** Social deficiencies are the result of the malfunctioning or inexistence of a certain degree of family "disorganization", of school non-integration followed by school failure or abandonment, all completed by affiliation to social groups that make the child a teenager a negative type of socialization.

In addition to social aspects, factors of individual nature, factors related to the personality structure of the individual, as well as anatomophysiological or genetic factors act.

## **Intentionality as a limit within a phenomenological approach in human sciences**

Adrian Păcurar

*„Vasile Goldis” Western University of Arad*

**Abstract:** The study is aiming to uncover some key elements from the historical development of the concept of intentionality within the epistemology of human sciences. The historical approach is doubled by a critical perspective by uncovering the limits of intentionality as a founding concept within the epistemological frame of human sciences. Some special issues regarding the concept of intentionality will be discussed in the end of the study by disclosing some fundamental limits about intentionality which occur when this concept it is used in the process of obtaining an ultimate epistemological ground in various human sciences.

## LEGIO V MACEDONICA – Pages of history

Marius Grec

*„Vasile Goldis” Western University of Arad*

**Abstract:** For ancient history, EPIGRAPHY provides an important category of sources, constituting valuable information on the various aspects of political and military life, but also on the daily, both civilian and military life. Naturally, epigraphic research has established a certain hierarchy among the diverse categories of researched inscriptions.

The tegular material – stamped, written (writing exercises) or simply imprinted with various human or animal shapes, has been long neglected in research, being regarded as irrelevant for historical research. This false view started to be corrected in the last decades, each entire or only fragmentary piece offering essential information on the extent of writing, on the various human activities, on the circulation of goods, people, military units or just some militaries, on the circulation of ideas, on the Roman way of life as whole or some of its particularities.

## **The pandemic years. Aspects regarding the involvement of the church in social actions**

Maria Oprea

*„Vasile Goldis” Western University of Arad*

**Abstract:** Abstract: For more than two years, all of humanity has been plagued by an unforeseen, unexpected and extremely aggressive, life-threatening danger: the pandemic, caused by the SARS-COV-2 virus. Taken by surprise, people around the world have gone from distrust to fear, from suffering and stress or anxiety, to the imminent presence of death. The Church, as it was involved before this terrifying moment, has shown great determination to help those in need, thus increasing its charitable activities, being, together with the medical, administrative and social institutions at the national level, a real support for those who needed so much not only material means but also spiritual support.

## **A new challenge for contemporary education - the management of educational microgroups**

Teodor Pătrăuță

*„Vasile Goldis” Western University of Arad*

**Abstract:** The management of educational microgroups is a new disciplinary branch of educational management, which certainly aims to manage processes, approaches and activities carried out at the micro-educational level, which involves dealing with small groups of educated in order to ensure efficiency and quality in education.

## **The ideas of Woodrow Wilson and the Romanian intellectuals from Austria-Hungary**

Maria Alexandra Pantea

*„Vasile Goldis” Western University of Arad*

**Abstract:** The events that took place in Europe at the beginning of 1918 also affected the situation of the Romanians. The 14-point statement of President Woodrow Wilson on January 8, 1918, in the United States Congress, was a presentation of "America's war goals", as well as an expression of the struggle for "justice and peace, for a new international order", a "favorable international climate ". With this statement, the president would affirm "America's role as a pacifier of the world". According to the White House president, he has "radically distanced himself from the precepts and experience of the ancient world", his ideas being based on the American belief in "essentially peaceful human nature", which is capable of ensuring the "harmony of the world". The American leader was the one who considered that "the application of the principle of self-determination will solve the desideratum of the populations that demanded the detachment from the Austro-Hungarian Empire", and then the values of the democratic world will be adopted in the new states, a necessary condition for their integration into a world order based on the acceptance of these values. The American president was a supporter of autonomy because he considered that "it was not self-determination that had triggered wars, but precisely its absence". The president of the United States asserted himself as a supporter of the oppressed peoples of Austria-Hungary, saying that they should enjoy autonomous development and become nations, and that the borders of Austria-Hungary should be drawn in accordance with the principle of self-determination.

As early as January 1918, Wilsonian ideas became known to Romanian leaders in the Austro-Hungarian monarchy. Most of them received them with hope and took them over, considering that the statements made by the American president offered a chance to the

Romanians, through which the problems of Central Europe and the divergences between Romanians and Hungarians could be solved.

## The Challenge of Understanding Medical Translations

Stăncuța Dima-Laza

*„Vasile Goldis” Western University of Arad*

**Abstract:** Medical Translation is receiving more and more attention nowadays because of a considerable responsibility it involves. The paper addresses three major issues within this field: the characteristics of medical language, the adaptation of cultural difference and the training of the medical translator. This terminology includes a wide variety of medical specialties and therefore, the translator must be able to sort out such problems related to neologisms, synonyms, register mismatches. Research is essential for professional translators as they constantly need updated sources of medical information in order to become more familiar with the target genre conventions. The most important medical notions required are related to Greek and Latin roots, abbreviations, etiology, symptoms and treatment of diseases, anatomical and physiological notions. Research articles are usually standardized internationally but medical written communication in general reflects cultural elements. As culture defines the socio-economic, religious, political aspects of a community the translator must observe, read and analyze a certain group of people so as to provide an adequate translation. He might have to change the point of view and the cultural framework if there is no correspondence between the source language and the target language.

## Cultural values promoted in the journal “Studies of Science and Culture” from Arad

Viviana Milivoievici

*Romanian Academy, Timisoara Branch*

**Abstract:** The quarterly journal “Studies of Science and Culture”, published under the auspices of “Vasile Goldiș” Western University of Arad in its 18th year of continuous apparition, being scientifically accredited in the domain of philology, is evaluated and rated by CNCS, humanistic profile. “Studies of Science and Culture” [„Studii de știință și cultură”] promotes culture both in written and electronic form, through the official website of the magazine (<https://eur05.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.revista-studii-uvvg.ro%2F&data=05%7C01%7Cscientometrie%40uvvg.ro%7C0c09d49c193e488c20ee08da3723ab93%7Cba4cad59d74f46928cfe927326689fd6%7C0%7C0%7C637882923591990712%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ikl1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sddata=J6FQqp%2FUhGtAQXxRotrxPPRijo8%2BpXTQKmRFN2mmS%2FU%3D&reserved=0.>).

The articles are published in Romanian, English, French, German, Italian and Serbian, with abstracts in English, considering the values of the Romanian and universal culture.

Throughout time, the publication signed scientific partnerships with universities and research institutions from the international academic space, such as Le Département de Roumain d’Aix Marseille Université, CAER – EA 854, d’Aix Marseille Université, France; le CIRMI (Centre Interuniversitaire de Recherche pour la Formation Continue des Enseignants d’Italien) Université de Paris 3 – Sorbonne Nouvelle, France. Starting with the month June 2014 the partnership was extended with the Faculty of Philosophy, the Department of Romanian Language and Literature, the University of Novi Sad, Serbia and with the Department of Slavonic Studies, University Friedrich Schiller, Jena, from Germany. The recent partnership of scientific and cultural research was officialised with

“Titu Maiorescu” Institute of Banat Studies of the Romanian Academy, Timișoara Branch. In this way, the journal is subscribed in the mass-media space as a valuable contribution to the prestige of the Romanian scientific press.

The Romanian values of the publicist activity are promoted yearly, also by organising, within the enclosure of the “Vasile Goldiș” Western University of Arad, the International Colloquium “Europe: Centre and Edge, Cross-Border Cultural Cooperation”.

The journal is indexed in international data bases as: BDI CEEOL (Central and Eastern European Online Library)

(<https://eur05.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.ceeol.com%2F&data=05%7C01%7Cscientometrie%40uvvg.ro%7C0c09d49c193e488c20ee08da3723ab93%7Cba4cad59d74f46928cfe927326689fd6%7C0%7C0%7C637882923591990712%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Iik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=HEuimUWDIAXBBJf5QKKvx3pIYxIJV2eeZGSWjPzN9Yo%3D&reserved=0>) from Frankfurt am Mein, Germany, EBSCO Publishing from Ipswich, SUA

(<https://eur05.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.ebscohost.com%2F&data=05%7C01%7Cscientometrie%40uvvg.ro%7C0c09d49c193e488c20ee08da3723ab93%7Cba4cad59d74f46928cfe927326689fd6%7C0%7C0%7C637882923591990712%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Iik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=RK6fD5IjHwBZv11leORu0nVpLv7lB0E8HKIZHoQG%2BJE%3D&reserved=0>), Index Copernicus International from Warsaw, Poland

(<https://eur05.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.indexcopernicus.com%2F&data=05%7C01%7Cscientometrie%40uvvg.ro%7C0c09d49c193e488c20ee08da3723ab93%7Cba4cad59d74f46928cfe927326689fd6%7C0%7C0%7C637882923591990712%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Iik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=jc4PK%2BmV4f5gfYqZB%2FdDemaXIysNxr8WTwYi6depSoU%3D&reserved=0>), DOAJ (Directory of Open Access Journals) din Lund, Sweden

(<https://eur05.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.doaj.org%2F&data=05%7C01%7Cscientometrie%40uvvg.ro%7C0c09d49c193e488c20ee08da3723ab93%7Cba4cad59d74>

[f46928cfe927326689fd6%7C0%7C0%7C637882923591990712%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ikl1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=y4d2oaZi4zpjzeRj5ievGPx5picR%2B4nui6ZF%2B0qLUwA%3D&reserved=0](https://eur05.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.revista-studii-uvvg.ro%2Fbdi%2F&data=05%7C01%7Cscientometrie%40uvvg.ro%7C0c09d49c193e488c20ee08da3723ab93%7Cba4cad59d74f46928cfe927326689fd6%7C0%7C0%7C637882923591990712%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ikl1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=y4d2oaZi4zpjzeRj5ievGPx5picR%2B4nui6ZF%2B0qLUwA%3D&reserved=0), SCIPHO (Scientific Publishing & Information Online) Romania, The Linguist List, SUA etc.

