

## PERSONAL INFORMATION



## Paunescu Virgil

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Gender Masculin | Date of birth 23/10/1961 | Nationality Romanian

## WORK EXPERIENCE

2003- present

## University Professor

„Victor Babes” University of Medicine and Pharmacy Timisoara, Department III – Functional Sciences, Discipline of Immunology and Allergology, Biology, Eftimie Murgu Square No. 2A, Timisoara 300041, Romania, [www.umft.ro](http://www.umft.ro)

Specific teaching activities

**Business or sector** Education

2013- present

## Primary Physician in Allergology and Clinical Immunology

“Pius Brinzeu” Clinical County Emergency Hospital Timisoara, 156 Liviu Rebreanu Street, Timisoara 300723; OncoGen Centre – Centre for Gene and Cellular Therapies in the Treatment of Cancer; [www.oncogen.ro](http://www.oncogen.ro)

Coordinator of OncoGen Center

**Business or sector** Research and Medical services

1994- present

## Primary Physician in Laboratory Medicine

“Pius Brinzeu” Clinical County Emergency Hospital Timisoara, 156 Liviu Rebreanu Street, Timisoara 300723; OncoGen Centre – Centre for Gene and Cellular Therapies in the Treatment of Cancer; [www.oncogen.ro](http://www.oncogen.ro)

Specific research activities

**Business or sector** Research and Medical services

## EDUCATION AND TRAINING

2013

## Primary MD certificate in Allergology and Clinical Immunology

Romanian Health Ministry, Allergology and Clinical Immunology

1998

## Competence Certificate for Management of Medical and Social Services

Romanian Health Ministry

1992-1996

## PhD in Medical Sciences

Romanian Ministry of Health, Normal and Pathological Physiology, “Victor Babes” University of Medicine and Pharmacy Timisoara, Eftimie Murgu Square No. 2A, Timisoara 300041, Romania

Specific research activities; 1996- public presentation of the doctoral thesis: „Studies related to CD5+ B cells”, Scientific Coordinator Prof. Dr. Francisc Schneider

## ADDITIONAL INFORMATION

A. Projects

**International – Project coordinator**

1. Cross-border cooperation to foster the resilience of clinical management in cancer patients by establishing best practices in personalized molecular-based diagnostics, treatment, and long-term care (**CROSSCARE**), **RORS00040 (2024-2026)**
2. Romanian-Hungarian cross-border project with a wider focus on diagnostics related to infertility, healthy pregnancy and newborn care (**ROHU-339**) (2021-2023)
3. Romania-Serbia Joint Initiative against Cancer in Cross-Border Region: Improved Diagnosis and Treatment of Malignant Tumors (**ROSECAN**) – coordinator of Romanian team, programme INTERREG – IPA CBC Romania–Serbia, code eMS RORS-193, contract no. 93360/28.07.2017 (2017 – 2021)
4. Development of pan-European standards and criteria for the inspection of blood establishments. (**EU-Blood-Inspection – EUBIS**) – coordinator of Romanian team, programme SANCO, contract no. 2006202 (2007-2009)
5. European Optimal Blood Use Project. (**EUOBUP**) – coordinator of Romanian team, programme SANCO, contract no. 2006209 (2007-2009)
6. Implementation of European quality management system network for blood safety (**EU-Q-Blood-SOP**) – coordinator of Romanian team , programme SANCO, contract no. 2004217 (2005-2007)
7. Adult mesenchymal stem cells engineering for connective tissue disorders. From the bench to the bed side (**GENOSTEM**) – coordinator of Romanian team , programme FP 6 – Health (Priority 1), contract no. LSHB-CT-2003-506161 (2004-2007)
8. Postgradual training in cellular therapies, Coordinator Romanian team, Leonardo da Vinci programme, contract no. RO/2003/PL91030 (2004)
9. European Quality Management System Network for Blood Safety (**EU-QMS-BLOODNET**) – Coordinator Romanian team, SANCO programme (2003-2006)

**National – Project director**

1. Center for Gene and Cellular Therapies in the Treatment of Cancer (**ONCOGEN**), programme POS-CCE, contract 852/14676, no. 261/28.09.2010 (competition A2-02.2.1.-2009-4) (2010-2015)
2. Development of New Technologies, Drugs and Vaccines for Prevention of SARS-CoV-2 (**DECODE**) – 11Sol/2020 (2020-2021)
3. Development of BIONanotechnologies based on Extracellular Vesicles, applied in early diagnostic, prognosis and therapy of atherosclerotic disease (**BIOVEA**) 83CCDI / 2018 (PN-III-P1-1.2-PCCDI-2017-0527) (2018-2021)
4. 3D Bioprinting Techniques for Building Tissue Constructs that Mimic the Tumor Microenvironment (**DeLIMIT**) 100PED/2017 (2017-2018)
5. Translating stem cell technologies to the conservation of highly endangered species (**CONSENS**), PNII-Partnerships No.120/2012 (2012-2016)
6. Tumor-associated fibroblasts as novel target in anti-tumor therapy – identification of origin, role and characteristic molecular markers, PNII-Ideii No. 318/2011 (2012-2016)
7. Studies regarding *in vitro* differentiation of mesenchymal stem cells towards adipocytes and validation of molecular factors involved in adipogenesis, PNII-Ideii No. 1748/2008 (2008-2011)
8. Genetic engineering of tumour stem cells for immunomodulation in cancers of non-viral origin (**ONCOSTEM**), PN II-Partnerships No. 41-019/2007 (2007-2010)
9. Stem cells therapy for vascular regeneration and reconstruction (**ANGIOSTEM**), CEEX- VIASAN, contract no. 44/2005 (2005-2008)
10. Development of innovative therapies in osteoarticular reconstruction (**CELLART**), CEEX- VIASAN, contract no. 45/2005 (2005-2008)
11. Nanocontrol and multifunctionality in materials, microlayers and shape memory architecture, CEEX - MATNANTECH, contract no. 7/2005 (2005-2008)
12. Potential role of coal-derived toxic compounds in the etiology of Balkan endemic nephropaty and other diseases, CEEX- PD, contract no. 3167/2005 (2005-2007)
13. Human hematopoietic stem cells – source for endothelial cells and for stents endothelisation, CNCSIS – type A, contract no. 1194/2004 (2004-2005)
14. Development of cellular therapy in diabetes mellitus (**BETASTEM**), VIASAN, contract no. 314/2004 (2004-2006)
15. Molecular targets in moder anti-tumor therapy, VIASAN, contract no. 481/2004 (2004-2006)
16. Mesenchymal stem cells processing for further use in diseases of the connective tissues. From experiment to clinical application, EU-RO CORINT, contract nr. 60/2004 (2004-2006)
17. Development of tissue bioengineering techniques for osteoarticular and myocardial reconstruction, MATNANTECH, 162(303)-2003 (2003-2005)

