



## OANA ISABELLA GAVRILIUC

OncoGen Center for Gene and Cellular Therapies in the Treatment of Cancer

"Pius Brinzeu" Clinical Emergency County Hospital Timisoara

Liviu Rebreanu No. 156, 300723, Timisoara, Romania

+40374 161282

e-mail: gavriliuc.oana@umft.ro

### EDUCATION

---

PhD, with Honors, Medicine | 2006-2010

Immunology Dept., 'Victor Babes' University of Medicine and Pharmacy, Timisoara

Thesis: *Perspectives on the Treatment of Diabetes Mellitus Employing Adult Stem Cell Therapy*,  
scientific coordinator Prof. Dr. Virgil Paunescu

MSc, Statistical methods and techniques applied to Clinical Research and Health Studies | 2013-2015

Dept. of Mathematics, Polytechnic University, Timisoara

Licence Diploma, with Honors, Chemistry-Biology (BSc equiv.) | 2002-2006

Chemistry-Biology Dept., West University, Timisoara

High-School Baccalaureate Diploma | 1998-2002

National Banat College, Timisoara

### PROFESSIONAL EXPERIENCE

---

Assistant Professor | 2011 - present

Immunology Dept., University of Medicine and Pharmacy 'Victor Babes', Timisoara

Senior Researcher | 2016-present

OncoGen, "Pius Brinzeu" Clinical Emergency County Hospital Timisoara

Postdoctoral researcher | 2013-2015

CIFB, "Pius Brinzeu" Clinical Emergency County Hospital Timisoara

Postdoctoral researcher | 2011-2013

Embriology Dept., Banat University of Agriculture and Veterinary Medicine Timisoara

PhD candidate and teaching assistant | 2006-2010

Immunology Dept., University of Medicine and Pharmacy 'Victor Babes', Timisoara

### Technical skills and competencies:

- Flow cytometry (BD FACScalibur, BD FACScverse, BD FACSAria, Miltenyi MACSQuant): immunophenotyping, cytotoxicity assays, viability and cell proliferation, DNA content, CBA, cell tracking and cell sorting;
- Cell cultures: tumor cells, blood-derived cells, cell lines, stem cells and iPSC, primary cultures from tissue samples;
- Molecular biology: gene expression, molecular cloning, transfection, lentiviral vector production and transduction, siRNA inhibition, cell reprogramming;
- Imaging and microscopy: immunocytochemistry, immunofluorescence, live cell monitoring;
- Creative problem solving demonstrated during equipment malfunction;

- Ability to understand and master very quickly most analytical equipment and software;

**Computer skills and competencies:**

- Excellent computer proficiency (PC and Apple operating systems, Word/Pages/Mellel, Excel/Numbers, Powerpoint/Keynote, Adobe Photoshop CS2/CS3, Sente/Reference Manager, Adobe Lightroom 2, Adobe Acrobat);
- Working knowledge of Bioinformatics (CLC Bio DNA Workbench, Serial Cloner, Geneious, Vector NTI, various open-access Internet based programs): vector design, gene cloning experimental set-up, analysis of sequencing and gene expression data;
- Statistical software (Prism 7 Graphpad, SPSS, R);

**Organisational skills and competencies:**

- Good experience in research project management (3 years as project director);
- Experience in organizing workshops and training sessions;
- Good experience in supervising and coordinating undergraduate and graduate students during their research assignments and thesis development;

**Social skills and competencies:**

- Good ability to work with large groups as part of national and foreign complex research project teams;
- Very good ability to adapt to culturally-diverse environments, as demonstrated during various training stages in European laboratories and participation to international conferences and workshops;
- Very good communication skills developed during 12 years teaching activity and participation with posters and oral presentations to national and international conferences;
- Strong initiative and original ideas expressed during research project management.

**SCHOLARSHIPS AND HONORS**

---

- Erasmus+ Mobility scholarship, Dept. of Statistics, Alpen Adria University, Klagenfurt, Austria | April-June 2015
- PhD Program – visiting scholar at Radboud University Nijmegen Medical Center, The Netherlands Internal Medicine Dept. – Immunology and Infectious Diseases | Oct – Dec, 2009
- Rotary scholarship at the Canisius-Wilhelmina Hospital, Nijmegen, The Netherlands Molecular Diagnostics Dept. | March-April, 2009
- Research scholarship at the transfusion center DRK-Blutspendedienst, Frankfurt offered by J.W.Goethe University, Frankfurt, Germany | July-Sept, 2007
- Scientific Research Scholarship for PhD Students awarded by the National Council for Scientific Research | 2007-2010
- Eminent Student distinction for the CBG Faculty, awarded by the Orizonturi Universitare Association | 2004
- Student representative for the Chemistry Dept. in the Teachers’ Committee of CBG | 2003-2005
- National Performance Scholarship, MECT | 2004-2006
- National Merit Scholarship, MECT | 2002-2004

## TRAINING COURSES (SELECTED)

---

- BD FACS Aria operator training, BD Biosciences, Erembodegem, Belgium | 2015
- CMED Clinical Services Romania – statistics internship, Timisoara, Romania | 2014
- Stemgent *Human iPS Cell Training Course* on cellular reprogramming techniques, La Jolla, CA, USA | 2011
- FOCIS/JSI *Immunology Update Special Teaching Course*, Prof. Dr. Abul K. Abbas and Prof. Dr. Andrew H. Lichtman, 14th International Congress of Immunology, Kobe, Japan, with travel grant offered by the International Union of Immunological Societies | 2010
- CONCERT Labcourse, *Lentiviral vectors: concepts, practice, hope and reality*, Universite d'Evry-Val d'Essonne, Evry, France, with travel grant | 2008
- Training course *Transdifferentiation to Beta Cells*, Juvenile Diabetes Research Foundation University of Bath, UK, with travel grant | 2007
- Summer course *Introduction to Chromatography*, Prof. Dr. Bernd Jastorff UFT Bremen, with student grant | 2005
- Francophone summer school *Pathologies and Molecular Pharmacology, Biotechnologies* coordinated by Pr. Emér. Jean Montreuil (Université des Sciences et Technologies de Lille) Arad, Romania | 2005
- Graduate school course *Environmental Issues for a Sustainable Society*, Prof. Dr. K.C. Swallow (MIT/Merrimack College), Timisoara | 2005

