PERSONAL INFORMATION

Irina Domnica Titorencu

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Sex Female | Date of birth 17/02/1977 | Nationality Romanian

WORK EXPERIENCE

2017-present	**Coordinator of Central Cell Culture Facility**
	"Nicolae Simionescu" Institute of Cellular Biology and Pathology, Department of Regenerative Medicine, Bucharest, Romania
	▪ Implement and oversee good laboratory practices; ▪ Developing and writing SOPs; ▪ Supervising laboratory assistants and technicians; ▪ Planning for the acquisition of laboratory supplies and equipment, including for the Sterilization Station; ▪ Instruction of staff and students in the use of cell culture techniques, laboratory procedures and safe working practices.
2010-present	**Group leader of Cell and Tissue Engineering Laboratory**
	"Nicolae Simionescu" Institute of Cellular Biology and Pathology, Department of Regenerative Medicine, Bucharest, Romania
2007-present	**Scientific Researcher**
	"Nicolae Simionescu" Institute of Cellular Biology and Pathology, Department of Regenerative Medicine, Bucharest, Romania
	▪ Cell culture techniques ▪ Isolation and characterization of human bone marrow derived mesenchymal stromal cells, focusing on their differentiation into osteoblasts ▪ Studies on the interaction between endothelial cells and collagen membranes and 3D matrices ▪ Studies on the interaction between osteoprogenitor cells and metallic, organic and hydroxyapatite-based scaffolds ▪ Writing scientific papers, laboratory activity reports, project proposals and project monitoring reports, including financial reports ▪ Ensuring that the equipment of the cell culture central laboratory is properly calibrated and that stocks for cell culture supplies, chemicals and equipment are up-to-date ▪ Documentation of the cell lines within the cell bank
	Business or sector Academic Research
2001-2007	**Junior Scientific Researcher**
	"Nicolae Simionescu" Institute of Cellular Biology and Pathology, Department of Regenerative Medicine, Bucharest, Romania
	▪ Cell culture techniques ▪ Biochemical assays – ELISA, Western Blot, protein concentration, RNA isolation, RT-PCR, PCR, gel-electrophoresis ▪ Keeping records on the methods, data and results in order to prepare research papers and internal reports ▪ Electron microscopy ▪ Histology, immunocytochemistry, immunohistochemistry ▪ Flow cytometry
	Business or sector Academic Research

2000-2001	**Research Assistant**
	"Nicolae Simionescu" Institute of Cellular Biology and Pathology, Central Cell Culture Laboratory, Bucharest, Romania
	▪ Basic cell culture techniques ▪ Ensuring and maintaining the biosafety level as well as the functionality of the main equipment- bio-hoods, incubators, centrifuges, microscopes ▪ Ensuring the proper cleaning of the equipment as well as the appropriate storage of the chemicals
	Business or sector Academic Research

EDUCATION AND TRAINING

June 2010- March 2013 — **Postdoctoral Stage in Biomateriales**

"Petru Poni" Institute of Macromolecular Chemistry, Iasi and "Nicolae Simionescu" Institute of Cellular Biology and Pathology, Bucharest, Romania (POSDRU/89/1.5/S/55216)

▪ Project: In vitro models for the biocompatibility studies of different biomaterials using human osteoprogenitor cells with applicability in bone tissue engineering and implantology

2001-2007 — **PhD in Biology**

Doctoral School of the Romanian Academy - "Nicolae Simionescu" Institute of Cellular Biology and Pathology, Bucharest, Romania

▪ Thesis: The osteoblasts differentiation from human adult mesenchymal stem cells

1999-2000 — **Master degree**

Faculty of Biology, University of Bucharest, Romania

▪ Oncobiology

1995-1999 — **Bachelor Degree in Biology**

Faculty of Biology, University of Bucharest, Romania

PERSONAL SKILLS

Mother tongue(s): Romanian

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C2	C2	C2
French	B1	B1	A1	A1	A1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

Communication skills

▪ Good interpersonal skills acquired as partner in different translational research projects involving mixt consortia of engineers, chemists and biologists: 2 international projects and 15 national projects
▪ Good communication skills developed by participating in over 30 national and international meetings

Organisational / managerial skills

- Good time and resources management skills by being responsible for managing the research activities as well as the financial resources for several national funded projects in which the group I lead was involved as a partner
- Good leadership skills acquired first by being project leader for a national postdoctoral grant (PD134/2010) and after as group leader of the Cell and Tissue Engineering Laboratory from the "Nicolae Simionescu" Institute of Cellular Biology and Pathology