**International – team member**

1. RBC-engager for NK and T cell activation in cancer immunotherapy (**REAKT**), PNRR/2022/C9/MCID/I8, contract no. 760103/23.05.2023, cod proiect CF 227/29.11.2022 (2023-2026)
2. Innovative strategies for prevention, diagnosis and therapy of ragweed pollen induced respiratory diseases (**INSPIRED**), contract no. P\_37\_747 (2016-2020)
3. Chimeric antigen receptor targeted oncoimmunotherapy with Natural Killer cells (CAR-NK) (2016-2020) contract no. P\_37\_786 (2016 – 2020)
4. Regenerating Bone defects using New biomedical Engineering approaches (**REBORNE**), programme FP7, contract no. 241879 (2010-2014)
5. Cultivated Adult Stem Cells as Alternative for Damaged tissue (**CASCADE**), program FP7, contract no. FP7-223236 (2008-2011)
6. European Quality System for Tissue Banking, program SANCO, contract no. 2003209 (2004-2007)

**National – team member**

1. Optimizing the prevention methods for allergic patient management efficiency (**PREVALERG**), PN II – Partnerships programme, contract no. 41-011/2007 (2007-2010)
2. Innovative methods for inducing the immune tolerance to non-self phenotypes to avoid post-transplant rejects (**GREFACCEPT**), CEEX-PCD programme, contract no. 194-CEEX/PCD (2006-2008)
3. Research on isolation, cultivation and *in vitro* differentiation of pluripotent stem cells harvested from the inner ear, CEEX-ET programme, contract no. 80-CEEX/PCD (2006-2008)
4. Development of bio-orthopedics innovative techniques (**BIOART**), CEEX-VIASAN programme, contract no. 70/2006 (2006-2008)
5. Promotion of stem cell therapy research (**PRO-CELL-TERA**), CEEX programme Module III, contract no. 206/2006 (2006-2008)
6. Experimental studies on human mesenchymal stem cells transfected for developing an innovative therapeutic strategy of glioblastoma (**GLIOSTEMCELL**), CEEX programme Module I, contract no. 176/2006 (2006-2008)
7. Dendritic cells as immunotherapeutical vectors: modulation of their activity by the loading strategies, telomeres' length and telomerase activity, CEEX-RP programme, contract no. 3214/CEEX-RP (2005-2007)
8. **RONANOMED**- nanomedicine national integrated network, CEEX – MATNANTECH programme, contract no. 42/2005 (2005-2007)
9. Development of a regional bank of stem cells from umbilical cord blood and placenta for autologous and autogenous transplantation (**STEMBANK**), VIASAN programme, contract no. 308/2004 (2004-2006)
10. Development of tissue bioengineering techniques for myocardial reconstruction (**CARDIOSTEM**), VIASAN programme, contract no. 311/2004 (2004-2006)
11. Assessment of cardiovascular risk factors in youth. Good practice models in health education, VIASAN programme, contract no. 464/2004 (2004-2006)
12. Development of biotechnologies for dendritic cell vaccines in solid tumours immunotherapy (**DENDRITECH**), BIOTECH programme, contract no. 4610/2004 (2004-2006)
13. Development of non-conventional medical techniques for optimizing the culture of living tissues obtained by tissue bioengineering, VIASAN programme, contract no. 313/2004 (2004-2006)
14. Microsensors and actuators for micro-opto-electromechanical systems obtained by alloys nano-engineering, MATNANTECH programme, contract no. 255(408)/2004 (2004-2006)
15. Assessment of the efficiency of new classes of antileukotriene therapy. In vivo and in vitro experimental studies, CNCSIS – type A programme, contract no. 1190-2004 (2004-2005)

B. Honor and rewards

- Knight of the „Faithful Service” National Order (2002)
- Knight of the „Romanian Star” National Order (2009)
- Vicepresident of the Romanian Academy of Medical Sciences
- President of the Timis Branch of the Romanian Academy of Medical Sciences

