



Personal information

First name / Surname

BRATOSIN DANIELA

Address(es)

WORKING PLACE ADDRESS:

1. National Institute of Research and Development for Biological Sciences of Bucharest (INCDSB), Splaiul Independenței street no. 296, sector 6, 060031-Bucharest, Romania
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Work experience

Dates

2000-present

Occupation or position held

Senior Researcher (CSI)

Main activities and responsibilities

Head of the « Cellular Dynamics and Flow Cytometry »
(http://www.dbiuro.eu/incdsb_bucharest/cellular_dynamics_and_flow_cytometry-879-en.html)

Member of the Scientific Council (2000-present)

Name and address of employer

NATIONAL INSTITUTE OF RESEARCH AND DEVELOPMENT FOR BIOLOGICAL SCIENCES (INCDSB-Bucharest), Splaiul Independenței street no. 296, sector 6, 060031 Bucharest, Romania, POB 17 – 16

Type of business or sector

Research, development and innovation in Biology, Pharmacomedical biotechnology, Toxi- and Ecotoxicology
Managerial activity

Period

2006- present

Occupation or position held

- **Professor - Ordin Min.1013/15.05.2007**
- Director of Center for Biological Research
- Director IOSUD

Main activities and responsibilities

- Coordination for PhD theses in the field of Biology- Doctoral School of the V. Goldis University of Arad
- **Professor of Animal Biology and Ecotoxicology**

Name and address of employer

„VASILE GOLDIS” WESTERN UNIVERSITY OF ARAD, Revolutiei Bvd. No. 94 - 96, 310025- Arad,Romania

Occupation or position held

- Fundamental and applied research
- Academic teaching and scientific coordinator for students
- Coordination of Bachelor and Master theses at "Vasile Goldis" Western University of Arad
- Scientific coordination for PhD theses in the field of Biology

Period

- 1990-2000 - BIOCHEMISTRY INSTITUTE OF THE ROMANIAN ACADEMY, Spl. Independenței no. 296
- 1980-1990 - CENTRAL INSTITUTE OF BIOLOGICAL SCIENCES, Biochemistry Laboratory, Bucharest
- 1980-1990- CLINICAL HOSPITAL of SCHELA, Olteni, County Teleorman (*nomination of government*)

EDUCATION AND TRAINING

- Period**
- 1976 - 1977- Master's degree in Microbiology - Genetics (master), University of Bucharest, Faculty of Biology
 - 1972 -1976- Bachelor's degree at the Faculty of Biology, University of Bucharest

Foreign languages	Understanding	Speaking	Writing
French	Very good	Very good	Very good
English	Very good	Very good	Very good

- STAGES OR SPECIALISATIONS ABROAD**
- 1986 - *FEBS-Advances Course on Glycoconjugates*, Villeneuve d'Ascq, France;
 - 1990 - *Short FEBS-fellowship*, Université des Sciences et Technologies de Lille, Laboratoire de Chimie Biologique, France
 - 1993 - 1995 - *3 scholarships of 6 months of the European Community - Go EST-Go WEST program*
 - 1995 - 1996 - *MESR post -doctoral stipendium* (France)- PECO-CEI program, University of Sciences and Technologies of Lille, France
 - 1996 – 2009 - *14 scholarships awarded* by the Regional Center of Transfusions from Lille (France) and Université des Sciences et Technologies de Lille, Laboratoire de Chimie Biologique and MacoPharma Pharmaceutical Laboratories, Tourcoing, France
 - 2006 - 2009 - *Visiting Professor* (12 months) -Université des Sciences et Technologies de Lille1, France

SCIENTIFIC RESEARCH ACTIVITY

Projects/grants (still in development) as Project Director:

NUCLEU PROGRAM- Biodivers PN 1619010 (2015-2018) "Improving quality of blood components for transfusion and their biotechnological valorification after deadline of conservation