## MEMBER OF RESEARCH PROJECT TEAMS

---

- PNRR/2022/C9/MCID/18 *RBC-engager for NK and T cell activation in cancer immunotherapy (REAKT)*, contract no. 760103/23.05.2023, project code CF 227/29.11.2022 | 2023-2026
- RORS00040 *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)* | 2024-2026
- PN-III-P2-2.1-SOL *Development of new technologies, drugs and vaccines for prevention of SARS-CoV-2 (DECODE)* | 2020-2021
- PN-III-P1-1.2-PCCDI *Development of BIONanotechnologies based on Extracellular Vesicles, applied in early diagnostic, prognosis and therapy of atherosclerotic disease (BIOVEA) – 83PCCDI* | 2018-2021
- PN-III-P2-2.1-PED *3D bioprinting methods for obtaining tissue constructs of tumor microenvironment* | 2017-18
- POC-A1-A1.1.4 *Chimeric Antigen Receptor Targeted Oncoimmunotherapy with Natural Killer cells* | 2016-2020
- PN-II-RU-PD *Induction of mesenchymal stem cells into insulin secreting cells as diabetes therapy*, project director | 2013-2015
- PN-II-PCCA *Translating stem cell technologies to the conservation of highly endangered species (CONSENS)* | 2012-2015
- PN-II-ID *Tumor-associated fibroblasts as novel therapeutic target in anti-tumor therapy – identification of origin, role and characteristic molecular markers* | 2012-2015
- PN-II-Complex Partnerships, *Molecular mechanisms of thymic involvement in diabetes* | 2008-11
- PN-II-Capacities Romanian-Hungarian Bilateral Cooperation *Isolation, characterization and in vitro differentiation of variety of animal and human embryonic and adult stem cells* | 2007-2009
- PN-II-Complex Partnerships, *Genetic engineering of cancer stem cells for immune response modulation in cancers of non-viral origin* | 2007-2009
- PN-II-Complex Partnerships, *In vitro lymphocyte therapy – a modern approach to tolerance induction during organ transplant* | 2007-2010

## MEMBER OF PROFESSIONAL ORGANIZATIONS

---

- International Society for Infectious Diseases (Member no. 00052939, 2010 – present)  
American Society for Microbiology (Member ID: 56677735, 2010 – present)  
Romanian Society of Immunology (2010 – present)  
Order of Biochemists, Biologists and Chemists in the Medical System in Romania (2010 – present)  
European Association for Cancer Research – EACR (2008 – 2010)

## PATENTS

---

1. Bojin MF, GAVRILIUC OI, Ordodi LV, Sălăgean AO, Tîrziu A, Panaitescu C, Păunescu V. *Product and method based on synthetic long peptides for the prevention of SARS-CoV-2 infection*, no. a 2022 0005/20.01.2022, State Office for Inventions and Trademarks (OSIM)
2. GAVRILIUC OI, Bojin MF, Hritcu EM, Tudor BAM, Mircu C, Huțu I. *Instrument and method for isolating somatic cells from milk by centrifugation*. Application RO202100600A-2021-09-30; Publication RO135472A0-2022-01-28; Published as RO135472A0, State Office for Inventions and Trademarks (OSIM)
3. Hutu I, Panaitescu C, Tanasie G, Gaspar CM, Zambori C, Tatu CS, Anghel S, GAVRILIUC OI, Paunescu V. Microbiological Box for Providing the Microclimate for Bacterial Films Growth and Development (Casetă microbiologică de asigurare a microclimatului pentru creșterea și dezvoltarea biofilmelor bacteriene). Application RO202100557A-2021-09-16; Publication RO135526A0-2022-02-28; Published as RO135526A0. State Office for Inventions and Trademarks (OSIM)
4. Ordodi LV, Dumitrel GA, PanA AM, Todea A, Matiu-Iovan L, Ionel RC, Sandesc D, Bedreag OH, Papurica M, Rogobete AF, Simion I, Motica A, Groapa DS, Paunescu V, Bojin MF, GAVRILIUC OI. *„Device for reducing microbiological load of air expired by mechanically-ventilated patients”*, no.134883, 22/05/2020, State Office for Inventions and Trademarks (OSIM)
5. Bojin MF, GAVRILIUC OI, Tanasie G, Tatu CA, Panaitescu C, Paunescu V, Nedeia CE. *„Bispecific Selective CAR-T Cells for Treating Solid Tumours and Method for Preparing the Same”*, nr. A/00704/2020, date of deposit 06/11/2020, State Office for Inventions and Trademarks (OSIM)
6. Nedeia CE, Paunescu V, GAVRILIUC OI, Zogoreanu R, Ivan A, Cristea IM, Tatu CA, Bojin MF, Anghel SS. *„Celule citotoxice purtatoare de receptori himerici de antigen universali care tintesc antigene diverse si multiple pentru tratament adoptiv”*, nr. A/00705/2020, date of deposit 06/11/2020, State Office for Inventions and Trademarks (OSIM)
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, GAVRILIUC OI, Lukinich-Gruia AT, Negru S, Crisnic D, Frunza GV. Electrostatic device for measuring electrical voltage with optical indicator. Application ROA202200635A; Published as RO137476A0, State Office for Inventions and Trademarks (OSIM)