(<https://eur05.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.revista-studii-uvvg.ro%2Fbdi%2F&data=05%7C01%7Cscientometrie%40uvvg.ro%7C0c09d49c193e488c20ee08da3723ab93%7Cba4cad59d74f46928cfe927326689fd6%7C0%7C0%7C637882923591990712%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ikl1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=oUidw7L353gEHv2oem40ZmlCToYPLZeC%2BIXOlnlIYEc%3D&reserved=0>)

The international impact of the journal “Studies of Science and Culture” is appreciated also through the great number of articles received at the editorial office through peer review and publication.

## **Modern Methods in Teaching Culture to Foreign Language Students**

Gianina Daniela Sabău

*„Vasile Goldis” Western University of Arad*

**Abstract:** This paper presents an investigation into the using of modern methods such as TED talks, PDFs and authentic documents when teaching to B2 level language learners. After defining some key terms - presentations, TED talks and B2 language level – the paper goes on to discuss the role of such materials in culture language learning and their importance in communication.

## **Psychological factors involved in the symptoms of diseases of the endocrine system**

Angela Bogluț

*„Vasile Goldis” Western University of Arad*

**Abstract:** The endocrine system have a key role in the body. This complex system intervenes in the normal development of the body, in maintaining homeostasis, in functioning of all its essential processes. The endocrine system interacts with the nervous system and immune system, this trio, having a relationship role and organic control, ensuring the processes of growth, development and metabolic, to ensure optimal functionality of the body. Diseases of the endocrine glands are often accompanied by psychic manifestations. The latter may precede or may to occur concomitantly with the clinical manifestations of the condition endocrine. In these situations, the treatment of endocrine disorder is represented by the treatment of the underlying disease, to which is added psychotherapeutic treatment of psychic manifestations.

## Teaching in the post-Covid world

Annemarie Arsenie Guzei

*„Vasile Goldis” Western University of Arad*

**Abstract:** Although the idea of digitizing education systems has been debated for some time, the acceleration of this initiative under the Covid pandemic has been truly impressive. All levels of education, from kindergarten to university, have been severely affected by the new coronavirus, and most institutions have either been completely shut down or have been operating at very limited capacity for several months. After the initial shock, millions of teachers, professors and members of the administrative and technical bodies of education systems around the world have reacted in a truly extraordinary way, trying to transfer the whole teaching activity to the online environment and, in just a few weeks, to become familiar with the operation of digital platforms such as Zoom, Google Meets and Microsoft Teams, which in most cases they were not even aware of before this crisis. Most of them have adapted surprisingly well to the new systems, appreciating the concrete advantages they bring and trying to overcome the inherent problems quickly:

Benefits:

The ability to offer and participate in educational courses at home, without the need for a physical presence in a classroom that can raise significant logistical and temporal problems for students living far from the premises of the respective institutions.

Ease of close interaction between students and teachers, using the chat function of digital platforms even during the actual courses.

An overall improvement in both the quality and quantity of digital resources available.

Disadvantages:

Reducing social interactivity with other students, a particularly critical factor especially for young people at the beginning of their higher education.

Difficulties for those disciplines based on experimental or practical activities, such as biology, pharmacology, medicine, archeology,

performing arts, fine arts, architecture, engineering and many other specializations.

Difficulties in accessing those libraries that do not have fully digitized resources, especially for students and researchers specializing in the humanities and social sciences.

## **Interdisciplinary mental health counseling of university students**

Nashwa Ibrahim

*Mansoura University, Egypt*

**Abstract:** Mental health of college students is both economic and morale imperative. Research findings report alarming prevalence of mental health issues among college students. Thus, counselling and mental health care appear crucial, however, it is essential to consider all the disciplines, and stakeholders that would contribute to the success of establishing students' mental health counseling center for university students

## **The Use of English for Presentations at International Conferences**

Laura-Rebeca Stiegelbauer

*„Vasile Goldis” Western University of Arad*

**Abstract:** This presentation is meant to be seen as a short guide for academics of all disciplines. Those who work in an academic environment need to take part in conferences in order to get visibility but also to advance in their careers. For some, it is a genuine pleasure but for others it can be a real burden. When academics attend international conferences, English is usually the common spoken and written language, the means by which they get themselves understood and spread their research and knowledge. When a presentation is being prepared, both language and technical and graphical elements need to be considered. Creating slides with an impact on the audience's eye and long-term memory is desirable. However, there is a plethora of questions that need to be answered beforehand. Unfortunately, most of the Romanian academics did not attend any specialised courses so as for their presentation skills to be developed. Hence, for some, the questions still remain after many years of experience; the insecurity, the uncertainty of a good or bad presentation might sometimes shadow the greatness of the research. But in the end, are there good and bad presentations? How can a presentation be a wonderful, elegant and unforgettable experience for the author but also for the audience? Is it useful to watch other people presenting? How many slides should the presentation have? How much text should it contain? How important is English grammar? What if the presenter does not remember the correct use of if clause? These are only a few of the questions that this presentation is meant to address.

## **An interdisciplinary approach to space and human beings**

Roxana Silvia Moraru

*„Vasile Goldis” Western University of Arad*

**Abstract:** In a postmodern interdisciplinary society, people have to face challenges, surpass obstacles and rediscover their authentic selves. The postmodern man acquires a different level of knowledge. The article highlights the twofoldness that lies within the human body. The latter is further transposed into the outer world via Soja's theory of the thirdspace, a nodal point that colludes the former space of objects and the secondary space of thoughts for creating an experiential macrocosm. How does the interdisciplinary approach to all fields of knowledge, with a particular emphasis on narrative fiction, influence the fast pace of our postmodern and contradictory life? Every human being should discover, recognize and use his/her inner power for a better understanding of his relationships, of the world, and, last but not least, of the creative potential that prevails over the divine and terrestrial existence. It is a well known-fact that genuine interpretations emerge from the synergy between substance and appearance.

## Migration and nonmigration,

Tiberiu Dîscă

*„Vasile Goldis” Western University of Arad*

**Abstract:** Migration is:

- a move, change of residence, relocation;
- of individuals or communities;
- for a certain period of time (determined, indefinite, permanent, temporary);
- from one stable place to another.

In fact, from what I have found by listing them, the many theories of migration do not necessarily challenge the definition of the term migration, but they strive to explain causation.

If we notice, from the definitions of the dictionaries and the statements of the migration theories, we start from the premise that if there were no causes, there would be no migration. This implies, therefore, that the natural state of an individual or a community is non-migrant, sedentary and only due to some factors the phenomenon of migration occurs.

## **Ethics and Psychotherapy in Spinoza's Philosophy**

Maria Sinaci

*„Vasile Goldis” Western University of Arad*

**Abstract:** Benedict Spinoza is considered one of the most influential figures in Western philosophy and one of the great rationalists of the seventeenth century, along with Descartes and Leibniz. In *Ethics*, Spinoza provides guidance for a good life and also a model of philosophical psychotherapy based on the unity of substance, arguing that mind and matter are two sides of the same coin. This paper aims to highlight ways to use Spinoza's ethical considerations in psychotherapy and the timeliness of the proposed methods.

**The political influence of prof. univ. dr. Aurel Ardelean, rector of UVVG, during his term as senator in promoting Romanian university education**

Ioan Daniel Albu

*„Vasile Goldis” Western University of Arad*

**Abstract:** Prof. univ. Dr. Aurel Ardelean, founding rector of the Vasile Goldiș Western University of Arad, as a senator in the Romanian Parliament, voted by the people of Arad by a large majority, initiated some of the most important laws regarding university education in Romania . He supported, by vote, important laws in both the pre-university and university fields.

## SECTION X

### PROVOCĂRI DE SECURITATE ÎNTR-O LUME INTERCONECTATĂ

#### SECURITY CHALLENGES IN AN INTERCONNECTED WORLD

##### **Social and cultural identities in Haiti: Echoes of origins and contemporary realities**

Speranța Sofia Milancovici

*„Vasile Goldis” Western University of Arad*

**Abstract:** The way that people think about themselves and about others influence their national and the international position more than institutions or organizations are capable of. Seeing the other (a person or a nation) as an enemy, a friend or a rival is a question of social and cultural identity construction. The values and beliefs can and do influence the international relations and the national climate. Mixed cultures represent a particular (co)existing landscape, where identities are shaped under reciprocal influence. In Haiti, the ancient local population, the slaves from Africa and all the other adstratum groups of influence form a unique and polymorph cultural community. In this mixture, there are characteristics from either that remain distinct, others that are hybrid and coexist in a spectacular social combination.