POS CCE CONTRACT NO.204/2007/2010, OPERATION 2.1.2: COMPLEX RESEARCH PROJECTS FOSTERING THE PARTICIPATION OF HIGH-LEVEL INTERNATIONAL EXPERTS, with the title of "Center of biotechnologies for cell therapy and regenerative medicine based on stem cells and apoptosis modulators", electronic registration number / SUIM code: 565/12449

INTERNATIONAL CONTRACT no.1541/2002 (2002-2010, with annual prolongation based on validated results) with MacoPharma Pharmaceutical Laboratories, Tourcoing, France „The study of cellular and molecular mechanisms of erythrocytes and platelets programmed death; Improving their preserving conditions in the Transfusion Centers”.

PN II: PARTENERIATES Contract no. 52121/2008 (2008-2011) (4 partners consortium), „New methods for the evaluation of the sanogenesis of products originated from pisciculture with the purpose of increasing food safety and ensuring sanitary and veterinary protection”

PN II: IDEAS Contract no. ID_916 (2008-2011) „A study on nanoparticles impact on aquatic environment and predictive modelling of their biological effects”.

NUCLEU PROGRAM - Biodiv: PN 09-360108 „Identification and characterization of the erythrocytes apoptosis phenomenon in normal and pathologic biology of the erythrocyte, for the elaboration of identification tests for autologous transfusion in case of sports practicans and therapeutic strategies”

CEEX- MATNANTECH Contract no .11/ 2005 (2005-2008) – (5 partners consortium) Evaluation of the degree of aquatic pollution using apoptosis biomarkers and cellular biosensors with the purpose of biomonitoring the Danube basin and estimating the quality of food products originated from pisciculture”

PROGRAM Biostar, PN 108/2008 Research concerning the modulation of cellular apoptosis phenomenon, particularly of erythrocyte apoptosis for biotechnological and therapeutical applications

PNCDI I - BIOTECH 4625 PROJECTS (2004-2006) Methods of tissue bioengineering using chondrocytes encapsulation in alginate microspheres and modulation of the apoptosis phenomenon in osteoarthritic diseases pathogenesis”

Ministry of Education and Science: (1990-1992) Establishing modifications of erythrocyte receptors in the senescence process with lectin type ligands

Drug Central: National Program of Research on Gerovital action (1986-1989) The action modality of Procain and Gerovital in the receptor-ligand reaction at cellular membrane level

Ministry of Education and Science – National Research Plan : (1986-1987) Determining the modality of action of Boicil at membrane level

Note 1: Between 1993 and 2000, as Scientific Researcher at the Biochemistry Institute of the Romanian Academy, I fulfilled the requirements for receiving the quality of Responsible for an International Collaboration Agreement signed by: the Biochemistry Institute of the Romanian Academy, The Regional Center of Transfusions from Lille and the University of Sciences and Technologies of Lille, France, in times when the activity of the institute was not based on research contracts.

Note 2: Between 2000 and 2011 I participated as a specialist at research activities done on the basis of other 12 research contracts, having colleagues from INCDSB-Bucharest as Project Directors, contracts resulting in scientific works for which I have the quality of co-author.

AREAS OF COMPETENCE AND RESEARCH

1. **Cellular and molecular biology, Biochemistry (1986- present):**
 - Cellular and molecular mechanisms of cellular senescence and apoptosis; erythrocyte senescence and particularly erythrophagocytosis
 - Cell therapy; Improving the preservation conditions for blood in Transfusion Centers and haematopoietic stem cells for bone marrow transplant
 - Stem cells and regenerative medicine
 - **Biomarkers and cellular biosensors for molecular toxicology and ecotoxicology. Applications in environment pollution biomonitoring.**
2. **Bionanotechnologies (2007-- present):**
 - Studies on biological effects produced by nanoparticles and nanomaterials on living matter
 - **Nanotoxicology and nano-ecotoxicology**
3. **Cytomics (2000-present)**
 - Exploring the cellular structure and functions by means of flow cytometry and complementary techniques
 - Adapting and developing Flow Cytometry techniques for the areas of Biotechnology
4. **Glycobiology (1980-present)**
 - Function-structure relation of glycoconjugates
 - The role of glycans in intracellular degradation of different glycoproteins (immunoglobulins, enzymes)
5. **Immunochemistry (1980-2000)**
 - The protective role of unspecific antimicrobial factors from the human colostrum (SIgA, lactotransferrin, lactoperoxidase and lysozyme).
 - The mechanisms of action in normal and pathological conditions
 - Immunochemistry techniques applied in enzyme studies