Digital competence

- Competent with Microsoft Office, Adobe (Reader, Photoshop), P, Origin Scion Image, TotalLab, Summit 4.3 for flow cytometry

Driving licence

driving licence category B

ADDITIONAL INFORMATION

Honours and awards

- Gold Medal for patent application „Nervous conductors made of collagen and process for preparing the same", Inventors: Albu M. G., Lascar I., Zamfirescu D. G., Simionescu M., Zegrea I., Titorencu I., Popescu M., Bumbeneci G., EUREKA, Brussels, 2013
- AGEPI Prize (Agence d'État pour la Propriété Intellectuelle,) for: „Nervous conductors made of collagen and process for preparing the same", 62nd edition of the International Invention, Research and New Technology Fair - INNOVA, Brussels, 2013.
- Gold Medal for presentation "Optimization of human mesenchymal stem cells interaction with innovative biomimetic structures for tissue engineering applications", A. Vladescu, A.C. Parau, I. Titorencu, V. Pruna, C. M. Cotrut, D. M. Vranceanu, Proiect no. 621PED/2022, (registration cod PN-III-P2-2.1-PED-2021-4275) International Exhibition INVENTCOR, 4th Edition, 14 -16.09.2023, Deva, Romania

Memberships

- Romanian Society for Biomaterials
- Romanian Society for Cell and Molecular Biology
- International Society of Regenerative Medicine and Surgery

Courses

- Training stage in human endothelial progenitor cells isolation from umbilical and peripheral blood and in vitro expansion- Centre for Vision and Vascular Science, Queen's University, Belfast, UK, June 2012
- Training stage in biocomposite synthesis and characterization, Group for Advanced Biomaterials Research, University of Chemical Technology and Metallurgy, Sofia, Bulgaria, March-April 2012
- Biomaterials and Regenerative Medicine: from molecular and cell biology to tissues and organs repair, Department of Materials Engineering and Industrial Technologies and the BIOtech Interdepartment Research Center of the University of Trento, in collaboration with the European Institute of Excellence on Tissue Engineering and Regenerative Medicine and the TERMIS-EU, Italy, September 2011
- Bioactive/Biocompatible polymeric materials, Centre of polymer and Carbon Materials Zabrze, Poland, March 2011
- Advanced Summer Course in Cell-Materials interactions- Bioinspired matrices for tissue regeneration, Instituto de Engenharia Biomedica, Porto, Portugal, June 2008
- Summer School: Frencophone Summer's School IX – Biologies & Pathologies Moleculaires: Biotechnologies- organized by Professor Emeritus Jean Montreuil, V. Goldis West University of Arad, Romania, July 2005

ANNEXES

Annexe 1: List of selected papers.

Annexe 1: List of selected papers

1. **I. Titorencu**, VV. Jinga, E. Constantinescu, AV. Gafencu, C. Ciohodaru, I. Manolescu, C. Zaharia, M. Simionescu, Proliferation, differentiation and characterization of osteoblasts from human bone marrow mesenchymal cells Cytotherapy 9 (7), 682-696, 2007.

2. **I. Titorencu**, VV. Jinga, A. Lungu, V. Trandafir, M. Albu, I. Rau, H. Iovu, New scaffold structure based on collagen. Fabrication and biocompatibility evaluation, Molecular Crystals and Liquid Crystals, 486:147[1189]-156[1198], 2008.

3. A. Burlacu, A-M. Rosca, H. Maniu, **I. Titorencu**, E. Dragan, VV. Jinga, M. Simionescu, Promoting effect of 5-azacytidine on the myogenic differentiation of bone marrow stromal cells. Eur. J. Cell Biol. 87 (3):173-184., 2008.

4. **I. Titorencu**, MG Albu, M. Giurginca, V. Jinga, I. Antoniac, V. Trandafir, C. Cotrut, F. Miculescu, M. Simionescu, In vitro biocompatibility of human endothelial cells with collagen-doxycycline matrices. Molecular Crystals and Liquid, Vol. 522: Pp. 242/[654]–256/[668], 2010.

5. M. Braic, V. Braic, M. Balaceanu, A.Vladescu, CN. Zoita, **I.Titorencu**, V. Jinga, F. Miculescu, Preparation and characterization of biocompatible Nb–C coatings, Thin Solid Films 519, 4064, 2011.