## PUBLICATIONS

---

### Full-text Articles

1. Tirziu A, Bojin MF, GAVRILIUC OI, Faur CI, Paunescu V. From CAR-T Cells to Exosome-Based Immunotherapy: Exploring the Frontiers of Cell-Free Targeted Cancer Therapeutics. *Cells*. 2026; 15(1):70. <https://doi.org/10.3390/cells15010070>; IF = 5.2
2. Tirziu A, GAVRILIUC OI, Bojin MF, Paunescu V. Exploring CAR-PBMCs: A novel strategy against EGFR-positive tumor cells. *Biomedicines* 2025; 13: 264; DOI: 10.3390/biomedicines13020264; WOS:001430632700001; eISSN: 2227-9059; IF = 3.9
3. Buda VO, Oprean C, GAVRILIUC OI, Diaconeasa Z, Cata A, Haidu D, Minda D, Paunescu A, Dehelean CA, Danciu C. Inorganic Element Identification and In Vitro Preliminary Evaluation of Three Types of Standardized Black Chokeberry Extracts Against Human Pulmonary Artery Endothelial Cells

- (HPAECs). *Plants* 2025, 14(8): 1202. DOI: <https://doi.org/10.3390/plants14081202>; IF = 4.1
4. Harich OO, GAVRILIUC 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: <https://doi.org/10.3390/biomedicines11082205>; IF = 4.7
  5. Barbulescu GI, Bojin FM, Ordodi VL, Goje ID, Buica TP, Gavriliuc OI, Baderca F, Hoinoiu T, Paunescu V. Innovative Biotechnology for Generation of Cardiac Tissue. *Applied Sciences*. 2021; 11(12):5603.
  6. Bojin F, Robu A, Bejenariu MI, Ordodi V, Olteanu E, Cean A, Popescu R, Neagu M, GAVRILIUC O, Neagu A, Arjoca S, Păunescu V. 3D Bioprinting of Model Tissues That Mimic the Tumor Microenvironment. *Micromachines* (Basel). 2021 May 9;12(5):535.
  7. Bojin F, GAVRILIUC OI, Margineanu M, Paunescu V. Design of an Epitope-Based Synthetic Long Peptide Vaccine to Counteract the Novel China Coronavirus (2019 nCoV). *Preprints* 2020, 2020020102
  8. Olteanu GE, Mihai IM, Bojin F, GAVRILIUC OI, Paunescu V. The natural adaptive evolution of cancer: The metastatic ability of cancer cells. *Bosn J Basic Med Sci.*, 2020; 20(3): 303-309.
  9. Popa L, Crisnic D, Nistor D, Plesca D, Tatu C, Tanasie G, Zogorean R, GAVRILIUC OI, Anghel S, Bojin F, Paunescu V. Modern application of Next-Generation Sequencing (NGS). *Fiziologia-Physiology* 2019; Vol. 29, No. 2(98): 9-16.
  10. Plesca D, Crisnic D, Nistor D, Tatu C, Tanasie G, Zogorean R, Anghel S, GAVRILIUC OI, Bojin F, Paunescu V. *Fiziologia-Physiology* 2019; Vol. 29, No. 2(98): 38-43.
  11. Barbulescu G, Bojin F, Ordodi V, Anghel S, GAVRILIUC OI, Paunescu V. Human induced pluripotent stem cells-derived cardiomyocytes for cardiac applications. *Fiziologia-Physiology* 2019; 29(97): 5-13.
  12. Szekely FAE, Zogorean R, Anghel S, GAVRILIUC OI, 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
  13. Zogorean R, GAVRILIUC OI, 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
  14. Nagib R, Zogorean R, GAVRILIUC 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 **69**, No.6, 2018: 1515-18
  15. Tatu CS, Groza S, Tatu FR, Bojin FM, Marusciac L, Gavriliuc O, Hurmuz M, Cean A, Paunescu V, Tanasie G *In vivo Functional Studies of Human Adult Mesenchymal Stem Cells Migration towards Inflammatory Lesions after Transfection with CD29 Specific siRNA in Mouse Models*, Rom Biotechnol Lett (2015), 20 (6): 11057-66
  16. Anastasiu MD, Cean, A.; Bojin, F.; Gavriliuc, O.; Gluhovschi, A.; Anastasiu, D.; Craina, M.; Tatu, C.; Tanasie, G.; Panaitescu, C.; Paunescu, V. *Placental Stem Cells Modulate Tumor Formation In Mouse Model Of Uterine Sarcoma*, *Fiziologia-Physiology* (2015), 25(1): 26-30
  17. Groza S, Anghel S, Cristea M, Tatu C, Tanasie G, Panaitescu C, Gavriliuc O, Paunescu V, Bojin F *Telomere Length Changes In Alzheimer Disease*, *Fiziologia-Physiology* (2014), 24(2): 27-30
  18. GAVRILIUC OI, Bojin FM, Paunescu V *Furin-cleavable Insulin Expressed in Mesenchymal Stem Cells as Diabetes Therapy*, *Fiziologia-Physiology* (2015), 25(4): 28-34
  19. Groza S, Anghel S, Tatu C, Tanasie G, Panaitescu C, Gavriliuc O, Paunescu V, Bojin F *Lymphocytes Subsets Involved In Alzheimer Disease-Associated Immunosenescence*, *Fiziologia-Physiology* (2014), 24(1): 22-26
  20. Paunescu V, Bojin FM, GAVRILIUC OI, Taculescu EA, Ianos R, Ordodi VL, Iman VF, Tatu CA. *Enucleation: a possible mechanism of cancer cell death*, J Cell Mol Med. 2014 Jun;18(6):962-5
  21. Tatu C, Bojin MF, Gruia A, Ordodi V, Mic F, Iman V, Cean A, GAVRILIUC OI, Paunescu V. *Features of Lipid Metabolism along Differentiation Pathway of Human Mesenchymal Stem Cells towards Mature Adipocytes*, Rom Biotechnol Lett, 19 (2), pg. 9257-9271, 2014
  22. Ilie DE, Cean A, GAVRILIUC OI, Păcală N. *Rapid and Sensitive Detection of BLAD in Cattle Population*, *Scientific Papers: Animal Sciences and Biotechnologies*, 2014, 47(1)109-112
  23. GAVRILIUC O, Paunescu V, Milovanov C, Tulcan C, Hutu I, Mircu C. *In vitro expansion of bovine skeletal muscle progenitor cells*, Scientific Papers: Veterinary Medicine, vol. XLVI, 2013
  24. Vintila R, GAVRILIUC O, Bojin F, Tatu C, Vintila C, Iovanescu G *Isolation and Characterization of Vestibular Stem Cells*, *Scientific Papers: Animal Sciences and Biotechnologies*, 2013, 46 (2)
  25. Ilie DE, Cean A, GAVRILIUC OI, Carstea AC, Gradinaru AC. *High-Resolution Melting Assay as a Tool for Identification of CSN3 Genotypes in Cattle*, *Scientific Papers: Animal Sciences and Biotechnologies*, 2013, 46 (1)
  26. Barbu-Tudoran L, GAVRILIUC OI, Paunescu V, Mic FA *Accumulation of tissue macrophages and depletion of resident macrophages in the diabetic thymus in response to hyperglycemia-induced thymocyte apoptosis*, J Diabetes Complications. 27(2):114-22 (2013)
  27. Vintila R, GAVRILIUC O *Results regarding self renewal and differentiation of cells composing inner ear derived spheres*, *Scientific Papers: Animal sciences & Biotechnologies*, 45(1), pp 358-365 (2012)
  28. GAVRILIUC O, Bojin FM, Rosca A, Tatu CA, Paunescu V. *Silencing of the Her2 gene by RNA interference*