MAJOR SCIENTIFIC CONTRIBUTIONS IN BIOLOGY

- Demonstration that sialic acids from glycoconjugates structure of erythrocyte membrane controls red blood cells lifetime. The loss of sialic acids from erythrocyte membrane causes their capture by a macrophage galactose lectin, but not their phagocytosis.
- Isolation and characterization of the circulating subpopulation of senescent erythrocytes which externalize phosphatidylserine and which is the only phagocytosed population. These have been identified later as an apoptotic erythrocyte population.
- **For the first time, she demonstrated that the erythrocyte senescence of the human red blood cells is an apoptotic phenomenon that involves the caspase -8 and caspase -3 activation in physiological control time-life of human erythrocytes, even in the absence of cellular organelles (nucleus and mitochondria).**
- Discovery of the erythrocyte apoptosis allowed the elucidation of some haematological diseases and the improving the quality of blood storage for transfusions. This contribution was awarded by the Academy of Science from Paris (2002) and by the Romanian Academy (2004).
- Evidence for an alternative immunoglobulin - independent pathway of erythrophagocytosis in agammaglobulinic mice ("Immunology database from CSA").
- Discovery of :
 - a cytosolic sialate pyruvate-lyase in human erythrocytes,
 - a sialic acid transporter in their membranes
 - other sialic acids than N-acetylneuraminic in membrane glycoconjugates structure.

All of these scientific results had contributed to elucidate the erythrocytes senescence biology.

- Implementation of an original method, rapid and sensitive, of *in vitro* erythrophagocytosis measured by flow cytometry. These methods were patented: French patent no. 96.11520 (1996), and European patent no. 974021172-2116 (1997), named "Procédé d'évaluation de la phagocytose des érythrocytes par les macrophages. Application au contrôle de qualité des stocks d'érythrocytes".
- Defining of new flow cytometric criteria for viability assessment of erythrocytes stored in blood banks in order to evaluate the quality of transfused blood and for amelioration of the preserved blood
- Demonstration by flow cytometric methods of the Improved Storage of Erythrocytes by prior leucodepletion and its necessity. These results were the starting point in leucodepletion as a mandatory procedure in France and other countries Rapport à l'Établissement Français du Sang : « Nécessité de leucocyter les globules rouges précocement avant leur conservation : démonstration par l'application de critères originaux d'étude de la viabilité des hématies destinées à la transfusion » ; French patent No. 9611250 from 16.09.1996; European patent 97402117.2-2116 from 12.09.1997.
Her original methods for assessment of human RBCs viability using Calcein – AM leads to a new test for detection of auto transfusion (autodoping) at the athletes, a clean doping which is impossible to detect in present (*OSIM patent registration no. A/00431 from 05.05.2011*).
- Demonstration of the implication of apoptosis phenomenon in osteoarthritic pathology.
- Elaboration of a massive multiplication procedure of osteoarthritic chondrocytes in order to use for autologous cellular therapy (French patent no. 0707113 since 10 October 2007 and USA patent no. 0256234 A1).
These results are the basis for development of the "Biotechnological center for cell-therapy and regenerative medicine based on stem cells and apoptosis modulators".
- Elaboration of a new cellular model (human and nucleated erythrocyte) for biocompatibility studies, toxicological and ecotoxicological tests which replace the cellular cultures.