6. MG. Albu, **I. Titorencu**, C. Chelaru, The stability of some collagen hydrogels, The Leather and Footwear Journal, Vol. 11, No.1, 11-20, ISSN 1583-4433, 2011.

7. A. Georgescu, N. Alexandru, A. Constantinescu, **I. Titorencu**, D. Popov. The promise of EPCs-based therapies on vascular dysfunction in diabetes. European Journal of Pharmacology 669: 1-6, 2011.

8. V. Braic, M.Braic, M.Balaceanu, A.Vladescu, CN Zoita, **I.Titorencu**, V. V. Jinga (Zr,Ti)CN coatings as potential candidates for biomedical applications, Surf. Coat. Technol. 206(4):604-609, 2011.

9. A. Georgescu, N. Alexandru, M. Nemecz, **I. Titorencu**, D. Popov. Enoxaparin reduces adrenergic contraction of resistance arterioles in aging and in aging associated with diabetes via engagement of MAP kinase pathway. Blood Coagulation and Fibrinolysis, 22(4):310-316, 2011.

10. CM. Cotrut, M.Balaceanu, **I.Titorencu**, V.Braic, M.Braic, ZrNbCN thin films as protective layers in biomedical applications, Surface & Coatings Technology, 211:57-61, 2011.

11. **I. Titorencu**, MG. Albu, MV. Ghica, L. Popa, A. Ficai, L. Albu, V. Jinga, Collagen-doxycycline matrices used in tissue engineering, Farmacia,59(6): 794-802, 2011.

12. **I. Titorencu**, MG. Albu, F. Anton, A. Georgescu, VV. Jinga, Collagen – dexamethasone and collagen -D3 scaffolds for bone tissue engineering, Mol. Cryst. Liq. Cryst., 555(1): 208-217, 2012.

13. MV. Ghica, MG. Albu, **I. Titorencu**, L. Popa, L. Albu, Collagen-doxycycline topical hydrogels: rheological, kinetic and biocompatibility studies, Farmacia, 60(6):866-876, 2012.

14. MG. Albu, M. Ferdes, DA. Kaya, MV. Ghica, **I. Titorencu**, L. Popa, L. Albu, Collagen wound dressings with anti-inflamatory activity, Molecular Crystal and Liquid Crystal, 555(1): 271-279, 2012.

15. A. Georgescu, N. Alexandru, E. Andrei, **I. Titorencu**, E. Dragan, C. Tarziu, S. Ghiorghe, E. Badila, D. Bartos, D. Popov, Circulating microparticles and endothelial progenitor cells in atherosclerosis: Pharmacological effects of irbesartan, Journal of Thrombosis and Haemostasis 10(4):680-691, 2012.

16. A. Mazare, M. Dilea, D. Ionita, **I. Titorencu**, V. Trusca, E. Vasile, Changing bioperformance of TiO2 amorphous nanotubes as an effect of inducing crystallinity, Bioelectrochemistry,87:124-131, 2012.

17. M.V. Ghica, MG. Albu, **I. Titorencu**, L. Popa, L. Albu, Collagen-doxycycline topical hydrogels: rheological, kinetic and biocompatibility studies, Farmacia, 60(6):866-876, 2012.

18. MG. Albu, D.M. Suflet, G.C. Chitanu, P. Budrugeac, **I. Titorencu**, V. Trandafir, Biocomposites based on collagen and phosphorylated dextran for bone regeneration, J. Mater. Res., 27(7):1086-1096, 2012.

19. D. Ionita, M. Dilea, **I. Titorencu**, I. Demetrescu, Merit and demerit effects of silver nanoparticles in the bioperformance of an electrodeposited hydroxyapatite: nanosilver composite coating, J. Nanopart Res., 14:1152-1162, 2012.

20. CM. Cotrut, V. Braic, M. Balaceanu, **I. Titorencu**, M. Braic, AC. Parau, Corrosion resistance, mechanical properties and biocompatibility of Hf-containing ZrCN coatings, Thin Solid Films, 538: 48-55, 2013.

21. AD. Bendrea, L. Cianga, E. G. Hitruc, **I. Titorencu**, I. Cianga, Fluorescent nanoparticles from "hairy-rods", water-self dispersible amphiphilic polythiophenes, Materiale Plastice, 50(2):71-78, 2013.