- inhibits proliferation of breast cancer cell line SK-BR-3*, Fiziologia-Physiology, 21(71), pp 4-9 (2011)
29. Bojin FM, GAVRILIUC O, Cristea MI, Tanasie G, Tatu CS, Panaitescu C, Paunescu V. *Telocytes within human skeletal muscle stem cell niche*, J. Cell. Mol. Med, 15(10), pp. 2269-72 (2011)
  30. Paunescu V, Bojin FM, Tatu CA, GAVRILIUC O, Rosca A, Gruia A, Tanasie G, Bunu C, Crisnic D, Gherghiceanu M, Tatu FR, Tatu CS, Vermesan S. *Tumour-associated fibroblasts and mesenchymal stem cells: more similarities than differences*, J. Cell. Mol. Med 15(3):635-46 (2011)
  31. Bojin F, Ordodi V, Anghel S, Gruia A, Gavriiliuc O, Georgescu R, Vintila R, Tatu C, Bunu C, Tatu CA, Tanasie G, Paunescu V. *Mesenchymal stem cells admix with biological scaffold heal bone defects in rat model*. Rom Biotechnol Lett, 16(3), pp. 6218-25 (2011)
  32. Tanasie G, Bojin F, Ordodi V, Gruia A, GAVRILIUC O, Cristea M, Dehelean C, Vintila R, Tatu CA, Bunu C, Paunescu V. *Epithelization of skin lesions in animal model treated with mesenchymal stem cells and derivatives*, Rom Biotechnol Lett, accepted for publication (2011)
  33. GAVRILIUC O, Tatu CA, Paunescu V *The race to cure diabetes: how far are we from a breakthrough?* Fiziologia-Physiology, 20(65), pp 4-8 (2010)
  34. Bojin F, Tatu CA, GAVRILIUC O, Gruia A, Tanasie G, Tatu C, Cristea M, Ciuculescu F, Tocut A, Crisnic D, Carabineanu A, Nistor D, Bunu C, Paunescu V. *Stromal cells – tumor microenvironment interactions – Part II*, Fiziologia - Physiology, 20(66), pp. 31-36 (2010)
  35. Bojin F, Tatu CA, GAVRILIUC O, Gruia A, Tanasie G, Tatu C, Cristea M, Ciuculescu F, Tocut A, Crisnic D, Carabineanu A, Nistor D, Bunu C, Paunescu V. *Stromal cells – tumor microenvironment interactions – Part I*, Fiziologia - Physiology, 20(65), pp. 37-41 (2010)
  36. David VL, Izvernariu DA, Bojin F, GAVRILIUC O, Popoiu MC, Tanasie G, Puiu M, Boia ES. *Insulin growth factor I involvement in the etiology of pectus excavatum in children*, Fiziologia - Physiology, 20(65), pp. 17-20 (2010)
  37. Bojin MF, Tatu CA, GAVRILIUC O, Ordodi V, Gruia A, Rosca A, Tanasie G, Tatu C, Crisnic D, Nistor D, Cristea M, Anghel S, Boleman A, Bunu C, Paunescu V *In vitro characterization of mechanisms involved in adipogenic differentiation of mesenchymal stem cells and tumour associated fibroblasts*, Fiziologia-Physiology, 19(64), pp 21-6 (2009)
  38. Tanasie G, Bojin F, Tatu CA, GAVRILIUC O, Tatu C, Nistor D, Ionita H, Bunu C, Paunescu V. *Mechanisms Involved in Mesenchymal Stem Cells Differentiation towards the Epithelial Lineage. Effects of Chemical Inductors*, Fiziologia – Physiology, 19(63), pp 7-12 (2009)
  39. Vintila R, GAVRILIUC O, Gocza E, Paunescu V, Ilie D, Vintila C, Bojin F, Tatu CA *The inner ear of seven day old mice contains pluripotent stem cells*, Scientific Papers: Animal sciences & Biotechnologies, 42(1), pp 115-124 (2009)
  40. Vintila R, Ilie D, GAVRILIUC O, Gocza E, Lichner Zs, Vintila C, Nichita I, Cotulbea S, Tatu CA *Utricular epithelia in mice contains pluripotent stem cells*, Scientific Papers: Animal sciences & Biotechnologies, 41(1), pp 174-180 (2008)
  41. GAVRILIUC O, Ostafe V. *Comparative study of vitamins B content of some pharmaceutical and dietary supplements*, Annals of West University of Timisoara, Series Chemistry 15(1) (2006), pp 91-102

### Books

GAVRILIUC O, Ostafe V. *Balancing the B vitamins. An Insight into the Health Claims of Dietary Supplements*, Quantum Biochemistry Monographs and Specific Interactions 4(2006) pp 1-102