ORGANIZATIONAL SKILLS AND COMPETENCE

- Organizing at zero of Department of Cellular Dynamics and Flow Cytometry within INCDSB-Bucharest
- Organised in collaboration with the University of Lille, International Summer School - Ecole d'été Francophone "Pathologie Pharmacologie Moléculaire. Biotechnologie", under the auspices of the Paris
- Academy of Sciences and the Romanian Academy (2004-2012)
- Organizer of National Congress of Cytometry (2004-2012)

MEMBER OF THE REDACTION COMMITTEE OF NATIONAL OR INTERNATIONAL SCIENTIFIC REVUES

- Member of the redaction committee of the scientific revues:
- Editor asociat la „Journal of Aging and Gerontology” (<http://savvysciencepublisher.com/editorial-board-member-jag/>)
- "Studia Universitatis "Vasile Goldis" Arad Life Sciences Series "(Revue CNCSIS B+) ISSN 1564 – 236
- "Romanian Biological Sciences" ISSN 1584-0158
- Referent for: Cytometry Part A and B, Medical Science Monitor, Nanotoxicology, The Open Chemical and Biomedical Methods, etc.

PROFESSIONAL AFFILIATIONS

- The Romanian Society of Biochemistry and Molecular Biology
- The Romanian Society of Cellular and Molecular Biology
- Société Française de Biochimie et Biologie Moléculaire (French Society of Biochemistry and Molecular Biology)
- Association Française de Citometrie (French Association of Cytometry)

DISTINCTIONS AND PRIZES

- Laureate of Academy of Sciences of Paris, The "Charles Dhéré" prize for Biological Chemistry (2002)
- Laureate of the Romanian Academy, « Nicolae Simionescu » prize for Biology for the year 2002
- Bronze medal of the V. Goldis University , with brevet - 2010
- Nominated for "100 Scientists 2010" International Biographical Centre, Cambridge, Engl
- Nominated for "Who's Who in the World" (2008, 2009, 2010)
- Nominated in the Romanian Personalities Encyclopedia "Who's Who in Romania" (2001, 2010, 2011)

SCIENTIFIC PAPERS

Scientific papers:

Books: 2 (1 monograph with personal results and 1 university course)

Chapter books (2)

ISI scientific articles : 31

Scientific articles were cited in 822 ISI articles after ResearchGate and Web of Sciences; (h-index: 10)

CNCSIS B + and BDI articles: 45

Patents: 3 french patents, 2 european patents, 1 USA patent, 6 OSIM patent

International and national scientific communications and conferences: 119

ANNEX

PUBLICATIONS AND PATENTS

I certify that the data presented are in conformity with reality
January 25, 2015



SELECTED SCIENTIFIC PUBLICATIONS AND PATENTS – Books, ISI articles and patents

ResearcherID: A-3319-2014; URL:<http://www.researcherid.com/rid/A-3319-2014>;

Scientific articles were cited in 922 ISI articles after Reearch Gate and Web of Sciences; (h-index: 10)

BOOKS AND CHAPTERS BOOK

1. **Bratosin D.**, "ECOTOXICOLOGY- Basic principles and molecular aspects ", Vasile Goldis University Press, Arad, 2009 , ISBN 978-973-664-353-8
2. **Bratosin D.**, "Exploring by flow cytometry the structure and cellular functions", V. Goldis University Press, Arad, 2007, ISBN: 978-973-664-213-5.
3. **Bratosin D.**, Estaquier J., Montreuil J., Ageing of erythrocytes, a model for investigating cellular senescence, in Gerontology Today, Editura "Viata medicala Romaneasca", Bucuresti, pg. 37-55, 2007,(325) pg ISBN: 978-973- 8437-96-8.
4. Buia L., Iordache C, Moldovan L., Caloianu M., **Bratosin D.**, Replicative senescence or chondrocyte apoptosis in pathogenesis of osteoarthritis, in Gerontology Today, Editura "Viata medicala Romaneasca", Bucuresti, pg 56 - 67, 2007, (325 pg) , ISBN: 978-973-8437- 96-8.