C. Books

1. Gherghiceanu M, Alexandru N, Magda SL, Constantin A, Nemezc M, Filippi A, Ioghen OC, Ceafalan LC, Bojin F, Tanko G, **Paunescu V**, Vinereanu D, Stepien E, Georgescu A. Part One: Extracellular Vesicles as Valuable Players in Diabetic cardiovascular Diseases. In Extracellular vesicles and Their Importance in Human Health, Ed. IntechOpen, 2019; DOI: 10.5772/intechopen.85225.
2. Ceafalan LC, Ioghen OC, Marta DC, Constantin A, Alexandru N, Nemezc M, Tanko G, Filippi A, Magda SL, Bojin F, **Paunescu V**, Vinereanu D, Georgescu A, Gherghiceanu M. Part Two: Extracellular Vesicles as a Risk factor in Neurogenerative Diseases. In Extracellular Vesicles and Their Importance in Human Health, Ed. IntechOpen, 2019; DOI: 10.5772/intechopen.85225.
3. Pros and cons on magnetic nanoparticles use in biomedicine and biotechnologies applications. In Nanoparticles' Promises and Risks-Characterization, Manipulation and Potential Hazards to Humanity and Environment. Bojin F, **Paunescu V**, Springer Ed.2014, ISBN:978-3-319-11728-7.
4. Stem cells – an introductory overview, Tanasie G, Bojin F, Panaitescu C, **Paunescu V**. EUROBIT Ed., Timisoara 2011, ISBN 978-973-620-855-3

D. Memberships

- Federation of European Physiological Sciences

- Romanian Society of Physiological Sciences
- Romanian Society of Immunology
- European Society for Bone Marrow Transplantation
- European Association for Cancer Research

E. Patents

1. Ordodi LV, Dumitrel GA, Pană AM, Todea A, Mățiu-Iovan L, Ionel RC, Săndesc D, Bedreag OH, Păpurică M, Rogobete AF, Simion I, Motica A, Groapă DS, **Păunescu V**, Bojin MF, Gavriluc OI. Device for Reducing the Microbiological Load of the Air Exhaled by Mechanically Ventilated Patients, no. A/00280/2020. Application RO202000280A-2020-05-22; Publication RO134883A0-2021-04-29; Published as RO134883A0; RO134883A3; RO134883B1. State Office for Inventions and Trademarks (OSIM), Directorate of Patents and Technological Information. Espacenet: <https://worldwide.espacenet.com/patent/search/family/075617170/publication/RO134883A0>
2. Bojin MF, Gavriluc OI, Tănăsie G, Țațu CA, Panaitescu C, **Păunescu V**, Nedeia CE. Bispecific Selective CAR-T Cells for Treating Solid Tumours and Method for Preparing the Same, no. A/00704/2020. Application RO202000704A-2020-11-06; Publication RO135040A0-2021-06-30; Published as RO135040A0. State Office for Inventions and Trademarks (OSIM), Directorate of Patents and Technological Information; Espacenet: <https://worldwide.espacenet.com/patent/search/family/076527547/publication/RO135040A0>
3. Nedeia CE, **Păunescu V**, Gavriluc OI, Zogoreanu R, Ivan A, Cristea IM, Țațu CA, Bojin MF, Anghel SS. Cytotoxic Cells Carriers of Universal Chimeric Antigen Receptors Targeting Diverse and Multiple Antigens for Adoptive Therapy, no. A/00705/2020. Application RO202000705A-2020-11-06; Publication RO135043A0-2021-06-30; Published as RO135043A0. State Office for Inventions and Trademarks (OSIM), Directorate of Patents and Technological Information; Espacenet: <https://worldwide.espacenet.com/patent/search/family/076527545/publication/RO135043A0>
4. Panaitescu C, Kuan-Wei Chen, **Paunescu V**, Buzan MR. Kit and Method of Use for the Diagnosis of Ragweed Allergy. Application RO202000615A-2020-09-30; Publication RO134815A0-2021-03-30; Published as RO134815A0. State Office for Inventions and Trademarks (OSIM), Directorate of Patents and Technological Information. Espacenet: <https://worldwide.espacenet.com/patent/search/family/075136739/publication/RO134815A0>
5. Hutu I, Panaitescu C, Tanasie G, Gaspar CM, Zambori C, Tatu CS, Anghel S, Gavriluc OI, **Paunescu V**. Microbiological Box for Providing the Microclimate for Bacterial Films Growth and Development. Application RO202100557A-2021-09-16; Publication RO135526A0-2022-02-28; Published as RO135526A0. State Office for Inventions and Trademarks (OSIM), Directorate of Patents and Technological Information. Espacenet: <https://worldwide.espacenet.com/patent/search/family/080681558/publication/RO135526A0>
6. Bojin MF, Gavriluc OI, Ordodi VL, Salagean AO, **Tirziu A**, Panaitescu C, **Paunescu V**. Product and method Based on Synthetic Long Peptides for Preventing SARS-CoV-2 Infection. Application RO202200005A-2022-01-20; Publication RO135709A0-2020-05-30; Published as RO135709A0. State Office for Inventions and Trademarks (OSIM), Directorate of Patents and Technological Information. Espacenet: <https://worldwide.espacenet.com/patent/search/family/081751083/publication/RO135709A0>
7. Ordodi LV, Vatau D, Salinschi M, Olariu AF, Dumitrel GA, Pana AM, Vaszilcsin N, Dan ML, Matiu-Iovan L, Ionel RC, Udrea IA, Bonciog DD, Veres DA, Stanese CM, **Paunescu V**, Bojin MF, Gavriluc OI, Lukinich-Gruia AT, Negru S, Crisnic D, Frunza GV. Electrostatic device for measuring electrical voltage with optical indicator element. Application ROA202200635A; Published as RO137476A0. State Office for Inventions and Trademarks (OSIM), Directorate of Patents and Technological Information. Espacenet: <https://worldwide.espacenet.com/patent/search/family/086469571/publication/RO137476A0>