Haiti is a country where the reality beats imagination.

We propose a trip through the interests, the norms and the mentalities of the Haitian social environment, in order to explain

how identities are shaped and how those identities give a meaning to internal and external realities.

## Conceptualizing the role of societal resilience in countering hybrid warfare

George-Marius Șinca

*“Babeș-Bolyai” University Cluj-Napoca*

**Abstract:** Nowadays we have available an entire toolkit to counter the diversity and complexity of hybrid threats, but even so, not even one of the tools we have at our disposal cannot stop the diversity of threats against state actors, business, or individuals. There is a new domain that must be governed by new rules in order to be resilient within all sectors (economical, energy, medical, military, etc.). By going on military sector we know already that there we have a need of strategy that blends all warfare types (conventional, irregular, and cyber). In the past three years we have been witnesses the cyber warfare capability in different parts of the world (Israel vs Palestine, Russia vs Ukraine). The complex dynamics encountered on military theatre of operations requires a highly adaptable and resilient response. Reflecting on the national and supranational response on recent events, this article looks into the importance of strengthening cyber resilience, understood and defined as the ability of a state, organization or society to absorb and recover from a critical cyber event or threat.

## **”Fixing” broken nations: United Nations missions in Haiti**

Ștefan Iaroslav Daniel

*„Vasile Goldis” Western University of Arad*

**Abstract:** United Nations involvement in Haiti started in 1990, when the United Nations Observer Group for the Verification of the Elections in Haiti (ONUVEH) observed the elections during the preparation process.

As the political situation worsened after 1991, a joint United Nations- OAS International Civilian Mission in Haiti (MICIVIH) was deployed in Haiti in February 1993.

The first United Nations peacekeeping operation in the country—the United Nations Mission in Haiti (UNMIH), was organized in September same year.

Between 1994 and 2017, a series of United Nations peacekeeping missions succeeded in Haiti. In April 2017, the Council decided in resolution 2350 (2017) that the UN Stabilization Mission in Haiti (MINUSTAH) would close on 15 October 2017, transforming in a smaller structure, having the role to assist the local authorities in reconstructing the key institutions in Haiti.

We propose a diachronic approach of those missions, but also an efficiency-based one, in order to emphasize their importance and impact which changed the face of the country and modeled its social, economic and political landscape and shaped its identity.

## **The influence of war in Ukraine on EU's energy policy**

Nicoleta Lășan

*„Vasile Goldis” Western University of Arad*

**Abstract:** The war in Ukraine has dramatic humanitarian and economic consequences, not only for the parties involved but for the entire Europe. In terms of energy supplies, the war in Ukraine means higher prices for oil and gas for the members states of the European Union, as well as uncertainty in terms of sustainable delivery. The European Union is paying the price for the energy dependency on Russia, as 25% of its oil imports, 45% of its natural gas imports and 44% of its hard coal imports are coming from Russia. The war in Ukraine will reshape the EU's energy policy, accelerating the energy transition and focusing more on renewable energy sources. The paper focuses on the next steps on the short term and long term to be taken in order to ensure a more energy independent Europe.

## **Poor exercise of fundamental rights and freedoms within informal communities, groups of homeless people and beggars**

Adrian Toma

*„Vasile Goldis” Western University of Arad*

**Abstract:** For more than half of the 32 fundamental rights and freedoms provided by the Romanian Constitution, there are serious limits in terms of capacity to exercise, in the case of the lowest strata of society: homeless people, beggars and members of informal communities.

The continuous interaction of local police officers, social workers and medical staff with the respective category of people, revealed two types of restrictions:

- a) serious impairment of the capacity to exercise, by the impossibility of the state institutions to guarantee minimum conditions of manifestation. Field experience indicates that in the case of rights such as life and physical integrity, education, health care, prohibition of forced labor etc., the state has failed to create the logistical and procedural basis for their exercise to be adjusted to the specific living conditions of the state. this category of population;
- b) significant limits of the exercise capacity, as a result of the characteristics of the analyzed subjects (intellectual, patrimonial, of social insertion, level of education etc.). For rights such as the right to be elected, to own private property, to exercise economic freedom, to claim an abuse of a public authority etc., there is a precariousness of the expertise and logistics that these steps entail.

## **Labor migration in the EU. Romania in a European context**

Vendelin Francisc Glazer

*„Vasile Goldis” Western University of Arad*

**Abstract:** Migration plays an important role in contemporary social transformations. It is both a result of global change and an impetus for future changes in the states of origin, but also in the host ones. Access to employment in a Member State is a fundamental aspect of the free movement of persons within the European Union. This freedom includes the right of the person to move to another Member State in order to seek employment or to work there, either as a self-employed person or as an employee. From a political and economic point of view, the free movement of persons aims at creating a common labor market and promoting a citizenship of the European Union, by eliminating barriers in this field.

**Vasile Goldiș, forerunner of the idea of unity of European States  
in the years of the first world war**

Eugen Gagea

*„Vasile Goldis” Western University of Arad*

**Abstract:** In the years of the First World War, the leader from Arad, Vasile Goldiș, established himself as an important supporter of the idea of national unity of the European states. He was well acquainted with the problem of the nationalities of Central Europe, looking for solutions for the Romanians in the dualist monarchy. He considered the issue of Central European nationalities to be a global one, which could only be solved by reorganizing the world into nation-states, which would then unite into a supranational structure. During the war, Vasile Goldiș was the Romanian who militated for the formation of an international solidarity of the peoples through which peace in the world can be maintained. As early as 1917, the Arad politician anticipated the interwar and post-war organization of the world, and in 1918 he was an ardent supporter of Wilsonian ideas.

# The Impact of COVID-19 Pandemic on Teaching and Learning Methods

Cristian Bețe

*„Vasile Goldis” Western University of Arad*

**Abstract:** The COVID-19 Pandemic had a significant impact on the teaching and learning methods in the higher education institutions. This paper presents the case of "Vasile Goldis" Western University and the way the university responded to the challenges of this period. The massive shift to the use of the online education platforms represents only one of the most obvious consequences of the pandemics. The technical aspects had to be accompanied by new methods of teaching but also of learning.

## SECTION XI

### CALITATEA EDUCAȚIEI IN MILENIUL III QUALITY OF EDUCATION IN THE THIRD MILLENNIUM

#### **The educational climate of the school / class**

Viorica Haluca

*Emanuil Gojdu Hunedoara Economic High School*

**Abstract:** The school is an organization in which the climate is an essential variable that influences the quality of pedagogical activity as a whole, but especially the performance of teachers and students. The school climate has its own metabolism, which mediates the internal and external aspects, inter-conditioned (internalization of various external influences, their connection to the internal dimensions of the school).

## Well-being and learning

Carmen Disca

*Iancu de Hunedoara National College*

**Abstract:** Well-being is closely linked to learning and motivation. No one can be good at what he does if he is not in good shape. The contexts in which we live can stimulate or, on the contrary, damage our well-being. This is also true for the place where a child spends most of his time: school.

## **Integrated curriculum in romanian education**

Tiberiu Disca

*„Vasile Goldis” Western University of Arad*

**Abstract:** Lifelong learning is a viable solution to the challenges of 21st century society, but it is based on a person's knowledge of the education system. In order to meet the challenges of the contemporary world, students need to become literate / information literate, a phrase that means the ability to access, select, gather, critically evaluate and communicate information from different disciplines, and use them to solve problems, make decisions and create new ideas and personal meanings, to form skills to learn to learn

## Contemporary educational paradigms

Teodor Pătrăuță

*„Vasile Goldis” Western University of Arad*

**Abstract:** The increasing complexity of the problems of the contemporary world, these demands and challenges, on the one hand, and the exceptional virtues and resources of today's education, on the other hand, have led and continue to lead to rethinking, reconsideration and resizing in the conceptual, theoretical and especially action. , the practice of education, starting with the almost complete revision of the traditional notion of education.

## **Personality and success in education**

Livia Pătrăuță

*„Sava Brancovici” Technological High School Ineu*

**Abstract:** The human being is not born with personality, but becomes a personality. Birth creates the candidacy for the acquisition of this attribute, an acquisition that takes place over time under the influence of education and many other factors.

## **The Modern Approach in Human Resource Management**

Camelia Beșleagă

*Hunedoara County School Inspectorate*

**Abstract:** Human resource management necessarily requires an approach multidisciplinary issue. Thus, technical knowledge is required to design an organizational structure in accordance with the purpose and objectives of the organization, but also with the level of technical equipment and its size. Also for the activities of preparation of job descriptions and analysis of jobs in order to design the salary system knowledge in the field of technology must be used, but here they must be combined with those in the field of work and organizational psychology. And last but not least, the ergonomics are better close to the field of technical sciences and is generally treated by specialists in this field domain.