SELECTED PAPER

1. Isaia (Oarcea) A I, Cata A, Olah NK, Stefanut MN ,Sirbu V, Ienascu IMC, **Bratosin D.**, Evaluation of antioxidant activity and phenolic content of 13 selected herbs from Romania, 68, 3, 2017 (in press).
2. Isaia (Oarcea) AI, Ienascu I MC, Andrica FM, Georgescu D, **Bratosin D.**, Pinzaru IA, Preliminary in vitro Evaluation of Seven Different Plant Extracts on A375, B164A5 and HaCat Cell Lines, Rev.Chim.,(Bucharest), 67, 8, 1633-1636, 2016

3. Isaia (Oarcea) A I, Cata A, Olah NK, Stefanut MN, Ienescu IMC, **Bratosin D**, Popoiu C, Evaluation of Antioxidant Activity and Phenolic Content of 13 Selected Herbs from Romania, Rev.Chim.(Bucharest), 67, 10, 2001-2004, 2016
4. Dobre A M, Mateescu-Tusa I, **Bratosin D**, Siposan D, Flow cytometric evaluation of low intensity laser action on human red blood cells (RBCs) viability stored in SAGM medium for 3 weeks, Digest Journal of Nanomaterials and Biostructures, 10, 1, 231 – 241, 2015; Editura Academiei Oamenilor de Știință din România; ISSN 1842 - 3582
5. **Bratosin D**, Fagadar-Cosma E, Gheorghe A-M, Rugină A, Ardelean A, Montreuil J, Marinescu A.G, *In vitro* toxicological assessment of porphyrine nanomaterials by flow cytometry using nucleated erythrocytes, Carpathian Journal of Earth and Environmental Sciences, 6, 2, 225–234, 2011
6. **Bratosin D**, Tissier J-P, Doummar D, Billette de Villemeur T, Cotoraci C, Montreuil J, Mignot C, A cytometric study of the red blood cells in Gaucher disease reveals their abnormal shape that may be involved in increased erythrophagocytosis, Cytometry Part B, 80B, 1, 28-37, 2011
7. **Bratosin D.**, Tissier J-P, Doummar D., Billette de Villemeur T., Cotoraci C., Hermine O., Montreuil J., Mignot C., A focus on the red blood cells of Gaucher disease reveals their unexpected shape in some patients, Cytometry Part B (Clinical Cytometry) 76B:424, 2009
8. **Bratosin D.**, Tcacenco L., Sidoroff M., Cotoraci C., Slomianny C., Estaquier J. and Montreuil J., Active caspases - 8 and -3 in circulating human erythrocytes purified on immobilized annexin-V. A cytometric demonstration, Cytometry Part A, 75A: 236_244, 2009
9. Takacs-Buia L., Iordachel C., Efimov N., Caloianu M., Montreuil J., **Bratosin D.**, Pathogenesis of osteoarthritis: Chondrocyte replicative senescence or apoptosis?, Cytometry Part B (Clinical Cytometry) 74B:356–362, 2008
10. Mitrofan-Oprea L., Palii C., Tissier J-P., Héron A., Verpoort T., Behague M., Goudaliez F., Smagge E., Schooneman, F. Huart J-J., Montreuil J., **Bratosin D.**, Nouveaux critères d'évaluation de la viabilité des hématies destinées à la transfusion, Transfus. Clin. Biol., 14, 393-401, 2007
11. **Bratosin D.**, Palii C., Moicean A. D., Zanetta J-P, Montreuil J., Reduced diversity of the human erythrocyte membrane sialic acids in polycythemia vera and absence of N-glycolylneuraminic acid, Biochimie, 88, 11, 2006
12. **Bratosin D.**, Pham-Bulai T., Mitrofan-Oprea L., Palii C., Estaquier J., Montreuil J., Mécanismes cellulaires et moléculaires de la mort programmée des hématies, Regard sur la Biochimie, n°4, 2005
13. **Bratosin D.**, Mitrofan L., Palii C., Montreuil J., A novel fluorescence assay for determination of human erythrocyte viability using Calcein-AM and flow cytometry, Cytometry A, 66A, 78-84, 2005