### PhD Thesis

Title: *Perspectives on the Treatment of Diabetes Mellitus Employing Adult Stem Cell Therapy*

Scientific coordinator: Prof. Dr. Virgil Paunescu

Immunology Dept., University of Medicine and Pharmacy 'Victor Babes', Timisoara (2006-2010)

### MSc Thesis

Title: *Bayesian data analysis of linear models using JAGS*

Scientific coordinators: Lect.-Dr. Maria Jivulescu, Prof. Dr. Jürgen Pilz

MTSSCC, Dept. of Mathematics, The Polytechnic University of Timisoara, Alpen-Adria University Klagenfurt

### Abstracts and Presentations

1. Bojin F, Tirziu A, GAVRILIUC OI, Paunescu V. *Paradigm shift in vaccine strategy – synthetic long peptides (SLPs)*. A 4-a Conferinta a Asociatiei Romane de Imuno-Dermatologie, A 49-a Conferinta a Societatii de Imunologie din Romania, 30 Septembrie – 03 Octombrie 2020, eveniment onsite si online, Abstract book

- pg.54.
2. GAVRILIUC O, Zogorean R, Bojin F, Paunescu V. *CAR-based immunotherapy of EGFR-positive solid tumors using cytokine-activated peripheral blood killer cells*, Human Gene Therapy **30**(12) Dec 2019:A1-A22, International Conference on Lymphocyte Engineering, 13-15 Sep 2019, London
  3. Bojin F, GAVRILIUC O, Paunescu V *Tumor-associated fibroblasts: generic target of cancer immunotherapy*, Human Gene Therapy **29**(11):A19, International Conference on Lymphocyte Engineering, 13-15 Sep 2018, Madrid, e-poster
  4. Cean A, Ilie D, GAVRILIUC O, Paunescu V *Reproductive biotechnologies for the conservation of Romanian Grey Steppe genetic heritage*, Journal of Biotechnology **231**, 2016, S100
  5. Bojin M, Gavriiliuc O, Tatu CS, Tanasie G, Panaitescu C, Tatu CA, Paunescu V *Cytotoxic T lymphocytes functionally active against tumor microenvironment-derived specific antigen*, European Journal of Cancer **50**, Suppl 5. 2014, S217
  6. GAVRILIUC OI, Bojin F, Paunescu V *Are tumor-associated fibroblasts mesenchymal stem cell?* Stem Cells & Epigenetics Abstract Book, 16-18 Oct 2014, pg.42, poster
  7. GAVRILIUC OI, Bojin FM, Tatu CA, Paunescu V *Genetically-engineered insulin not recognized by autoreactive T Cells in T1D*, Cell Symposia- Systems Approach to Metabolic Disease Abstract Book, Chicago, 1-3 Oct 2014, poster (P22)
  8. Lazarovicz R, Toma M, GAVRILIUC O, Marusciac L, Gruia A, Tatu C, Tanasie G, Panaitescu C, Bojin F, Paunescu V. *Repurposing Na<sup>+</sup>/K<sup>+</sup> pump blockers for in vitro suppression of tumor development*. Front. Immunol. Conference Abstract: 15<sup>th</sup> International Congress of Immunology, August 22-27, 2013, Milan, Italy, Abstract book, pg.843, doi: 10.3389/conf.fimmu.2013.02.00498
  9. Toma M, Lazarovicz R, GAVRILIUC O, Marusciac L, Gruia A, Tatu C, Tanasie G, Panaitescu C, Bojin F, Paunescu V. *Tumor associated fibroblasts are endowed with increased ability to support tumor development*. Front. Immunol. Conference Abstract:15<sup>th</sup> International Congress of Immunology, August 22-27, 2013, Milan, Italy, Abstract book, pg.963 doi: 10.3389/conf.fimmu.2013.02.00446
  10. GAVRILIUC O, Paunescu V, Ilie D, Milovanov C, Tulcan C, Hutu I, Mircu C *Gene expression patterns during in vitro differentiation of bovine skeletal muscle*, Current Opinion in Biotechnology **24S**, pg. S143 (2013), European Biotechnology Congress, Bratislava May 16-18, 2013, poster presentation
  11. Ilie DE, Cean A, GAVRILIUC OI, Neo SI, Chirila D, Hutu I, Pacala N *High-resolution Melting Analysis for the Rapid and Sensitive Detection of BLAD*, Current Opinion in Biotechnology, **24S**, pg. S49 (2013), European Biotechnology Congress, Bratislava May16-18, 2013, poster presentation
  12. Bojin F, GAVRILIUC O, Tanasie G, Tatu C, Panaitescu C, Cernescu L, Marusciac L, Toma M, Lazarovicz R, Paunescu V. *Targeted methods for isolation of human cytotoxic T lymphocytes against tumor microenvironment*. Physiology Conference – New facet of function and dysfunction. Current progress in biomedical sciences and medical education, May 9-10, 2013, Iasi, Romania, Abstract book
  13. Bojin F, Ordodi V, GAVRILIUC O, Cristea M, Anghel S, Gruia A, Mic FA, Cean A, Lazarovicz R, Toma M, Marusciac L, Tanasie G, Tatu C, Panaitescu C, Paunescu V. *In vitro models for understanding molecular mechanisms underlying occurrence of obesity*. Conference and Advanced Translational Research Workshop: Chronic Diseases –From Pathogenesis to Therapy, 25-27 Oct 2012, Timisoara, Abstract book pg. 37, ISBN 978-606-8054-93-3, oral presentation
  14. Bojin F, Ordodi V, Anghel S, Cristea M, GAVRILIUC O, Marusciac L, Toma M, Lazarovicz R, Panaitescu C, Paunescu V. *Na/K – ATP-ase blockers inhibit functionality of bone marrow-derived mesenchymal stem cells*. Conference and Advanced Research Workshop – Sudden Cardiac Death and Cardioprotection, 6-9 Sept 2012, Timisoara, Abstract book pg. 97
  15. Cernescu L, Toma M, Bojin F, GAVRILIUC O, Anghel S, Cristea M, Gruia A, Tatu C, Tanasie G, Panaitescu C, Paunescu V. *Proliferative potential of double positive CD4<sup>+</sup>/CD8<sup>+</sup> T cells in co-culture system with tumor cells*. The 24th Annual Immunology Conference, 27-29 Sept 2012, Bucharest, Abstract Book pg. 102
  16. Bojin F, GAVRILIUC O, Cristea MI, Gruia AT, Anghel S, Tatu CS, Tanasie G, Panaitescu C, Tatu CA, Paunescu V. *Ouabain inhibits in vitro proliferation of tumour-associated fibroblasts and cancer cell lines*. European Journal of Cancer **48**, Suppl. 5 (2012): S52; Proceedings Book, 22<sup>nd</sup> Biennial Congress of the European Association of Cancer Research –From basic research to personalized cancer treatment, 7-10 July 2012, Barcelona, Spain
  17. Bojin F, Ordodi V, GAVRILIUC O, Cristea M, Anghel S, Gruia A, Nistor D, Crisnic D, Boleman A, Tanasie G, Tatu C, Panaitescu C, Paunescu V. *Na/K pump inhibitors decrease proliferation of normal and tumor cells*. Fiziologia-Physiology, 2012, Suppl.: 34 – The 11th national Congress of the Romanian Society of Physiological Sciences, 10-12 May 2012, Timisoara, oral presentation
  18. Paunescu V, Bojin F, Ordodi V, GAVRILIUC O, Cristea M, Anghel S, Gruia A, Mic FA, Tanasie G, Tatu C, Panaitescu C. *Molecular expression pattern of human mesenchymal stem cells –differentiated adipocytes*. Fiziologia-Physiology, 2012; Suppl: 22 - 11th National Congress of the Romanian Society of Physiological Sciences, 10-12 May 2012, oral presentation