22. M. Drobota, DGh. Dimitriu, B. Simionescu, **I. Titorencu**, M. Olaru, M. Aflori, Cytocompatibility of PET films after DC helium plasma treatments and collagen immobilization, REV. CHIM., 64(7):761-765, 2013.

23. V. Braic, M. Balaceanu, M. Braic, **I. Titorencu**, V. Pruna, AC. Parau, C. Fanara, A. Vladescu „Characterization of the Ti–10Nb –10Zr–5Ta alloy for biomedical applications", Journal of Materials Engineering and Performance (JMEPEG) 23(1):326-332, 2014.

24. S. Grigorescu, V. Pruna, **I. Titorencu**, V. V. Jinga, A. Mazare, P. Schmuki, I. Demetrescu, The two step nanotube formation on TiZr as scaffolds for cell growth, Bioelectrochemistry, 98:39-45, 2014.

25. C. Dumitriu, SA. Bogdan, **I. Titorencu**, V. Pruna, VV. Jinga, RM. Latonen, J. Bobacka, I. Demetrescu, Electrospun Ti2 decorated Ti substrate for biomedical application, Materials Science and Engineering C, 45:56-63, 2014.

26. **I. Titorencu**, V. Pruna, VV. Jinga, M. Simionescu, Osteoblast ontogeny and implications for bone pathology: an overview, Cell Tissue Res., 355(1):23-33, 2014.

27. A. Vladescu, M. Braic, F. Ak Azem, **I. Titorencu**, V. Braic, V. Pruna, A. Kiss A.C. Parau, I. Birlik, Effect of the deposition temperature on corrosion resistance and biocompatibility of the hydroxyapatite coatings, Applied Surface Science, 354 B:373-379, 2015.

28. F. Ak Azem, I. Birlik, V. Braic, M. Toparli, E.Celik, A. Parau, A. Kiss, **I. Titorencu**, A. Vladescu, Effect of SiC interlayer between Ti6Al4V alloy and hydroxyapatite films, Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 229: 307-318, 2015.

29. A. Vladescu, SC. Padmanabhan, F. Ak Azem, M. Braic, **I. Titorencu**, I. Birlik, MA. Morris, V. Braic, Mechanical properties and biocompatibility of the sputtered Ti doped hydroxyapatite, Journal of the Mechanical Behavior of Biomedical Materials, 63: 314-325, 2016.

30. DM. Vranceanu, CM. Cotrut, M. Bramowicz, **I. Titorencu**, S. Kulesza, A. Kiss, A. Berbecaru, V. Pruna, M. Branzei, A. Vladescu, Osseointegration of sputtered SiC-added hydroxyapatite for orthopaedic applications, Ceramic International 42(8):10085-10093, 2016.

31. A. Vladescu, **I. Titorencu**, Y. Dekhtyar, V. Jinga, V. Pruna, M. Balaceanu, M. Dinu, I. Pana, V. Vendina, M. Braic, In vitro biocompatibility of Si alloyed multi-principal element carbide coatings, Plos One, 11 (8):e0161151. doi: 10.1371/journal.pone.0161151. eCollection 2016.

32. **I.Titorencu,** M.G. Albu, M.A. Nemecz, V.V. Jinga, Natural polymer-cell bioconstructs for bone tissue engineering,Current Stem Cell Research & Therapy 12(2):165-174, 2017.

33. CM. Cotrut, AC. Parau, AI. Gherghilescu, **I. Titorencu**, I. Pana, DV. Cojocaru, V. Pruna, L. Constantin, I. Dan, DM. Vranceanu, A. Vladescu, Mechanical, in vitro corrosion resistance and biological compatibility of cast and annealed Ti25Nb10Zr alloy, Metals, 7(3) 86, 2017.

34. A-M Rosca, R. Tutuianu, **I. Titorencu**, Mesenchymal stromal cells derived exosomes as tools for chronic wound healing therapy, Rom J Morphol Embryol. 59(3):655-662, 2018.

35. A.Vladescu, V. Pruna, S. Kulesza, V. Braic, **I. Titorencu**, M. Bramowicz, A. Gozdziejewska, A. Parau, C. M.Cotrut, I. Pana, M. Dinu, M. Braic,Influence of Ti, Zr or Nb carbide adhesion layers on the adhesion, corrosion resistance and cell proliferation of titania doped hydroxyapatite to the Ti6Al4V alloy substrate, utilizable for orthopaedic implants, Ceramics International 45(2)A: 1710-1723, 2019.