## **Human resources management - basic principles**

Daniela Bufnea

*Hunedoara County School Inspectorate*

**Abstract:** It can be stated that all the problems related to the process of conducting any activity, by economic, social or political nature, have in common the human factor. Regardless of nature activity, the human factor has a primary role, the level of efficiency being conditioned by its possibilities and interests.

The individual, through his structure, through feelings, mentality and self-awareness, is constitutes a biological entity that represents the basic variable in a system, being able to favor or inhibit actions, processes, or activities; is the only resource that, if not treated and duly motivated, will actively and consciously oppose the interests organization!

## **Human Resource Management - essence, purpose, components**

Claudia VasIU

*Hunedoara County School Inspectorate*

**Abstract:** Human Resource Management is the use-oriented complex of activities efficient use of human capital in order to achieve the objectives of the organization, simultaneously with ensuring the conditions that guarantee the satisfaction of the employees' needs and, implicitly, the motivation to be loyal to the organization to which they belong.

## **Didactics of geography. A current approach**

Carmen Dîscă

*Iancu de Hunedoara National College*

**Abstract:** Starting from its scientific specificity, geography is a science that relates to both the natural and social components of the Earth, its object of study also involving the interaction between man and his living environment. Hundreds, thousands or maybe millions of books have been written about education, but it is not an exhausting subject. The geography teacher must be constantly updated both methodically and scientifically.

## Modern kindergarten management

Adriana Stângă

*„Dumbrava Minunată” Kindergarten Hunedoara*

**Abstract:** We set out to create the best possible conditions for education and instruction. In each room, according to the new requirements, the activity is carried out on centers of interest. We strive to live up to the most demanding requirements, in line with European educational standards.

## Early education in Romania

Carmen Tepes

*Kindergarten with extended hours nr.1, Hunedoara*

**Abstract:** Early education (including pre-school education) has a positive effect on a child's abilities and future school career. Especially for children from very disadvantaged socio-economic backgrounds, in the sense that they progress intellectually, develop positive attitudes towards learning as well as the motivation to make a real effort in school in the future. On the other hand, it was found that education has a positive effect on children's intellectual and social abilities, regardless of their background, when preschools really promote quality, both in terms of physical environment and adult / child interactions.

## **Strategies for preventing and eliminating school failure in primary education**

Vendelin Francisc Glazer

*„Vasile Goldis” Western University of Arad*

**Abstract:** Failure or failure is a process in which the student gradually turns behind his / her classmates and experiences a disconnection from compulsory education, which eventually leads to absenteeism and, later, to school dropout before graduating from a class or of a cycle. This process can take place at any time, but it takes place more frequently during the "transition" periods, such as the transition from primary to secondary school or from gymnasium to high school.

## **Innovative approaches in adult education and training**

Vasile-Ioan Pop

*„Vasile Goldis” Western University of Arad*

**Abstract:** Summary: Adult learning and education are central components of lifelong learning. They cover all forms of teaching and learning that aim to ensure the involvement of adults in the acquisition of the necessary knowledge and skills in society and in the labor market. The article presents current ways to motivate (re) entry of adults into the field of education: the replacement of failed or neglected primary and / or secondary education; development of basic educational skills: literacy and arithmetic operations; education for personal development and recreation, etc. Adult education and learning generate broader economic, social and cultural benefits, recognized in particular in the 2030 Agenda for Sustainable Development, with many goals for adult education, to which all states have committed themselves through educational policies.

## **The quality of education in the modern society**

Simona Macarie

*„Vasile Goldis” Western University of Arad*

**Abstract:** The quality of education represents a collection of characteristics of the study program and its provider, through which the beneficiaries' expectations are satisfied, as well as the settled quality standards. The manifestation of education's quality is realized in virtue of certain actions meant to develop the elaboration, planification and implementation capacities of the learning institutions in order to enhance the trust of the beneficiaries that the providing institution satisfies the quality standards.

Education's quality represents a permanent priority for any institution, organization or education unit, including their employees. The excellence of the teaching and learning process contributes to students' personal development, to the overall status of the society. The improvement of education's quality implies continuous evaluation, analysis and corrective action from the education provider, based on the selection and adaptation of the right measures, as well as choosing and applying the most relevant standards of reference.

## **The computerization of education midway necessity and efficiency.**

Horea Sebastian Macarie

*Sports Highschool Satu Mare*

**Abstract:** The involvement of technology in the learning process implies the adaptation of a coherent strategy manifested by team work, by ensuring the right learning conditions such as: accommodating the education to the current and future society's necessities so that the education becomes an active factor for the sustainable development, for the continuous modernization of the education system, and for the elimination of the shortfall between domain knowledge, school and information technology progress. The most outstanding benefit of combining learning with technology consists in the active participation of the students in the teaching-learning process which allows their intellectual development to be adapted to their working pattern.

Generally, the advancement and modernization of the didactic methodology represents an endless process determined by the accelerated changes in the society, the growing demand for education, the learning' exigencies and its finalities, the debate on the teaching process complexity, the gains from the education sciences and the enlargement of science role in everyday life.

## Education in pandemic times

Luiza Pascal

*Matei Corvin Technological High School*

**Abstract:** Although there is a diverse range of views, classical education is the most effective and must be adapted to current conditions to minimize the risk of disease, whether we are talking about the current pandemic or others that will follow. Of course, the primary and secondary school students will be scheduled in the first part of the day for the educational activity in the school.

## **Preparatory class - advantages and disadvantages**

Negrea Mihaela

*Matei Corvin Technological High School, Hunedoara*

**Abstract:** Advantages: - if you start school earlier, you can finish your studies earlier and this means that you can benefit from the benefits of your education in advance. - studies have shown that early education is essential in later school success, and in Romania we could add that, given that many families are not involved in the education of their own children, it is better for them to have an education from a young age (in other words, better in kindergarten than at home in front of the TV). - Parents began to see the benefits of introducing the preparatory class in compulsory primary education, and the initial revolt subsided.

## Non-formal education in the context of the pandemic COVID-19

Constantin Marius Aradan

*„Vasile Goldis” Western University of Arad*

**Abstract:** The article addresses a field that becomes increasingly more researched and more demanded, that of non-formal education in the era of COVID-19 pandemic, which is analysed based on specialised studies. With the globalisation and development of the era of knowledge and information, the theoretical and practical research contributes to the development of conceptual perspectives, with practical approaches in different contexts, including that of the Romania, where the status of non-formal education is being clarified and formalised. The author conducts a multi-aspectual analysis of non-formal education, highlighting its role in opposition to formal education.

**Keywords:** non-formal education, formal education, conceptualisation, definitions, concept, international context, beneficiary.

## **Mentoring activities in pandemic times**

Andreea Feher

*Theoretical High School „A. M. Guttenbrunn ”Arad*

**Abstract:** Mentoring has proven to be an effective way to exchange knowledge to develop children's social and emotional skills, to promote integration, giving young people the tools and support they need through a structured program

## Competence in mentoring

Cosmin Colțun

*"Moise Nicoară" National College Arad*

**Abstract:** Mentoring is a process in which a competent person provides guidance, support and tips to encourage another person to develop their skills and be better endowed with life skills, for better results. In a program such as pedagogical practice, mentors create a supportive environment in which appropriate activities are implemented for to encourage disciples / beneficiaries to apply critical thinking, to develop self-efficacy and improve their social skills.

## **Personal relationship between mentor and beneficiary**

Ligia Iercan

*"Moise Nicoară" National College Arad*

**Abstract:**The most important factor in a successful mentoring activity is the personal relationship between mentor and beneficiary. The purpose of the mentoring program was to improve the effectiveness of this personal relationship by supporting activities and opportunities so that students can develop their social skills through activities which further promoted social integration and also eliminated gaps in preparation.

## **Mentor qualities**

Alina Popescu

*"Moise Nicoară" National College Arad*

### **Abstract: Mentor:**

He is a loyal friend and advisor.

He is a facilitator, guide, coach and model.

He is the one who can be entrusted with the care and education of someone else.

Has the knowledge or experience to stimulate interest and development

someone else's life skills.

He is willing to give what he knows without expecting reciprocity or remuneration.

Understands that mentoring means volunteering consistently to give someone guidance and support.

Understands that mentoring means developing personal skills and ability

to find and keep a job.

Is receptive to developing the ability of the disciple / beneficiary to solve

problem-solving, decision-making and confidence through new opportunities.

Can create a strong relationship with the disciple / beneficiary and, in turn, can

use this relationship as a catalyst for positive change and development.

## **The benefits of mentoring**

Adriana Filip

*"Moise Nicoară" National College Arad*

**Abstract:** The benefits of mentoring are not one-sided; both the mentor and the disciples have a lot of gained from this experience.

## **Pedagogical practice planning**

Brigitte Waldwogel

*"Moise Nicoară" National College Arad*

**Abstract:**In order to design effective mentoring programs, tailored to the needs of the context, it is important that the program parameters are defined from the beginning. For the project pedagogical practice, this was done during the initial meeting, which brought together all within the project.