## Publications

1. Vîlcu A, Comarița IK, Constantin A, Alexandru N, Nemezc M, Safciuc F, Bojin F, Paunescu V, Georgescu A. Innovative Therapy with Stem Cell-Derived Extracellular Vesicles on Cardiac Hypertrophy in an Animal Model of Atherosclerosis; Elucidation of the Molecular Mechanisms Involved in the Repair Process. *Biomolecules*, 2025; 15(10); DOI:10.3390/biom15101424;
2. Pricop MA, Negrea A, Ciopec M, Pascu IB, Oprean C, Lukinich-Gruia AT, Cristea IM, Ivan A, Paunescu V, Tatu CA. Aristolochic Acid I Adsorption onto Activated Carbon: Kinetics, Equilibrium, and Thermodynamic Studies. *Processes* 2025; 13(11); DOI: 10.3390/pr13113397;
3. Ivan A, Pricop MA, Lukinich-Gruia AT, Cristea IM, Negrea A, Pascu IB, Calma CL, Paunescu A, Paunescu V, Tatu CA. Cellular Metabolic Responses to Copper Nanoparticles: Comparison Between Normal and Breast Cancer Cells. *International Journal of Molecular Sciences* 2025; 26 (21); DOI: 10.3390/ijms262110716;
4. Zimbru RI, Grijincu M, Tănăsie G, Zimbru EL, Bojin MF, Buzan MR, Tamas TP, Cotarcă MD, Harich OO, Pătrașcu R, Haidar L, Ciurariu E, Marin KC, **Paunescu V**, Panaitescu C. Breaking Barriers: The Detrimental Effects of Combined Ragweed and House Dust Mite Allergen Extract Exposure on the Bronchial Epithelium. *Appl. Sci.*, 2025; 15: 4113; DOI: 10.3390/app15084113;
5. Tirziu A, Bojin MF, Gavriluc OI, Buzan RM, Zbircea LE, Grijincu M, **Paunescu V**. Anti-Her2 CAR-NK92 Cells and Their Exosomes: Generation, Characterization, and selective Cytotoxicity against Her2-Positive tumor Cells. *International Journal of Molecular Sciences*, 2025; 26(15): 7648; DOI: 10.3390/ijms26157648;
6. Ivan A, Lukinich-Gruia AT, Cristea IM, Pricop MA, Calma CL, Paunescu A, Tatu CA, Galuscan A, **Paunescu V**. In Vitro Antioxidant Effects of Coenzyme Q10 on Cellular Metabolism in Aged Mesenchymal Stem Cells. *Applied Sciences Basel*, 2025; 15(5): 2783; DOI: 10.3390/app15052783
7. Tirziu A, Gavriluc O-I, Bojin M-F, **Paunescu V**. Exploring CAR-PBMCs: A novel strategy against EGFR-positive tumor cells. *Biomedicines* 2025; 13: 264; DOI: 10.3390/biomedicines13020264
8. Zimbru EL, Zimbru RI, Ordodi VL, Bojin FM, Crisnic D, andor M, Mirica SN, Hutu I, Tanasie G, Haidar L, Nistor D, Velcean L, **Paunescu V**, Panaitescu C. Rosuvastatin attenuates vascular dysfunction induced by high-fructose diets and allergic asthma in rats. *Nutrients*, 2024; 16(23): 4104; DOI: 10.3390/nu16234104
9. Ivan A, Lukinich-Gruia AT, Cristea IM, Pricop MA, Calma CL, Simina AG, Tatu CA, Galuscan A, **Paunescu V**. Quercetin and Mesenchymal Stem Cell Metabolism: A Comparative Analysis of Young and Senescent States. *Molecules*, 2024; 29(23): 5755; DOI: 10.3390/molecules29235755
10. Pricop MA, Lukinich-Gruia AT, Cristea IM, **Paunescu V**, Tatu CA. *Aristolochia clematitis* L. Ethanol Extracts: In Vitro Evaluation of Antioxidant Activity and Cytotoxicity on Caco-2 Cell Line. *Plants-Basel*, 2024; 13(21): 2987; DOI: 10.3390/plants13212987