36. R. Ţuţuianu, AM. Roşca, G. Florea, V. Prună, DM. Iacomi, LA. Rădulescu, TP. Neagu, I. Lascăr, **I. Titorencu**, Heterogeneity of human fibroblasts isolated from hypertrophic scar, Romanian Journal of Morphology and Embryology, 60(3):793-802, 2019.

37. M. Dinu, L. Braic, S. C. Padmanabhan, MA. Morris, **I. Titorencu**, V. Pruna, A. Parau, N. Romanchikova, LF. Petrik, A. Vladescu, Characterization of electron beam deposited Nb_2O_5 coatings for biomedical applications, Journal of the Mechanical Behavior of Biomedical Materials,103: 103582, 2020.

38. R. Tutuianu, A.M. Rosca, M.G. Albu Kaya, V. Pruna, TP. Neagu, I. Lascar, M. Simionescu, **I. Titorencu**, Mesenchymal stromal cell-derived factors promote the colonization of collagen 3D scaffolds with human skin cells. J Cell Mol Med., 24(17):9692–704, 2020.

39. R. Tutuianu, A-M. Rosca, MD. Iacomi, M. Simionescu, **I. Titorencu**, Human mesenchymal stromal cell-derived exosomes promote in vitro wound healing by modulating the biological properties of skin keratinocytes and fibroblasts and stimulating angiogenesis, IJMS, 22,6239, 2021.

40. DM Iacomi (Ghetu), AM Rosca, R Tutuianu, TP Neagu, V Pruna, M Simionescu, I Titorencu. Generation of an immortalized human adipose-derived mesenchymal stromal cell line suitable for wound healing therapy. Int J Mol Sci. **23**: 8925, 2022.

41. E. Dănilă, R. Stan, MA. Kaya, G. Voicu, MM. Marin, A. Moroşan**, I. Titorencu**, R. Ţuţuianu, Valorization of Cyprinus Carpio skin for biocompatible collagen hydrolysates with potential application in foods, cosmetics and pharmaceuticals, Waste Biomass Valor, 13: 917-928, 2022.

42. I. Luca, M. G. Albu Kay, **I. Titorencu**, CE. Dinu-Pîrvu, MM. Marin, L. Popa, A-M. Roșca, A. Antoniac, V. Anuța, MV. Ghica, Design and Evaluation of New Wound Dressings based on Collagen-Cellulose Derivatives, Materials and Design 236, 112469, 2023.

43. DM. Vranceanu, E. Ungureanu, IC. Ionescu, AC. Parau, V. Pruna, **I. Titorencu**, M. Badea, C-Ș. Gălbău, M. Idomir, M. Dinu, et al. In Vitro Characterization of Hydroxyapatite-Based Coatings Doped with Mg or Zn Electrochemically Deposited on Nanostructured Titanium. Biomimetics *9*, 244, **2024**.

44. F. Popescu, **I. Titorencu**, M. Albu Kaya, F. Miculescu, R. Tutuianu, AE. Coman, E. Danila, MM. Marin, D-L. Ancuta, C. Coman, et al. Development of Innovative Biocomposites with Collagen, Keratin and Hydroxyapatite for Bone Tissue Engineering. *Biomimetics 9*, 428. **2024**.

45. BV. Sorca, DA. Kaya, MG. Albu Kaya, M. Enachescu, D-M. Ghetu, L-B. Enache, I. Boerasu, AE. Coman, LC. Rusu, R. Constantinescu, **I. Titorencu**. Bone Fillers with Balance Between Biocompatibility and Antimicrobial Properties., Biomimetics. 10(2):100, **2025**.

46. DM. Ghetu, K. Raymond, **I. Titorencu**, M. Simionescu, Innovative Strategies: Use of Stromal Cell-Derived Secretome for Chronic Wound Therapy, IJMS, 26:12, **2025**.

47. I. Luca, MG. Albu Kaya, **I. Titorencu**, CE. Dinu-Pîrvu, MM. Marin, L. Popa, AM. Rosca, A. Antoniac, V. Anuta, RM. Prisada, et al. Influence of Mucoadhesive Polymers on Physicochemical Features and Biocompatibility of Collagen Wafers, ACS Polym Au. 5:3, 282–297, **2025**.