19. Bojin F, GAVRILIUC O, Ordodi V, Cristea M, Anghel S, Crisnic D, Nistor D, Tatu C, Tanasie G, Panaitescu C, Paunescu V. *Controversies related to cell cultures obtained from various tissular samples*. Fiziologia - Physiology, 21(72), pp. 4-9 (2011)
20. GAVRILIUC O, Bojin F, Rosca A, Tatu CA, Paunescu V. *Silencing of the Her2 gene by RNA interference inhibits proliferation of breast cancer cell line SK-BR3*. Fiziologia-Physiology, 2011; suppl: 27 - 41st Annual Immunology Conference, Sept 22-24, 2011, Timisoara, Romania, oral presentation
21. Paunescu V, Bojin F, GAVRILIUC O, Tatu CA, Ordodi V, Rosca A, Cristea M, Gruia A, Anghel S, Nistor D, Crisnic D, Tatu C, Tanasie G, Panaitescu C. *Multipotent stromal cells of different origins: insights on in vitro characteristics*. Fiziologia-Physiology, 2011; suppl: 33 - 41st Annual Immunology Conference, Sept 22-24, 2011, Timisoara, Romania, oral presentation
22. Bojin F, GAVRILIUC O, Tatu CA, Ordodi V, Rosca A, Cristea M, Gruia A, Anghel S, Nistor D, Crisnic D, Tatu C, Tanasie G, Panaitescu C, Paunescu V. *Ouabain-induced effect on normal and tumor cell line*. Fiziologia-Physiology, 2011; suppl: 23 - 41st Annual Immunology Conference, Sept 22-24, 2011, Timisoara, Romania, oral presentation
23. Ordodi V, Bojin F, Gruia A, Boleman A, GAVRILIUC O, Cristea M, Anghel S, Tanasie G, Panaitescu C, Paunescu V. *Mesenchymal stem cells as model of in vitro adipogenesis*. Fiziologia-Physiology, 2011; suppl: 55 - 41st Annual Immunology Conference, Sept 22-24, 2011, Timisoara, Romania
24. GAVRILIUC O, Rosca A, Ordodi V, Gruia A, Mic F, Bojin F, Tatu C, Tanasie G, Paunescu V. *Induction of mesenchymal stem cells into insulin-secreting cells*. VIth Academician Nicolae Cajal Symposium, Bucharest, March 30-April 01 2011, Abstract book pg. 19, prezentare orala
25. Bojin F, GAVRILIUC O, Tatu CA, Ordodi V, Cristea M, Gruia A, Anghel S, Boleman A, Crisnic D, Tatu C, Tanasie G, Panaitescu C, Paunescu V. *Genetic changes during adipocytes ontogenesis*. VIth Academician Nicolae Cajal Symposium, Bucharest, March 30-April 01 2011, Abstract book pg. 19.
26. Paunescu V, Bojin F, GAVRILIUC O, Tatu CA, Ordodi V, Rosca A, Cristea M, Gruia A, Anghel S, Crisnic D, Tatu C, Tanasie G, Panaitescu C. *In vitro suppression of tumor development*. VIth Academician Nicolae Cajal Symposium, Abstract book pg. 15. Bucharest, March 30-April 01 2011.
27. Bojin F, GAVRILIUC O, Tatu CA, Cristea M, Anghel S, Crisnic D, Nistor D, Tatu C, Tanasie G, Panaitescu C, Paunescu V. *In vitro adipogenic differentiation pathway*. A XXV-a Conferință Națională a Societății Române de Fiziologie, 26-28 Mai 2011, Târgu Mureș, Romania
28. Paunescu V, Bojin F, GAVRILIUC O, Tanasie G, Panaitescu C. *Stem cells differ in their pro-angiogenic potential*. The 1st Congress CompasX, Timisoara 1-2 April, 2011, Abstract book pg. 2.
29. Paunescu V, Bojin F, Cristea M, GAVRILIUC O, Anghel S, Tanasie G, Tatu C, Panaitescu C. *Characterization of stem cells of different origins*. A XXV-a Conferință Națională a Societății Române de Fiziologie, 26-28 Mai 2011, Târgu Mureș, Romania
30. Tanasie G, GAVRILIUC O, Bojin F, Anghel S, Tatu C, Bunu C, Paunescu V. *Plasticity of human mesenchymal stem cells - In vitro assays*. Diaspora in Romanian scientific research and higher education Conference, Romanian Academy, Bucharest (Sep 22-23, 2010), oral presentation
31. GAVRILIUC O, Rosca A, Ordodi V, Gruia A, Mic F, Bojin F, Tatu C, Paunescu V. *Insulin-secreting mesenchymal stem cells for Type 1 Diabetes*. Diaspora in Romanian scientific research and higher education Conference, Romanian Academy, Bucharest (Sep 22-23, 2010), Abstract book (Stem cells) pp.36, poster
32. Bojin F, Tatu CA, GAVRILIUC O, Rosca A, Tatu C, Tanasie G, Cristea M, Gruia A, Crisnic D, Nistor D, Anghel S, Bunu C, Paunescu V. *Tumor-associated fibroblasts as a subset of mesenchymal stem cells*. Diaspora in Romanian scientific research and higher education Conference, Romanian Academy, Bucharest (Sep 22-23, 2010), Abstract book (Molecular Medicine) pp 48-49
33. Bojin F, Tatu C, GAVRILIUC O, Gruia A, Cristea M, Tanasie G, Tatu C, Bunu C, Paunescu V. *Tumor-associated fibroblasts as an activated subtype of mesenchymal stem cells*. First European Conference on Mesenchymal Stem Cells, Toulouse, France (Nov 18-20, 2010) Abstract Book, pp. 51
34. GAVRILIUC O, Bojin FM, Ordodi V, Mic FA, Rosca A, Cristea M, Tatu CA, Paunescu V. *Mesenchymal stem cells – linking immunomodulation with pancreatic regeneration in Type 1 diabetes*, 14th International Congress of Immunology, Kobe, Japan (Aug 2010), International Immunology 22 (suppl), pp 164, poster
35. Bojin FM, Tatu CA, GAVRILIUC O, Ciuculescu F, Cristea M, Rosca A, Anghel S, Gruia A, Crisnic D, Tanasie G, Tatu C, Nistor D, Bunu C, Paunescu V. *In vitro characterization of tumor-associated fibroblasts as supportive network for cancer development*, 14th International Congress of Immunology, Kobe, Japan (Aug 23-27, 2010), International Immunology 22 (suppl), pp 167
36. Bojin MF, GAVRILIUC O, Tatu CA, Bunu C, Paunescu V. *Tumor-associated fibroblasts recapitulate in vitro adipogenic differentiation pathway*, 11th International Congress on Obesity, Stockholm, Suedia (July 11-15, 2010), Obesity Reviews, pp 92-93
37. Bojin F, GAVRILIUC O, Tatu C, Tanasie G, Tatu C, Nistor D, Crisnic D, Boleman A, Bunu C, Paunescu V. *Adipogenic differentiation pathway – gene expression profile*, National Conference of the Romanian Society of Physiological Sciences, Oradea, Romania (June 2-5, 2010), Fiziologia – Physiology, (suppl.) pp