11. Pahontu E, Pirvu CED, Visan DC, Socea LI, Apostol TV, Oprean C, **Paunescu V**, Ungurianu A, Margina DM, Codita I, Dumitrescu S, Draganescu D, Lupascu G. Evaluation of Antimicrobial, Antitumor, Antioxidant Activities, and Molecular Docking Studies of Some Co(II), Cu(II), Mn(II), Ni(II), Pd(II), and Pt(II) Complexes With a Schiff Base Derived From 2-Chloro-5-(trifluoromethyl)aniline. *Applied Organometallic Chemistry*, 2024; Corpus ID: 273645866; DOI: 10.1002/aoc.7829
12. Lukinich-Gruia AT, Calma CL, Szekeley FAE, Cristea IM, Pricop MA, Simina AG, Ordodi VL, Pavlovic NM, Tatu CA, **Paunescu V**. Mitochondrial Dysfunction in Aristolochic Acid I-Induced Kidney Diseases: What We Know and What We Do Not Know. *Applied Sciences-Basel*, 2024; 14(17): 7961; DOI: 10.3390/app14177961
13. Udrea IA, Lukinich-Gruia AT, Paul C, Pricop MA, Dan MR, **Paunescu V**, Baloi A, Tatu CA, Vaszilcsin N, Ordodi V. Experimental Device for the "Green" Synthesis of Unbranched Aliphatic Esters C4-C8 Using an Audio Frequency Electric Field. *Processes*, 2024; 12(9): 1891; DOI: 10.3390/pr12091891
14. Zimbru RI, Zimbru EL, Ordodi VL, Bojin FM, Crisnic D, Grijincu M, Mirica SN, Tanasie G, Georgescu M, Hutu I, Haidar L, **Paunescu V**, Panaitescu C. The Impact of High-Fructose Diet and Co-Sensitization to House Dust Mites and Ragweed Pollen on the Modulation of Airway Reactivity and Serum Biomarkers in Rats. *International Journal of Molecular Sciences*, 2024; 25(16): 8868; DOI: 10.3390/ijms25168868
15. Grijincu M, Buzan MR, Zbircea LE, **Paunescu V**, Panaitescu C. Prenatal Factors in the Development of Allergic Diseases. *International Journal of Molecular Sciences*, 2024; 25(12): 6359; DOI: 10.3390/ijms25126359
16. Grijincu M, Tanasie G, Zbircea LE, Buzan MR, Tamas TP, Cotarca MD, Hutu I, Babaev E, Stolz F, Dorofeeva Y, Valenta R, **Paunescu V**, Panaitescu C, Chen KW. Non-Specific Lipid Transfer Protein Amb a 6 Is a Source-Specific Important Allergenic Molecule in Ragweed Pollen. *International Journal of Molecular Sciences*, 2024; 25(12): 6513; DOI: 10.3390/ijms25126513
17. Zbircea LE, Buzan MR, Grijincu M, Tamas TP, Vulpe CB, Hutu I, **Paunescu V**, Panaitescu C, Chen KW. Cross-Reactivity of Ragweed Pollen Calcium-Binding Proteins and IgE Sensitization in a Ragweed-Allergic Population from Western Romania. *Advances in Respiratory Medicine*, 2024; 92(3): 218-229
18. Zbircea LE, Buzan MR, Grijincu M, Cotarca MD, Tamas TP, Haidar L, Tanasie G, Hutu I, Babaev E, Stolz F, Valenta R, **Paunescu V**, Panaitescu C, Chen KW. Heterogenous Induction of Blocking Antibodies against Ragweed Allergen Molecules by Allergen Extract-Based Immunotherapy Vaccines. *Vaccines*, 2024; 12(6): 635; DOI: 10.3390/vaccines12060635
19. Buzan MR, Grijincu M, Haidar L, Tamas TP, Cotarca MD, Tanasie G, Weber M, Babaev E, Stolz F, Valenta R, **Paunescu V**, Panaitescu C, Chen KW. Insect Cell-Expressed Major Ragweed Allergen Amb a 1.01 Exhibits Similar Allergenic Properties to Its Natural Counterpart from Common Ragweed Pollen. *International Journal of Molecular Sciences*, 2024; 25(10): 5175; DOI: 10.3390/ijms25105175
20. Arjoca S, Bojin F, Neagu M, Paunescu A, Neagu A, **Paunescu V**. Hydrogel extrusion speed measurement for the optimization of bioprinting parameters. *Gels*. 2024; 10(2): 103; doi: 10.3390/gels10020103