48. AF. Vladu, MG. Albu Kaya, A. Ficai, D. Ficai, R. Tutuianu, L. Motelica, VA. Surdu, OC. Oprea, RD. Truşcă, **I. Titorencu**, Localized Combination Therapy Using Collagen–Hydroxyapatite Bone Grafts for Simultaneous Bone Cancer Inhibition and Tissue Regeneration. Polymers 17(16), 2239, **2025**.

Book chapters

1. **I.Titorencu**, MG. Albu, V. Jinga. The future of cardiovascular medicine: Biomaterials for tissue therapy. In book: *From Vascular Cell Biology to Cardiovascular Medicine*, Ed: Adriana Georgescu, Felicia Antohe, published by RESEARCH SIGNPOST TRANSWORLD RESEARCH NETWORK, ISBN - 978-81-7895-503-2, 2011.

2. MG. Albu, **I.Titorencu**, MV. Ghica, "Collagen-based Drug Delivery Systems for Tissue Engineering" in book: *Biomaterials Applications for Nanomedicine*, InTech, ISBN 978-953-307-661-4, 2011.

3. **I. Titorencu**, V. Pruna, VV. Jinga, M. Simionescu, Bone replacement therapy. *Advanced biocompatible structures for prospective bioengineering: Concepts and Strategies*, Ed: M. Costache, M. Simionescu, The Publishing House of the Romanian Academy, ISBN 978-973-27-2317-3, 2013.

4. N. Alexandru, **I. Titorencu**, S. Frunză, E. Bădilă, A. Georgescu, Endothelial Progenitor Cell Dysfunction in the Pathogenesis of Vascular Complications of Diabetes**,** "*Advances in biochemistry in health and disease*", Ed C.C. Kartha, S. Ramachandran, M Radhakrishna Pillai, Springer, ISBN 978-3-319-60323-0, p.159-208, 2017.

5. M. Dinu, S. Franchi, V. Prună, C. M. Cotruț, V. Secchi, M. Santi, **I. Titorencu**, C. Battocchio, G. Iucci, A. Vlădescu, Ti-Nb-Zr system and its surface biofunctionalization for biomedical applications. „*Titanium for Medical and Dental Applications - A review of all aspects of titanium use in the medical and dental industries*", Ed. F. Froes, M. Qian, Elsevier, ISBN 9780128124567, 2018.

6. A-M Rosca, R. Tutuianu, **I. Titorencu**, Advances in Skin Regeneration and Reconstruction. In book: *Frontiers in stem cells and regenerative medicine research* Vol. 9, Ed. Atta-ur- Rahman and Shazia Adjum, 143-187, Bentham Science Publishers LTD, ISBN: 978-1-68108-436-7, 2020.

Patents

1. **BOPI nr. 12/2012** : Albu M. G., Lascar I, Zamfirescu DG, Simionescu M, Zegrea I, **Titorencu I**, Popescu M, Bumbeneci G, " Nervous conductors made of collagen and process for preparing the same";

2. **BOPI nr. 3/2019**: Albu MG, Lascăr I, Stancu IC, **Titorencu I**, Zamfirescu DG, Zegrea I, Marin S, Lungu A, Nitipir C, Țuțuianu R, Simionescu M, "Porous stratified scaffolds for the personalized treatment of difficult wounds and process for preparing the same".

3. **BOPI nr. 6/2021**: Vladescu A, Cotruț CM, Kiss AE, Braic M, **Titorencu I**, Braic V, „thin inorganic bioactive osteoconductive layers based on hydroxyapatite deposited on magnesium alloy substrate".

4. **Patent application** (OSIM) A/00370/26.06.2021 M. Simionescu, **I. Titorencu**, AM Rosca, V. Pruna, R. Tutuianu, MD Ghetu, I. Lascar, T. P. Neagu, L. Mogoanta, I.A. Checherita, G.D. Mogosanu, N.D. Pirici, C.T. Streba, A.C. Barca, A.C. Burdusel, A.E. Stoica, A. M. Grumezescu,C. Chircov.:„Composite polymeric hydrogels with antibacterial and healing properties and process for obtaining them".

5. **Patent application** (OSIM) A/00760/28.11.**2023**, D.M. Vranceanu, I.D. Titorencu, A. Vladescu (Dragomir), E. Ungureanu, V. Pruna, A.C. Parau, C.M. Cotrut, "Bioactive ceramic-based biomimetic coating for titanium implantable medical devices".