38. Tanasie G, Bojin F, Tatu CA, GAVRILIUC O, Tatu C, Nistor D, Ionita H, Bunu C, Ordodi V, Paunescu V. *In vitro* characterization of epithelial-like cells induced from adult bone marrow derived mesenchymal stem cells, National Conference of the Romanian Society of Physiological Sciences, Oradea, Romania (June 2-5, 2010), Fiziologia – Physiology, (suppl.) pp 13
39. Paunescu V, Bojin F, Tatu CA, GAVRILIUC O, Rosca A, Tanasie G, Bunu C. *Tumor-associated fibroblasts as a functional immunosuppressive network in cancer development*, Immunology and Clinical Allergology Joint Meeting, Sibiu (April 28 - May 1, 2010), Abstract book pp. 22
40. Bojin F, Tatu CA, GAVRILIUC O, Boleman A, Gruia A, Cristea M, Anghel S, Nistor D, Tatu C, Tanasie G, Bunu C, Paunescu V. *Adipocytes-induced changes in tumor microenvironment and cancer cells behavior*. Immunology and Clinical Allergology Joint Meeting, Sibiu (April 28 - May 1, 2010), Abstract book pp. 30
41. Cristea M, Gruia A, Bojin F, Gai E, GAVRILIUC O, Tatu C, Paunescu V. *Functional studies and tumoral cells exposed to different concentration of Aristolochia Clematitis aqueous extracts*. Immunology and Clinical Allergology Joint Meeting, Sibiu (April 28 - May 1, 2010), Abstract book pp. 28
42. Gruia A, Bojin F, Cristea M, Ordodi VL, GAVRILIUC O, Gai E, Anghel S, Rosca A, Tatu C, Paunescu V. *Immunophenotypic characterization of several tumoral cell lines and cytotoxicity evaluation of certain antitumoral compounds by Alamar Blue assay*. Immunology and Clinical Allergology Joint Meeting, Sibiu (April 28 - May 1, 2010), Abstract book pp. 28
43. Bojin MF, GAVRILIUC O, Tatu CA, Tanasie G, Tatu C, Bunu C, Paunescu V. *Normal and abnormal gene expression in adipogenic differentiation pathway*. Academician Nicolae Cajal Symposium Vth Edition. „Translational Oncology, Cell Therapy, Virology” Romanian Academy library, Bucharest (April 15-16, 2010), Abstract book pp. 31
44. Paunescu V, Bojin F, Tatu CA, GAVRILIUC O, Rosca A, Gruia A, Ciuculescu F, Tanasie G, Tatu C, Bunu C. *Tumor-associated fibroblasts involvement in cancer development*. Academician Nicolae Cajal Symposium Vth Edition. „Translational Oncology, Cell Therapy, Virology” Romanian Academy library, Bucharest (April 15-16, 2010), Abstract book pp. 5-6
45. Tanasie G, Bojin F, Tatu CA, GAVRILIUC O, Tatu RF, Bunu C, Anghel S, Cristea M, Paunescu V. *In vitro* induction of bone marrow derived mesenchymal stem cells in epithelial-like cells. Academician Nicolae Cajal Symposium Vth Edition. „Translational Oncology, Cell Therapy, Virology” Romanian Academy library, Bucharest (April 15-16, 2010), Abstract book pp. 10
46. Bunu C, Matis B, Tatu CA, Bojin F, GAVRILIUC O, Tanasie G, Tatu C, Paunescu V. *Establishment of primary pulmonary fibroblasts culture and in vitro induction of smooth muscle phenotype*. Academician Nicolae Cajal Symposium Vth Edition. „Translational Oncology, Cell Therapy, Virology” Romanian Academy library, Bucharest (April 15-16, 2010), Abstract book pp. 25
47. Bojin F, Tatu C, GAVRILIUC O, Bunu C, Paunescu V. *Molecular mechanisms involved in regulation of adipogenesis in mesenchymal stem cells and tumor-associated fibroblasts*. 2nd International Symposium on Adipobiology and Adipopharmacology, Varna, Bulgaria (Oct 23-25, 2009), Adipobiology 1, pp 123
48. Matis B, Tatu C, Cernescu L, Bojin F, GAVRILIUC O, Tanasie G, Bunu C. *Airway fibroblasts phenotype markers after pro-inflammatory cytokines challenge*. ERS Vienna Congress (Sept 12-16, 2009), Eur Respir J Suppl 34(53; P901), pp 147
49. Bojin MF, Paunescu V, Tatu CA, Rosca A, GAVRILIUC O, Crisnic D, Bunu C, Tanasie G, Tatu C, Gruia A, Nistor D. *Tumor microenvironment induces changes in human mesenchymal stem cells behavior*. The XXXVI Congress of Physiological Sciences Kyoto, Japan, (July 27-Aug 1, 2009), J Physiol Sci 59, (suppl 1), pg. 443
50. Paunescu V, Bojin F, Tatu CA, GAVRILIUC O, Ciuculescu F, Gruia A, Tanasie G, Bunu C. *In vitro* evaluation of mesenchymal stem cells to inhibit tumor progression. 3rd International workshop on multipotent stromal cells (MSCs) for regenerative medicine and immune regulation (June 12-13, 2009) Frankfurt University Hospital, Germany, Abstract Book, pg. 2
51. Bojin MF, GAVRILIUC O, Tatu CA, Szilagyi D, Gruia A, Crisnic D, Tanasie G, Paunescu V. *Tumor microenvironment induces changes in human mesenchymal stem cells behavior*. Mesenchymal stromal cells and tumor microenvironment: an update, Montpellier, France (May 13-15, 2009), Abstract book, pp.14
52. GAVRILIUC O, Ciuculescu FM, Cristea M, Bojin FM, Tatu CA, Paunescu V *Expression of pluripotency transcription factors in mesenchymal stem cells is not indicative of their potential for differentiation* The XXth International Symposium on Morphological Sciences, Timisoara (Sept 12 – 16, 2008), oral presentation
53. GAVRILIUC O, Ciuculescu FM, Mirea FM, Tatu CA, Paunescu V *Susceptibility of induced pluripotent stem cells to oncogenic mutation*, CONSERT Labcourse, *Lentiviral vectors: concepts, practice, hope and reality*, Universite d'Evry-Val d'Essonne, Evry, France (June 29 – July 5, 2008), poster
54. Paunescu V, Deak E, Herman D, GAVRILIUC O, Siska IR, Tanasie G, Bunu C, Anghel S, Tatu CA, Oprea TI, Henschler R, Ruster B, Bistriean R, Seifried E *In vitro* differentiation of human mesenchymal stem cells to epithelial lineage, CSHL 73rd Symposium: Control & Regulation of Stem Cells , Cold Spring Harbor Laboratory, NY, USA (May 28 – June 2, 2008) , poster