21. Ivan A, Cristea MI, Telea A, Oprean C, Galuscan A, Tatu C, **Paunescu V**. Stem cells derived from exfoliated deciduous teeth functional assessment: Exploring the changes of free fatty acids composition during cultivation. *International Journal of Molecular Sciences*, 2023; 24(24): 17249; DOI: 10.3390/ijms242417249
22. Habago SD, Ordodi V, Bojin F, Vesa SC, Moldovan V, **Paunescu V**, Ionescu D. Inhibitory effects of lidocaine on colon carcinoma progression in a rat model: a pilot study. *Br J Anaesth.* 2023; 131(5): E163-E165; DOI: 10.1016/j.bja.2023.07.029
23. Harich OO, Gavrilic OI, Ordodi VL, Tirziu A, **Paunescu V**, Panaitescu C, Bojin MF. In Vitro Study of the Multimodal Effect of Na<sup>+</sup>/K<sup>+</sup> ATPase Blocker Ouabain on the Tumor Microenvironment and Malignant Cells. *Biomedicines*, 2023; 11: 2205; DOI: 10.3390/biomedicines11082205
24. Tirziu A, Avram S, Mada L, Crisan-Vida M, Popovici C, Popovici D, Faur C, Duda-Seiman C, **Paunescu V\***, Vernic C. Design of a Synthetic Long Peptide Vaccine Targeting HPV-16 and-18 Using Immunoinformatic Methods. *Pharmaceutics*, 2023; 15(7): 1798; DOI: 10.3390/pharmaceutics15071798
25. Ordodi VL, Hadaruga NG, Hadaruga DI, Lukinich-Gruia AT, Margineanu M, Tatu CA, **Paunescu V**. Urine Metabolomic Signature of People Diagnosed with Balkan Endemic Nephropathy and Other Types of Chronic Kidney Disease Compared with Healthy Subjects in Romania. *Metabolites*, 2023; 13(5): 609; DOI: 10.3390/metabo13050609
26. Grijincu M, Hutu I, Weber M, Babaev E, Stolz F, Valenta R, **Paunescu V**, Panaitescu C, Chen KW. Physicochemical and immunological characterization of Amb a 12, a novel ragweed (*Ambrosia artemisiifolia*) pollen allergen. *Molecular Immunology*, 2023; 157: 18-29; DOI: 10.1016/j.molimm.2023.03.012
27. Zbircea LE, Buzan MR, Grijincu M, Babaev E, Stolz F, Valenta R, **Paunescu V**, Panaitescu C, Chen KW. Relationship between IgE Levels Specific for Ragweed Pollen Extract, Amb a 1 and Cross-Reactive Allergen Molecules. *International Journal of Molecular Sciences*, 2023; 24(4): 4040; DOI: 10.3390/ijms24044040
28. Tamas TP, Buzan MR, Zbircea LE, Cotarca MD, Grijincu M, **Paunescu V**, Panaitescu C, Chen KW. Ragweed Major Allergen Amb a 11 Recombinant Production and Clinical Implications. *Biomolecules*, 2023; 13(1): 182; DOI: 10.3390/biom13010182
29. Tirziu A, **Paunescu V**. Cytotoxic T-Cell-Based Vaccine against SARS-CoV-2: A Hybrid Immunoinformatic Approach. *Vaccines*, 2022; 10(2): 218; DOI: 10.3390/vaccines10020218
30. Tirziu A, Paunescu V. Cytotoxic T-cell-based vaccine against SARS-CoV2: a hybrid immunoinformatic approach. *BioRxiv*, 2021, doi: <https://doi.org/10.1101/2021.09.26.461851>
31. Bojin F, Gavrilic O, Margineanu M, **Paunescu V**. Design of an Epitope-Based Synthetic Long Peptide Vaccine to Counteract the Novel China Coronavirus (2019 nCoV). *Preprints* 2020, 2020020102.
32. Constantin A, Comarita IK, Alexandru N, Filippi A, Bojin F, Gherghiceanu M, Vilcu A, Nemezc M, Niculescu LS, **Paunescu V**, Georgescu A. Stem cell-derived extracellular vesicles reduce the expression of molecules involved in cardiac hypertrophy-In a model of human-induced pluripotent stem cell-derived cardiomyocytes. *Frontiers in Pharmacology*, 2022; 13: 1003684; DOI: 10.3389/fphar.2022.1003684
33. Buzan MR, Zbircea LE, Gattinger P, Babaev E, Valenta R, **Paunescu V**, Panaitescu V, Chen KW. Complex IgE sensitization patterns in ragweed allergic patients: Implications for diagnosis and specific immunotherapy. *Clinical and Translational Allergy*, 2022; 12(7): e12179; DOI: 10.1002/ct2.12179
34. Lukinich-Gruia AT, Nortier J, Pavlovic NM, Milovanovic D, Popovic M, Draghia LP, Paunescu V, Tatu CA. Aristolochic acid I as an emerging biogenic contaminant involved in chronic kidney diseases: A comprehensive review on exposure pathways, environmental health issues and future challenges. *Chemosphere*, 2022; 297: 134111; DOI: 10.1016/j.chemosphere.2022.134111
35. Barbulescu GI, Buica TP, Goje ID, Bojin FM, Ordodi VL, Olteanu GE, Heredea RE, **Paunescu V**. Optimization of Complete Rat Heart Decellularization Using Artificial Neural Networks. *Micromachines*, 2022; 13(1): 79; DOI: 10.3390/mi13010079
36. Barbulescu GI, Bojin FM, Ordodi VL, Goje ID, Barbulescu AS, **Paunescu V**. Decellularized Extracellular Matrix Scaffolds for Cardiovascular Tissue Engineering: Current Techniques and Challenges. *International Journal of Molecular Sciences*, 2022; 23(21): 13040; DOI: 10.3390/ijms232113040
37. Bojin F, Robu A, Bejenariu MI, Ordodi V, Olteanu E, Cean A, Popescu R, Neagu M, Gavrilic O, Neagu A, Arjoca S, **Paunescu V**. 3D Bioprinting of model tissue that mimic the tumor microenvironment. *Micromachines*, 2021; 12: 535; DOI: 10.3390/mi12050535
38. Barbulescu GI, Bojin FM, Ordodi VL, Goje ID, Buica TP, Gavrilic OI, Baderca F, Hoinoiu T, **Paunescu V**. Innovative biotechnology for generation of cardiac tissue. *Applied Sciences*, 2021; 11: 5603.
39. Ivan A, Lam D, Cristea MI, Telea A, Gruia AT, Oprean C, Margineanu F, Bojin MF, Saffery R, **Paunescu V**, Tatu CA. Differential methylation pattern of xenobiotic metabolizing genes and susceptibility to Balkan endemic nephropathy, in a cohort of Romanian patients. *J Nephrol.*, 2020; 33(1): 91-100.
40. Olteanu GE, Mihai IM, Bojin F, Gavrilic O, **Paunescu V**. The natural adaptive evolution of cancer: The metastatic ability of cancer cells. *Bosn J Basic Med Sci.*, 2020; 20(3): 303-309.
41. Hădărugă NG, Szakal RN, Chirilă CA, Lukinich-Gruia AT, **Paunescu V**, Muntean C, Rusu G, Bujancă G, Hădărugă DI. Complexation of Danube common nase (*Chondrostoma nasus* L.) oil by  $\beta$ -cyclodextrin and 2-hydroxypropyl- $\beta$ -cyclodextrin. *Food Chemistry*, 2020; 303: 125419
42. Ordodi V, Pana AM, Dumitrel A, Hadaruga D, Tamas A, Pode V, Todea A, **Paunescu V**, Negru S. An Ecological Treatment Method for Ifosfamide Contaminated Waste Water Resulting from Oncological Therapy. *Studia Universitatis Babeş-Bolyai Chimia*, 2020; 65(1): 267-277.
43. Crîsnic D, Ordodi V, Hădărugă D, Todea A, **Paunescu V**, Negru S. Doxorubicin Depuration in Oncological Wastewaters Using an Electrochemical Method. *Revista de Chimie*, 2020; 71(3): 161-165.