## **The modern approach to the educational space in kindergarten,**

Lorena Urîtu

*Kindergarten PP 1 Hunedoara*

**Abstract:**The current trends in the arrangement of the educational space in kindergarten are in areas of stimulation. This arrangement gives preschoolers the opportunity to choose for themselves where, with what, with whom and how much they play, gives them the opportunity to assume certain responsibilities for the choices made, and at the same time they will not feel compelled to do an unwanted activity. . This creates their independence and self-confidence, leading to a positive self-image. Areas are educational spaces that stimulate children's development through the play proposals it offers them.

## SECTION XII

### ACTUALITĂȚI IN CERCETAREA BIOMEDICALĂ CURRENT AFFAIRS IN BIOMEDICAL RESEARCH

Sesiune pentru studenții doctoranzi din Domeniul Medicină și  
Biologie/ Session for doctoral students in the domains of  
Medicine and Biology

#### **Pulmonary arterial hypertension in thyroid disorders**

Delia Panduru, Radu Lala, Maria Pușchiță

*„Vasile Goldis” Western University of Arad*

**Abstract:** The existent data in the international speciality literature revealed a significantly high prevalence of thyroid disorders, mainly of those autoimmune, in patients with pulmonary arterial hypertension (PAH), and, conversely, an high prevalence of PAH in patients with hyperthyroidism or Hashimoto autoimmune thyroiditis with euthyroidism. The studies carried out until the present did not identify the pathogenetic mechanism of the occurrence of PAH in patients with thyroid disorders.

The prompt normalization of PAH appeared in context of the hyperthyroidism, after adequate treatment of the hyperthyroidism and after obtaining euthyroidism, has been proven after many clinical trials.

There are limited data in the speciality literature about comparative assessment of the effectiveness of the different therapeutic methods of hyperthyroidism (the treatment with antithyroid drugs, surgical

treatment and radioactive iodine treatment) in reduction of pulmonary pressure.

At the moment of diagnosis of hyperthyroidism an significant percent of patients presented high values of NT-proBNP. After obtaining euthyroidism with antithyroid drugs, pulmonary hypertension has normalized in majority of patients and NT-proBNP decreased in an small percent of patients. The levels of NT-proBNP are well correlated with severity and duration of cardiovascular disfunction and this may be an objectif tool for monitorization of cardiac disfunction in hyperthyroidism. Revers, the value of NT-proBNP is lower in patients with hypothyroidism and increase after obtaining euthyroidism with treatment with thyroid hormones.

## **Toxoplasma gondii Infection in Patients with Psychiatric Disorders from Western Romania**

Sebastian Grada

*„Vasile Goldis” Western University of Arad*

**Abstract:** High rates of infection with *Toxoplasma gondii* were found in psychiatric patients globally. In this study, we assessed for the first time the prevalence of *T. gondii* infection in psychiatric patients and healthy individuals with no known psychiatric disorders in Western Romania. **Materials and Methods:** The presence of specific IgG anti-*T. gondii* antibodies was evaluated in 308 psychiatric patients and 296 control subjects using a chemiluminescence assay. **Results:** Overall, the seroprevalence of IgG antibodies was higher in psychiatric patients (67.86%; 209/308), compared with the control group (54.05%; 160/296) ( $p < 0.001$ ). Our results revealed a significantly higher prevalence of *T. gondii* antibodies among patients with schizophrenia (69.77%), organic (personality and behaviour) disorders (76.74%), and mental disorders concerning alcohol abuse (84.62%), compared with the control group ( $p = 0.009$ ,  $p = 0.005$ ,  $p = 0.043$ , respectively). **Conclusions:** This study provides new and important information on the seroprevalence of *T. gondii* in Romanian psychiatric patients and may serve for further scientific research regarding the status of *T. gondii* infection in patients with psychiatric disorders

## Hepatitis C Clearance by Direct-Acting Antivirals

Oana Koppandi, Eftimie Miuțescu, Dana Iovănescu, Amelia Uzum,  
Oana Maria Jigau, Andreea Iulia Papoi, Sebastian Grada

*„Vasile Goldis” Western University of Arad*

**Abstract:** Background and Aim: Hepatitis C virus (HCV) infection is one of the main causes of chronic liver disease worldwide. The development and clinical implementation of direct-acting antivirals (DAAs) has revolutionized the treatment of chronic hepatitis C. DAA treatment is safe, with little or no side effects, and best of all, it achieves cure rates of up to 99% of cases. We aimed to analyze the effect of HCV eradication by direct-acting antiviral (DAA) agents.

Methods: 29 patients with chronic HCV who were treated with DAAs in our clinic, were screened and enrolled in the study. Biochemical, imaging, clinical and virological data, as well as noninvasive liver fibrosis parameters, were prospectively collected at baseline and at the end of treatment.

Results: 28 of 29 patients achieved sustained virologic response (SVR). The prevalence of HBV co-infection or occult infection was 13.7%. The prevalence of liver fibrosis in the group, measured by noninvasive methods, ranged from F0 to F4 with a higher percentage of patients with F2 (31%). In some cases, liver fibrosis decreased after the achievement of SVR. Advanced fibrosis was seen in 27% of the patients at the time of initiation of the treatment, but only patients with compensated cirrhosis were included in the study. There were no significant side effects noted in the group and none of the patients interrupted the treatment.

Conclusion: We had a high rate of eradication of HCV in the studied group, but also a quite high incidence of association with HBV infection. The treatment was well tolerated by the patients, and some of them achieved regression of fibrosis and improvement in biochemical parameters.

## **Corelation between Pentraxin 3 (PTX 3) and diabetic polineuropathy**

Andrei Ardelean

*„Vasile Goldis” Western University of Arad*

**Abstract:** Diabetes is a chronic disease, characterized by increased blood glucose levels. Diabetic foot refers to all the changes caused by diabetes mellitus in the lower members. In the most advanced stages, diabetic gangrene can be reached, most commonly located at the level of one or more fingers and can extend to the entire leg. Deep tissue infection, ulceration and / or destruction can be associated with neurological abnormalities and peripheral vascular disease to varying degrees in the lower limbs in people with diabetes. It is a "concept" and not a diagnosis itself, because it involves the diagnosis and therapeutic approach of each component element (diabetic polyneuropathy, obliterating arteriopathy, etc.).  
Keywords: Pentraxin 3, diabetic gangrene, diabetes mellitus, diabetic polineuropathy

## **Particular aspects in the onset of personality disorders. Case presentation**

Robert Almasan, Afilon Jompan

*„Vasile Goldis” Western University of Arad*

**Abstract:** Introduction: A personality disorder is an enduring pattern of inner experience and behavior that deviates markedly from the expectations of the individual's culture, is pervasive and inflexible, has an onset in adolescence or early adulthood, is stable over time, and leads to distress or impairment. Around 10% of individuals worldwide suffer from a personality disorder. With prevalence rates of up to 24% in primary care and more than 30% amongst psychiatric patients, personality disorders, as a group, range amongst the most frequent disorders treated by psychiatrists and psychotherapists.

Case presentation: The patient is a 21 year old single male who presented for the first time to his local mental health center. His accusations included identity disorders, insomnia, emotional lability, impulsivity, heteroaggression, recurrent suicidal thoughts, feelings of inner emptiness, intrapsychic tension, irritability, increased anxiety, poor self-control even to the point of cutting the forearm with a razor; the reasons for these feelings and actions he could not identify. There was no history of any previous psychiatric contact. During the two weeks of hospitalization, following psychodiagnostic evaluations, anamnestic, clinical data and paraclinical examinations, a borderline personality disorder was detected.

Treatment: Psychiatric drug treatment was initiated to stabilize psychodynamics and behavior to ensure patient integrity. The patient also took part in group psychotherapy but also in the individual ones within the hospital, which led to a favorable evolution.

Result: Given that the patient was in a psychiatric service for the first time, the response to treatment was adequate, the case having a slow but favorable evolution with the partial amendment of the symptomatology to the point where he even gained a partial insight on the pathology during the two weeks of hospitalization. However, the management of the case was a difficult one, in the first days of

hospitalization the patient was sometimes uncooperative, demanding, frustrated and irritable.

Discussions: Numerous symptoms of the patient and his behavior made us focus on a borderline personality disorder, given that this case meets 7 of the 9 diagnostic criteria referring to DSM V. Even the increased prevalence of this disorder is not negligible, because according to some statistics it can be even 6% among the general population and about 20% among patients admitted to psychiatric wards. Recognizing behaviors that deviates from normal norms, cardinal signs of pathology, seeking specialized help as soon as possible, and initiating treatment with both medication and psychotherapy can drastically reduce dramatic events that may occur due to this disorder.

Conclusions: We can consider this case a therapeutic success, especially if we refer to the rather short duration of hospitalization, with all the costs involved, the patient's health visibly improved both physically and especially mentally, gaining insight into the pathology which gives us hope about the patients compliance with treatment; and last but not least, the satisfaction of such a case, which could at any time get out of control in an irreversible manner, could even result in a successful suicide attempt, but which, due to multiple psychopharmacological and psychotherapeutical interventions, resulted in the patient being discharged safely for both him and society.