55. Mirea MF, Tanasie G, Siska IR, Deak E, Herman D, Anghel S, GAVRILIUC O, Bunu C, Paunescu V. *Mesenchymal stem cells – Epithelial cells in vitro differentiation pathways*. JDRF Center for Beta Cell Therapy, Training Course 2008, May 28-30, Gentofte, Denmark, Abstract volume, pg. 21
56. Paunescu Virgil, GAVRILIUC O, Tatu CA, Anghel S, Mirea F, Rosca A, Tanasie G, Cioaca R, Crisnic D, Paunescu V, Cristea M, Simionescu O, Vintila T *Genetic engineering of cancer stem cells in view of immune response modulation in tumours of non-viral origin*, ERA STEM Conference, Timisoara (Nov 8-10, 2007), *Fiziologia – Physiology* 17(55), pp 4, oral presentation
57. Mirea F, Nistor D, Tatu C, Tanasie G, Siska I, Anghel S, Plesca D, Cioaca R, GAVRILIUC O, Bunu C, Paunescu V. *Differentiation of mesenchymal stem cells towards different cell lineages under the influence of culture medium factors*. ERA STEM Conference, Timisoara (Nov 8-10, 2007), *Fiziologia – Physiology* 17(55), pp 44
58. Tanasie G, Tatu C, Bunu C, GAVRILIUC O, Tascu M, Igna C, Vasilco R, Cristea M, Paunescu V, Anghel S, Voicu A, Dema A, Paunescu Virgil *Combined bioimplants for osteoarticular reconstruction*, Viasan Conference, Sibiu (Oct 25-26, 2007), oral presentation
59. GAVRILIUC O, Ilie D, Mirea F, Paunescu V, Bunceanu M, Simona A, Tatu CA, Paunescu V. *Mesenchymal-epithelial transition during differentiation of hMSC into insulin producing cells, Transdifferentiation to BetaCells*, University of Bath, UK ( June 26-28 2007), poster
60. School scientific sessions, Timisoara: *Carnivorous Plants* (March 2005), *Antimicrobial Properties of Kefir Lactobacilli* (May 2004)