44. Rusu D, Boariu M, Stratul SI, Bojin F, **Paunescu V**, Calniceanu H, Surlin P, Roman A, Milicescu S, Caruntu C, Didilescu A, Gaje NP, Calenic B. Interaction between a 3D collagen matrix used for periodontal soft tissue regeneration and T-lymphocytes: An in vitro pilot study. *Exp Ther Med*. 2019; 17(2):990-996.
45. Kis B, Ifrim FC, Buda V, Avram S, Pavel IZ, Antal D, **Paunescu V**, Dehelean CA, Ardelean F, Diaconeasa Z, Soica C, Danciu C. Cannabidiol-from Plant to Human Body: A Promising Bioactive Molecule with Multi-Target Effects in Cancer. *International Journal of Molecular Sciences*, 2019; 20(23).
46. Draghia LP, Lukinich-Gruia AT, Oprean C, **Paunescu V**, Tatu CA. Preliminary study of soil composition from Balkan Endemic Nephropathy areas, using a GC-MS method. *Environmental Engineering and Management Journal*, 2019; 18(11): 2455-2463.
47. Pahontu E, Proks M, Shova S, Lupascu G, Ilies DC, Barbuceanu SF, Socea LI, Badea M, **Paunescu V**, Istrati D, Gulea A, Drăgănescu D, Pirvu CE. Synthesis, characterization, molecular docking studies and in vitro screening of new metal complexes with Schiff base as antimicrobial and antiproliferative agents. *Applied Organometallic Chemistry*, 2019; 33(11): e5185.
48. Petrescu A, Lukinich-Gruia AT, **Paunescu V**, Ilia G. A Theoretical Study of the Molecular Coupled Structures of Aristolochic Acids and Humic Acid, Potential Environmental Contaminants. *Chemistry & Biodiversity*, 2019; 16(11): e1900406
49. Petrescu A, **Paunescu V**, Ilia G. The antiviral activity and cytotoxicity of 15 natural phenolic compounds with previously demonstrated antifungal activity. *Journal of Environmental Science and Health Part B-Pesticides Food Contaminants and Agricultural Wastes*, 2019; 54(6): 498-504.
50. Iman V, Taculescu A, Dehelean C, **Paunescu V**. Magnetic Nanoparticles (MNPs) Influence on SK-BR3 Breast Cancer Cell Line - in vitro Study. *REVISTA DE CHIMIE*, 2019; 70(7): 2452-2455.
51. Proks M, Heghes A, Cheveresan A, Nita S, Voicu M, Buda V, Ionescu D, Nita L, Trandafirescu C, **Paunescu V**. Thyme Leaves Aqueous Extract and its Formulations A comparative study based on chemical structures and biological activity. *Revista de Chimie*, 2019; 70(5): 1875-1878.
52. Tuta-Sas I, Proks M, **Paunescu V**, Pinzaru I, Sas I, Coricovac D, Moacă A, Dehelean C. Thymus Vulgaris Extract Formulated as Cyclodextrin Complexes: Synthesis, Characterization, Antioxidant Activity and In Vitro Cytotoxicity Assessment. *Farmacia*, 2019; 67(3): 442-451.
53. Bonciog D, Matiu-Iovan L, Barbulescu G, Burian C, Goje D, Buica P, **Paunescu V**, Ordodi V. Modified Langendorff device for rat heart decellularization. *Fiziologia-Physiology*, 2019; 29(98): 17-20.
54. Gai E, Lungeanu D, Arghirescu S, Calma CL, **Paunescu V**. B08:01 HLA class I and class II alleles and haplotypes frequencies patients with hematological diseases in Western part of Romania. *Fiziologia-Physiology*, 2019; 29(98): 21-34.
55. Szekely FAE, Zogorean R, Anghel S, Gavriluc O, Bojin F, **Paunescu V**. CAR-T cells therapy versus TILs therapy: the future of cancer immunotherapy. *Fiziologia-Physiology* 2018; Vol. 28, No. 1(95): 4-15.
56. Zogorean R, Gavriluc O, Bojin F, **Paunescu V**. Real-time imaging of NK-92 cells interaction with tumoral cell lines. *Fiziologia-Physiology* 2018; Vol. 28, No. 2(96): 4-9
57. Popa L, Crisnic D, Nistor D, Plesca D, Tatu C, Tanasie G, Zogorean R, Gavriluc O, Anghel S, Bojin F, **Paunescu V**. Modern application of Next-Generation Sequencing (NGS). *Fiziologia-Physiology* 2019; Vol. 29, No. 2(98): 9-16.
58. Plesca D, Crisnic D, Nistor D, Tatu C, Tanasie G, Zogorean R, Anghel S, Gavriluc O, Bojin F, **Paunescu V**. *Fiziologia-Physiology* 2019; Vol. 29, No. 2(98): 38-43.
59. Barbulescu G, Bojin F, Ordodi V, Anghel S, Gavriluc O, **Paunescu V**. Human induced pluripotent stem cells-derived cardiomyocytes for cardiac applications. *Fiziologia-Physiology* 2019; 29(97): 5-13.
60. Danciu C, Zupko I, Bor A, Schwiebs A, Radeke H, Hancianu M, Cioanca O, Alexa E, Oprean C, Bojin F, Soica C, **Paunescu V**, Dehelean CA. Botanical Therapeutics: Phytochemical Screening and Biological Assessment of Chamomile, Parsley and Celery Extracts against A375 Human Melanoma and Dendritic Cells. *Int J Mol Sci.*, 2018; 19(11): E3624.
61. Oprean C, Ivan A, Bojin F, Cristea M, Soica C, Drăghia L, Caunii A, **Paunescu V**, Tatu C. Selective in vitro anti-melanoma activity of ursolic and oleanolic acids. *Toxicol Mech Methods*, 2018;28(2): 148-156.
62. Proks M, Borcan F, Cheveresan A, Pinzaru I, Guta BA, Coricovac D, **Paunescu V**, Lazureanu V. Study on the Release and Bioevaluations of Green Silver Nanoparticles Entrapped Inside Polymer-based Nanovesicles. *Materiale Plastice*, 2018; 55(4): 696-699.
63. Gruia AT, Oprean C, Ivan A, Cean A, Cristea M, Draghia L, Damiescu R, Pavlovic NM, **Paunescu V**, Tatu CA. Balkan endemic nephropathy and aristolochic acid I: an investigation into the role of soil and soil organic matter contamination, as a potential natural exposure pathway. *Environmental Geochemistry and Health* 2018; 40(4): 1437-1448.
64. Nagib R, Zogorean R, Gavriluc OI, Szuhaneck C, Moldoveanu B, Negrutiu ML, Sinescu C, Paunescu V, Brad S. Cytotoxicity Assessment of Metal and 3D Printed Resin Orthodontic Attachments An in vitro cell culture behavior study. *Revista de Chimie* 2018; 69(6): 1515-1518.
65. Danciu C, Bojin F, Ambrus R, Muntean D, Soica C, **Paunescu V**, Cristea M, Pinzaru I, Dehelean C. Physico-chemical and Biological Evaluation of Flavonols: Fisetin, Quercetin and Kaempferol Alone and Incorporated in beta Cyclodextrins. *Anti-Cancer Agents in Medicinal Chemistry*, 2017; 17(4): 615-626.
66. Caunii A, Oprean C, Cristea M, Ivan A, Danciu C, Tatu C, **Paunescu V**, Marti D, Tzanakakis G, Spandidos D, Tsatsakis A, Susan R, Soica C, Avram S, Dehelean C. Effects of ursolic and oleanolic on SK-MEL-2 melanoma cells: In vitro and in vivo assays. *International Journal of Oncology* 2017; 51(6): 1651-1660.
67. Pahontu E, Ilies DC, Shova S, Oprean C, **Paunescu V**, Olaru OT, Radulescu FS, Gulea A, Rosu T, Draganescu D. Synthesis, Characterization, Antimicrobial and Antiproliferative Activity Evaluation of Cu(II), Co(II), Zn(II), Ni(II) and Pt(II) Complexes with Isoniazid-Derived Compound. *Molecules* 2017; 22(4).