## **Analysis of deliveries from juvenile mothers during COVID 19 pandemic**

Florin Mihai Sandor<sup>1</sup>, Roxana Furău<sup>1</sup>, Cris Precup<sup>1</sup>, Casiana Boru-Stănescu<sup>1</sup>, Petar Arsenijevic<sup>2</sup>, Dejana Rakic<sup>2</sup>, Milos Popadic<sup>2</sup>, Cristian Furău<sup>1</sup>

<sup>1</sup>, „Vasile Goldis” Western University of Arad, <sup>2</sup>University of Kragujevac

**Abstract:** Deliveries during adolescence represent a major and a current problem of healthcare and social system. It is a growing phenomenon, spread globally, but if we refer to Romania, our country has the highest rates of underaged mothers in the European Union. The recent epidemiological context, has only further complicated the risks to young mothers in terms of the rate complications during pregnancy and during delivery, as well as the significant psychosocial impact, which is more difficult to demonstrate objectively. Our study is based on a retrospective analysis in cases of underaged mothers in Arad county, data received from Emergency Clinical County Hospital of Arad between 01.01.2020 – 31.12.2021, pointing out the negative influence that the SARS-COV-2 virus infection had on juvenil mothers, in the context of COVID 19 pandemic.

## **Importance of analgo-sedation in patients with severe pelvic and spine trauma during prehospital transport**

Florica Băgescu-Drugă (Pop)

*„Vasile Goldis” Western University of Arad, Emergency Arad  
County Hospital*

### **Abstract:**

**Background:** Recent changes in the treatment of the traumatized patient focus on the treatment of pain to decrease the strong inflammatory response, which results in hypercoagulability, organ dysfunction, systemic inflammatory response, lung damage, brain injury, depression and post-traumatic stress disorder. Few scientific studies show pre-hospital use of painkillers, and under-treatment of pain is frequently reported. Based on these data, we conducted a prospective, randomized, interventional study to determine whether Propofol-associated Ketamine has advantages over the more commonly used Midazolam / Fentanyl combination in the emergency department and later during transport to patients with severe pelvic trauma and spine, thereby emphasizing the importance of analgesia in these patients, who are generally hemodynamically compromised. **Material and methods:** The study is performed on a sample of 154 patients with severe trauma to the pelvis and spine over a period of 30 months (January 2019 - June 2021). Patients were randomized 1: 1 to receive analgesia with Ketamine / Propofol (K / P, n = 77) or Fentanyl / Midazolam (F / M, n = 77). The following parameters were assessed: pain intensity using the numerical pain scale, pulse rate, respiratory rate, oxygen saturation, systolic blood pressure, state of consciousness, using the Glasgow Coma (GCS) score. The main outcome variable was the change in physiological severity score (PSS) and pain severity. The level of sedation was assessed by Ramsay sedation scores. All information was stored and processed using Microsoft® Excel® 2010 (Microsoft® Corporation, USA), which is the statistical study database. As statistical analysis methods we used the Comparison of means test (t-test) and the Comparison of proportions test using the MedCalc® medical statistics program version 12.2.1.0 (MedCalc®

Software, Mariakerke, Belgium). The p value  $<0.05$  proves a statistically significant difference between the studied groups. Results: Perceived pain, using the numerical scale for pain assessment, was significantly lower in the Ketamine / Propofol group than in the Fentanyl / Midazolam group ( $p <0.0001$ ). According to the Ramsay scale, patients had adequate sedation on average 3.1 (2 - 4) points in the Ketamine / Propofol group, compared to 5.5 (5 - 6) points, where the sedation was deeper with a significant difference between groups ( $p <0.0001$ ). Analgesia showed a significant improvement in the physiological severity score (PSS) ( $p <0.0001$ ) in the Ketamine / Propofol group. One patient experienced oxygen desaturation in the Ketamine / Propofol group compared to 16 patients in the Fentanyl / Midazolam group ( $p = 0.0003$ ). Conclusions: Co-administration of low-dose ketamine and propofol is a safe and useful technique in both the emergency department and pre-hospital, providing adequate sedation and analgesia, with a significantly lower frequency of oxygen desaturation as an adverse effect compared to the combination Fentanyl / Midazolam, which has a deeper level of analgesic according to the Ramsay score.

Keywords: severe pelvic trauma and spine, Ketamine/Propofol, Fentanyl/Midazolam, analgesia, sedation.

## **Congestion- the hallmark of heart failure and current diagnostic challenges**

Daniela Hoza Mocan, Ioan Radu Lala, Adina Pop Moldovan,

*„Vasile Goldis” Western University of Arad*

**Abstract:** Cardiovascular diseases are the most common cause of global mortality. Heart failure is the main cause of re-admission of elderly patients and is defined as a clinical syndrome manifested by symptoms and signs caused by functional or structural abnormalities, objectified by the increase in natriuretic peptides and signs of congestion (pulmonary or systemic).

Congestion is the pathognomonic pull of heart failure defined as the presence of signs and symptoms due to the accumulation of extracellular fluid. The underlying mechanism of congestion is due to volemic overloading, fluid redistribution, or both processes. Volemic overload is due to pump failure of the left ventricle, as well as retrograde overload (forward failure and backward failure). Forward failure consists in the impossibility of the left ventricle to ensure an adequate circulatory flow, which will have an important impact on the kidneys due to renal hypoperfusion and will materialize in the release of renin, angiotensin II, aldosterone, and finally will lead to the retention of water and sodium. Backward failure represents the belonging of congestion at the level of the venous bed, due to the transudation of the interstitial fluid, the increase of the retrograde pressure from the left ventricle to the left atrium, and its accumulation at the level of the pulmonary circulation and peripheral vessels. Volemic redistribution is due to peripheral vasoconstriction, since venous vasoconstriction favors venous return, with increased preload, and arterial vasoconstriction will cause the afterload to increase. Both mechanisms will lead to an increase in the intraventricular pressure, with an increase in the filling pressure that will also affect the pressure in the pulmonary capillaries and will cause congestion.

The current diagnostic challenges lie in the early diagnosis of heart failure and the subsequent optimal treatment. Clinical evaluation, accompanied by clinical scores and imaging investigations is

necessary, but cannot transcribe the diagnosis alone. The collection of paraclinical analyzes completes the picture having a great importance in the rapid management of heart failure. "Medicine of tomorrow" is aimed at the use of new biomarkers (CD 146, CEA 125, Adrenomedullin), less known than natriuretic peptides and routine analyzes (serum albumin, serum proteins, hemoglobin, hematocrit, urea, creatinine, ALAT, ASAT, GGT, LDH)

CD146 –cluster of differentiation (MCAM- Melanoma cell adhesion molecules) was discovered in 1987 in the membrane of human melanocytes and is localized at the level of intracellular junctions, at the level of the vascular endothelium, releasing into circulation in response to venous stretching, endothelial dysfunction, or the destruction of endothelial junctions. The roles of CD146 are multiple due to the fact that it can be found in several structures such as smooth muscle cells, pericarditis, mesenchymal stromal cells of the bone marrow, trophoblasts, or monocellular blood cells, and are therefore involved in angiogenesis, vascular permeability, or inflammation. High values are found both in heart failure and in the framework of neoplasia or inflammatory diseases.

Studies have concluded that this biomarker highlights endothelial dysfunction and systemic congestion, and its elevated values are accompanied by a negative prognosis of heart failure. The similar diagnostic utility of decompensated heart failure similar to NT-proBNP attracts attention in the future use of this biomarker with a promising benefit for both the patient and the medical system.

## **Topical negative pressure therapy in chronic wounds : an immunohistochemical analysis of vessel transformation**

Maria Hoară, Bogdan Totolici

*„Vasile Goldis” Western University of Arad*

**Abstract:** Topical negative pressure (TNP) therapy has become a well known treatment and an established method in the clinical management of complex wounds. The underlying physiological mechanism of TNP therapy is not yet completely understood. The aim of this prospective clinical study is to clarify the potential influence of TNP therapy on vessel proliferation and hypoxia in chronic wounds. TNP was applied on chronic wounds of 12 patients ( -125 mm Hg ) in order to prepare them for a plastic surgical reconstruction using free or pedicled flaps. Tissue biopsies were taken from the wound edge and wound bed at different time points. All samples were stained with haematoxylin and eosin and were detected hypoxia-induced factor-1 $\alpha$  and endothelial cell markers (CD31 and CD34 ) for the immunohistological analysis of inflammation, hypoxia and vessel proliferation. Between the day 6 and 9 of the treatment, a considerable increase in blood vessel density could be observed, reaching a maximum of approximately 200% in contrast to the vessel density prior to treatment. In addition, the number of hypoxic and inflammatory cells was found to be increased at particular time points. The study demonstrates a stimulating effect of vessel proliferation under TNP treatment. TNP appears to support neo-angiogenesis and transformation of chronic non-healing wounds in a physiological wound healing process when it is combined with surgical debridement. As shown by various clinical reports, this effect underlines the positive influence of TNP in the treatment of chronic wounds.

## **Paraclinical clinical considerations of post COVID-19 interstitial pneumonia**

Erika Simon Repolski

*„Vasile Goldis” Western University of Arad*

**Abstract:** COVID-19 is the infectious-contagious disease caused by the coronavirus of severe acute respiratory syndrome SARS-CoV2 appeared in China. From the current data, 40% of the infected population is asymptomatic, and of the 60% symptomatic only 15% make a form of disease that requires hospitalization and only 5% end up on intensive care requiring invasive or non-invasive mechanical ventilation. After more than two years of the pandemic we know that in some patients the symptomatology and paraclinical changes can persist even for several months after the acute phase of the disease, thus speaking of the post-COVID-19 syndrome. The exact prevalence of post COVID-19 syndrome is still unknown. Post-COVID interstitial pneumonitis should be classified in the large group of diffuse interstitial pneumopathies, a group represented by ca. 200 different diseases that have in common the diffuse damage of the lung parenchyma, It involves alterations of the pulmonary interstitial, epithelial or capillary slope of the alveoli. Although they have different causes, PID can have similar clinical, radiological, and functional manifestations. A proportion that varies between 10% and 25% of diffuse interstitial pneumopathies (PID) remain unclassified according to the last classification of interstitial pneumopathies. For the correct incarceration of post Covid-19 pneumopathy, many clinical trials are needed in the future, it is currently not yet clear whether post-COVID-19 lung lesions tend towards resorption or evolve to permanent fibrosing lesions. Diagnosis of PID is made in two stages. The first stage is represented by the diagnosis of "interstitial syndrome", with common clinical, radiological, and functional characters. The second stage is the etiological diagnosis. Risk factors for the development of post-COVID interstitial pneumonitis would be old age, clinical severity of acute diseases including associated comorbidities such as

high blood pressure, diabetes mellitus, increased serum LDH levels, lymphopenia, prolonged stay at the ICU.

Key words: diffuse interstitial pneumonitis, post COVID-19 syndrome

## **Prevalence of anemia in the elderly**

Daniel Papiu, Afilon Jompan, Coralia Cotoraci, Alciona Sasu,  
Alexandra Nădăban

*„Vasile Goldis” Western University of Arad*

**Abstract:** Anemia is an important public health care problem. This disorder is a common clinical condition in adults over 60 years of age. Anemia in the elderly is usually associated both with nutritional deficiencies and with the inflammation of chronic diseases. Purpose: to determine the prevalence of anemia in the elderly, the forms of severity and types of anemia. Method: the design – descriptive transversal study, on a batch of 110 patients with ages over 60 years old from a primary health care physician’s cabinet, on the time span of year 2021. From the annual health review blood tests we observed the values of hemoglobin and the mean corpuscular volume. Results and analysis: the prevalence of anemia was 11,9%, predominantly in males with 18,2% compared to females with 9,1%. In regards to the severity forms of anemia and subtypes, it was revealed the predominance of the mild form with 92,3%, and normocytic anemia with 76,9%. Conclusions: 1.The prevalence of anemia in the elderly is similar to that from other studies for developed countries. 2.The prevalence of anemia in men was higher than in women. 3. The bulk of the cases of anemia were the mild forms and normocytic.

## **Incretins drugs in diabetes and Covid-19 infection**

**Abstract:**It is well known fact that poorly controlled hyperglycemia impairs the immune response and worsens the clinical course of infections in all forms of diabetes.

Diabetes is associated with increased Covid-19 severity and mortality. Incretins drugs currently used as glucose lowering agents may have the potential to exert positive pleiotropic effect on inflammatory diseases, in addition to their effects on glucose metabolism.

Our data suggested that preadmission use of Glucagon like peptid-1 receptor agonist was associated with improve inflammatory status and reduction in spitalization rate in patients with DM and moderate forms of Covid-19 infections.

The human dipeptidyl peptidase-4(DPP-4) enzyme receptor may be a functional target for the spike proteins of acute respiratory syndrom( SARS COV-2 infection). Regardless of the viral strain coronavirus infection are counteracted by submucosal mast cells of the respiratory tract and endothelial transmigration is under the control of the stromal derived factor-1 (SDF-1), wich is cleaved and inactivated by DPP-4.

So, the use of DPP-4 inhibitors could be a potential protective strategy against Covid-19 manifestatios or downregulation of DPP-4 activity and cytotoxic mediators release can aggravete the clinical cours of the disease?

### **Assessment of mesenchymal stem cells' interaction with magnetic gelatin-based scaffolds**

Alexandra Dobranici<sup>1</sup>, Aida Şelaru<sup>1</sup>, Elena Olăreţ<sup>2</sup>, Izabela Stancu<sup>2</sup>,  
Marieta Costache<sup>1</sup>, Sorina Dinescu<sup>1</sup>

<sup>1</sup> Faculty of Biology, University of Bucharest, <sup>2</sup> APMG, University  
Politehnica of Bucharest

**Abstract:** Magnetic biomaterials are currently investigated as potential scaffolds to support nerve regeneration, as it was proved magnetic stimulation has favorable effects on neuronal differentiation of stem cells. Additionally, the use of human adipose derived stem cells (hASCs) has emerged as a promising approach for nervous tissue reconstruction, as they can differentiate into cells originating from the ectoderm, such as neurons or glial cells. Therefore, we aimed to assess hASCs interaction with gelatin-based scaffolds enriched with magnetic nanoparticles (MNPs), in terms of in vitro cytocompatibility and ability to support cells' growth and proliferation. Scaffolds containing low concentrations of MNPs, 0-2%, were generated through electrospinning technique, seeded with hASCs and maintained for up to one week in standard culture conditions. MTT assay was used to investigate cell viability and proliferation, while scaffolds' cytotoxic profile was assessed based on quantification of lactic dehydrogenase (LDH) release in culture medium. Live/Dead staining allowed the observation of both live and dead cells in contact with magnetic scaffolds, while cytoskeleton and focal adhesion distribution was investigated through immunolabeling and confocal microscopy. MTT assay results and Live/Dead staining indicated beneficial effects of magnetic materials on cells viability and proliferation, proportional to the increase of MNPs concentration. Moreover, all tested scaffolds didn't induce any significant cytotoxic effects towards hASC for up to seven days of in vitro culture. Cytoskeleton and focal adhesion investigation revealed an elongated shape of actin microfilaments and emphasized paxillin distribution, indicating favorable effects of magnetic materials. Thus, scaffolds enriched with small concentrations of MNPs display good interaction with hASC culture and could be utilized in further studies for nervous tissue regeneration. This work was supported by PN-III-P1-1.1-TE-2019-1191/MAGNIFICENT grant.



**Trauma and COVID 19 study in the orthopedics department of  
Arad county hospital 2020-2022**

Paul Deme, Giada Baroni, Dan Fruja, Alexandru Pop, Roland  
Fazakas

*„Vasile Goldis” Western University of Arad*

**Abstract:**In the last 2 years COVID 19 has dominated all medical fields and it has represented a primary concern of every medical department in the world. The aim of this study is to emphasize the experience of Arad county hospital's department of ortophedics of treating trauma patients infected with COVID 19. Treating COVID 19 infected trauma patients has its challenges from the difficulty of choosing the right moment for surgical procedure when it is needed, the delicate ballance between trauma treatment and COVID 19 treatment and choosing the right course of action for each patient. In the last 2 years our department has treated COVID 19 infected trauma patients with various fractures, lung damage scores and ages. Treating an COVID 19 trauma patient requires a special attention concerning epidemiological, pulmonary and surgical matters.

**Non-alcoholic fatty liver disease and metabolic syndrome.  
Correlation between the degree of hepatic steatosis and  
dyslipidemia in patients with type 2 diabetes mellitus**

Andreea Iulia Papoi, Oana-Maria Jigău, Sebastian Grada, Oana Koppandi, Florinel Cozma, Amelia Uzum, Dana Iovănescu, Eftimie Miuțescu

*„Vasile Goldis” Western University of Arad*

**Abstract: Introduction.** Non-alcoholic fatty liver disease (NAFLD) is considered the hepatic expression of the metabolic syndrome, being in a close relationship with hypercholesterolemia and hypertriglyceridemia.

**Aim.** The purpose of this study was to determine the correlation between hypertriglyceridemia, hypercholesterolemia and the degree of hepatic steatosis in patients with type 2 diabetes mellitus and cardiovascular risk.

**Methods.** A retrospective study was conducted on 300 patients with type 2 diabetes mellitus. We followed lipid profile, anthropometric indices, measurement of blood pressure, abdominal ultrasonography to assess the degree of hepatic steatosis.

**Results.** The group of 300 subjects consisted of 203 (67.66%) women and 97 (32.33%) men. In terms of the provenance environment, 175 (58.33%) of the subjects belonged to the urban environment and 125 (41.66%) subjects to the rural environment. The average age was  $55 \pm 10.5$  years, ranging from 35 to 88 years. More than 3/4 of the subjects had grade 2 hepatic steatosis, of which over 80% had hypercholesterolemia and hypertriglyceridemia in the absence of lipid-lowering treatment. Also, these parameters are closely related to the presence of high cardiovascular risk, with over

75% of the subjects in this category showing grade 2 high blood pressure and over 45% grade 1 obesity.

**Conclusions.** We can state that there is a directly proportional relationship between the presence of non-alcoholic fatty liver disease and the existence of dyslipidemia and cardiovascular risk.