68. Pahontu E, Parashivescu C, Ilies DC, Poirier D, Oprean C, **Paunescu V**, Gulea A, Rosu T, Bratu O. Synthesis and Characterization of Novel Cu(II), Pd(II) and Pt(II) Complexes with 8-Ethyl-2-hydroxytricyclo(7.3.1.0(2,7))tridecan-13-one-thiosemicarbazone: Antimicrobial and in Vitro Antiproliferative Activity. *Molecules* 2016; 21(5): 674.
69. Unlusayin M, Hadaruga NG, Rusu G, Gruia AT, **Paunescu V**, Hadaruga DI. Nano-encapsulation competitiveness of omega-3 fatty acids and correlations of thermal analysis and Karl Fischer water titration for European anchovy (*Engraulis encrasicolus* L.) oil/beta-cyclodextrin complexes. *LWT-Food Science and Technology* 2016; 68: 135-144.
70. Oprean C, Zambori C, Borcan F, Soica C, Zupko I, Minorics R, Bojin F, Ambrus R, Muntean D, Danciu C, Pinzaru IA, Dehelean C, **Paunescu V**, Tanasie G. Anti-proliferative and antibacterial in vitro evaluation of the polyurethane nanostructures incorporating pentacyclic triterpenes. *Pharm Biol.*, 2016; 9: 1-9.
71. Anastasiu DM, Cean A, Bojin MF, Gluhovschi A, Panaitescu C, **Paunescu V**, Tănăsie G. Explants-isolated human placenta and umbilical cord cells share characteristics of both epithelial and mesenchymal stem cells. *Rom J Morphol Embryol.* 2016;57(2):383-90.
72. Oprean C, Mioc M, Csányi E, Ambrus R, Bojin F, Tatu C, Cristea M, Ivan A, Danciu C, Dehelean C, **Paunescu V**, Soica C. Improvement of ursolic and oleanolic acids' antitumor activity by complexation with hydrophilic cyclodextrins. *Biomed Pharmacother.* 2016 Oct; 83:1095-1104.
73. Rusu D, Calenic B, Greabu M, Kravev A, Boariu M, Bojin F, Anghel S, **Paunescu V**, Vela O, Calniceanu H, Stratul SI, Evaluation of keratinocyte progenitor and T-lymphocyte cells response during early healing after augmentation of keratinized gingiva with 3D collagen matrix – a pilot study. *BMC Oral Health*, 2016