**Key words:** fatty liver, diabetes, dyslipidemia, obesity.

## **Studies on the cellular and molecular mechanisms involved in post-COVID-19 pulmonary fibrogenesis**

Daniela-Adriana Oatiş

*„Vasile Goldis” Western University of Arad*

**Abstract:** Pulmonary fibrosis is a chronic lung disease that is characterized by the excess accumulation of the extracellular matrix (ECM) and the consequence of remodeling of the pulmonary architecture. Fibrosis occurs in response to aggressive stimuli for the tissue and is a disturbance of the balance between the proliferation / apoptosis of fibroblasts and the accumulation / degradation of the extracellular matrix, in other words it is the consequence between the lesion and the tissue response to the lesion.

The post-COVID-19 pulmonary fibrosis process is related to the pro-inflammatory activity of macrophages. Secretion of Gal-3(galectin-3) by macrophages positively regulates receptors on fibroblasts and myofibroblasts for TGF- $\beta$  (transformer growth factor). The TGF- $\beta$  pathway, in turn, activates fibroblasts in myofibroblasts, initiating the formation of granulation tissue (by deposition of collagen) that is eventually reshaped to a fibrous scar.

Galectins could have 3 key roles in the progression of COVID-19. The first is determined by the phase of hyperinflammation related to macrophages and leading to cytokine storm, in the vast majority of severe cases of the disease. Galectins are also involved in the mechanism of infection of the virus through the spike protein, but also in the mechanism of fibrosis, which correlates with the acute phase of diffuse alveolar damage, edema, hypoxia, and inflammatory response. So, Gal-3 could be a good prognosis marker for severe COVID-19, as increased plasma levels of Gal-3 can be a trigger for the cytokine storm phenomenon observed in patients with severe COVID-19.

The course of pulmonary fibrosis correlates with the inflammatory response to infection; thus, the mediators of inflammation initiate and determine the progression of fibrosis at the lung level. Profibrogenic mechanisms include: the production of proinflammatory cytokines, such as interleukin-6 (IL-6) and IL-8, the production of reactive oxygen species among infected alveolar

cells, and the activation of TGF- $\beta$  1 which, in turn, leads to the proliferation, migration and differentiation of fibroblasts to myofibroblasts with the resulting deposition of collagen and fibronectin.

The aim of the research is to evaluate the cellular and molecular mechanisms of post-COVID-19 pulmonary fibrosis, the understanding of the proinflammatory pathways and profibrotic mediators underlying pulmonary fibrosis, as well as the role of galectins involved in pulmonary fibrosis.

The criteria for inclusion in the study were: post-COVID-19 patients in whom they will be diagnosed with idiopathic pulmonary fibrosis by CT by the pulmonologist. The progression of pulmonary fibrosis will be comparatively evaluated between two paraclinical determinations by samples of: bronchoalveolar lavage, blood, and biopsies. Patient follow-up period: 1 year.

Key words: pulmonary fibrosis, COVID-19, Gal-3, TGF- $\beta$

## **Monitoring the incidence of platelets derived from platelets in oncohematological pathologies**

Alexandra Nădăban Alexa, Coralia-Adina Cotoraci, Eftimie Miuțescu, Alciona Sasu, Daniel-Horațiu Papiu

*„Vasile Goldis” Western University of Arad*

**Abstract:** Interest in extracellular vesicles derived from cells and their physiological and pathological implications is constantly growing. Microvesicles, also known as microparticles, are small extracellular vesicles released by cells in response to activation or apoptosis.

They are extracellular vesicles of heterogeneous size, ranging from 100 nm to 1  $\mu$ m in diameter, discarded by living cells during the external budding of the plasma membrane, capturing the contents of the local cytosol in a seemingly stochastic manner.

Platelets play significant and varied roles in cancer progression, as detailed in this series of analyses, through direct interactions with cancer cells and long-range indirect interactions mediated by the release of platelets.

Microvesicles (MV; also called microparticles) released from activated platelets have emerged as major contributors to the platelet-cancer link. Platelet-derived MV (PMV) interactions with cancer cells can promote disease progression through multiple mechanisms, but PMVs also harbor antitumor functions. This complex relationship derives from the binding of PMVs to both cancer cells and untransformed cells in the tumor microenvironment and the transfer of platelet-derived content to the target cell, each of which can have stimulated or modulating effects. Their characterization revealed a heterogeneous charge that includes a set of adhesion molecules. Similar to platelets, PMVs are also involved in thrombosis by supporting the coagulation cascade. Circulatory PMV levels are altered during several manifestations of the disease, such as coagulation disorders, rheumatoid arthritis, systemic lupus erythematosus, cancers, cardiovascular diseases, and infections, indicating their potential contribution to the disease and their development as a biomarker.

According to studies, PMVs emerged as important contributors, as well as markers, of the delicate balance between health and disease. They can have on the one hand, beneficial effects by supporting the repair and regeneration of tissues, as well as hemostasis, but they can be, on the other hand, a pro-coagulant promoter that leads to thrombotic events observed in the context of cancer. PMVs can act as a direct tumor growth amplifier by releasing potent growth factors into the tumor micro-environment. Tumor grafting can also be stimulated by pro-angiogenic potentials of platelet growth factors released by PMV.

It has been demonstrated that PMP's, through their pro-inflammatory and immunomodulatory functions, can also exert an indirect role in the metastatic process in several stages, helping malignant cells to get rid of immunological surveillance. The possible harmful effect of transfusions in cancer patients has been debated for several years and the role played by PMP present in blood products receives special attention, given their tendency to trigger thrombosis and support tumors. Intimate PMP-tumor diaphonia can therefore result in pro-thrombotic states and a physiological state favorable to the growth, binding, and dissemination of the tumor.

Laboratory and experimental studies are needed to better reveal the contribution of PMP as coagulation promoters, as well as potential markers and targets for treating cancer.

## **Tetranectin as a Marker for the Prediction and Diagnosis of Heart Failure**

Paula Alexandra Hornea, Voicu Dașcău, Luminița Pilat, Maria Pușchiță

*„Vasile Goldis” Western University of Arad*

**Abstract:**Introduction Heart failure (HF) is a complex clinical syndrome resulting from structural and functional impairment of ventricular filling or blood ejection, most of which are due to impaired myocardial function, which varies widely. The prevalence of heart failure in the general population is 0.4-2%. The widely used classifications are those of NYHA and ACC / AHA.

Methods The available data on tetranectin from literature was consulted, and a synthesis was performed.

Results Screening strategies for HF require and include biomarkers to predict disease manifestation and for surveillance and management programs, including inflammation, oxidative stress and myocardial injury, extracellular matrix remodeling, neurohormones, myocyte stress, new myocardial remodeling, biomarkers, miscellaneous.

Tetranectin is a calcium-binding homotrimeric protein of the lectin type C protein family, composed of three identical and non-covalently linked subunits, of 20-23 kDa, being found primarily in serum and the extracellular matrix, as well as in the interstitium and perivascular space, during the development of tissue regeneration and cancer, with low levels in normal adult tissue. Higher levels of plasma tetranectin, which acts in tissue remodeling along with fibrin and plasminogen, have been inversely associated with the risk of atherosclerotic cardiovascular disease. Tetranectin has a significant correlation with collagen synthesis and degradation products and a higher value than BNP in chronic heart failure.

Conclusions Small studies to date require confirmation by large studies, with tetranectin being a promising marker for the evaluation of HF.

## **The crosstalk between paclitaxel and inflammasome in breast cancer mechanism**

Liliana-Roxana Balahura Stămat, Sorina Dinescu, Marieta Costache

*Faculty of Biology, University of Bucharest*

**Abstract:** Breast cancer is one of the most aggressive types of cancer due to excessive inflammation, heterogeneity and aggressivity of tumor microenvironment. Many treatment modalities are currently available, including mastectomy, radiotherapy, hormone therapy or targeted therapy. However, chemotherapy remains a fundamental component of multidisciplinary treatment, being essential for breast cancer remission and long-term survival. In this context, our study aimed to evaluate molecular effects of paclitaxel on inflammasome assembly and pyroptosis mechanisms in breast tumor cells in order to identify new efficient therapeutic strategies. To accomplish this study, tumor cells were put in contact with different concentration of paclitaxel and the half maximal inhibitory concentration (IC<sub>50</sub>) was determined. The expression of key markers of inflammasome and pyroptosis pathways were analyzed at gene and protein level, using qPCR and immunofluorescence techniques. The results showed that paclitaxel treatment has significantly reduced the viability of tumor cells. Regarding gene and protein expression, aberrant modulation of several markers involved in inflammasome assembly and pyroptosis initiation (NLRP3, ASC, caspase-1, IL-1 $\beta$ , IL-18, etc) was observed between breast cancer cell line and normal breast cell line, used as reference. These promising results highlighted the potential therapeutic strategies targeting tumor cells and their inflammatory profile in breast cancer. Even if multiple and complex challenges remain, the search is progressing in order to develop more efficient treatment therapies, to improve the patients' prognosis.



# Zilele Academice Arădene™

**IMPLICAȚI ÎN EDUCAȚIA TA!**  
**[www.zileleacademicearadene.ro](http://www.zileleacademicearadene.ro)**

**ISBN 978-973-664-920-2**