14. **Bratosin D.**, Estaquier J., Slomianny C., Tissier J-P, Quatannes B., Bulai T., Mitrofan L., Marinescu A., Trandaburu I., Ameisen J-C, Montreuil J., On the evolution of erythrocyte programmed cell death : apoptosis of Rana esculenta nucleated red blood cells involves cysteine proteinase activation and mitochondrion permeabilization, Biochimie, 86, 183-193, 2004
15. Bulai T., **Bratosin D.**, Artenie V., Montreuil J., Uptake of sialic acid by human erythrocyte, Characterisation of a transport system, Biochimie, 85, 241-244, 2003
16. T. Bulai, **D. Bratosin**, A. Pons, J. Montreuil, J-P. Zanetta, Diversity of the human erythrocyte membrane sialic acids in relation with blood groups. FEBS Letters, 534,185-189, 2003
17. Bulai T., **Bratosin D.**, Artenie V., Montreuil J., Characterisation of a sialate pyruvate-lyase in the cytosol of human erythrocytes, Biochimie, 84, 655-660, 2002
18. **Bratosin D.**, Estaquier J., Ameisen J.C., Montreuil J., Molecular and Cellular Mechanisms of Erythrocyte Programmed Cell Death: Impact on Blood Transfusion, Vox Sanguinis 83, 307-310, 2002
19. **Bratosin D.**, Estaquier J., Ameisen J.C., D. Aminoff, J. Montreuil, Flow cytometric approach of erythrophagocytosis: evidence for an alternative immunoglobulin - independent pathway in agammaglobulinic mice, Journal of Immunological Methods, 265, 133-143, 2002
20. **D. Bratosin**, Leszczynski S., Sartiaux, C. Fontaine O., Descamps J., Huart J-J., Poplineau J., Gaudaliez F., Aminoff D. and Montreuil J., Improved Storage of Erythrocytes by Prior Leucodepletion: Flow Cytometric Evaluation of Stored Erythrocytes. Cytometry (Clinical Cytometry) 46, 351-356, 2001
21. **D. Bratosin**, Estaquier J., Petit F., Arnoult D., Quatannens B., Tissier J-P, Slomianny C., Sartiaux C., Alonso C., Huart J.J., Montreuil J. and Ameisen J.C. - Programmed cell death in mature erythrocytes: a model for investigating death effector pathways operating in the absence of mitochondria, Cell Death and Differentiation, 8, 1143-1156, 2001
22. **Bratosin D.**, Mazurier J., Tissier J-P., Estaquier, J. Huart J-J, Aminoff, D. Montreuil J., Cellular and molecular mechanism of senescent erythrocyte phagocytosis by macrophages. A review. Biochimie, 80, 173-195, 1998
23. **Bratosin D.**, Mazurier J. Tissier J-P., Slomianny C., Estaquier J., Russo-Marie F., Huart J-J, Freyssinet J.M., Aminoff D., Ameisen J.C. and Montreuil J., Molecular mechanism of erythrophagocytosis. Characterization of senescent erythrocytes that are phagocytized by macrophages. C. R. Acad. Sci., Paris, Sciences de la vie, 320, 811-818, 1997
24. **Bratosin D.**, J. Mazurier, C. Slomianny, D. Aminoff, J. Montreuil, Molecular Mechanism of Erythrophagocytosis: Flow Cytometric Quantitation of In Vitro Erythrocyte Phagocytoses by Macrophages. Cytometry, 30, 269-274, 1997
25. **Bratosin D.**, Mazurier J., Debray H., Lecocq M., Boilly B., Alonso C., Moisei M., Motaș C., Montreuil J., Flow cytofluorimetric analysis of young and senescent human erythrocytes probed with lectins. Evidence that sialic acids control their life span. Glycoconjugate Journal, 12, 258-267, 1995

PATENTS

1. **French Patent No. 9611250 from 16/09/1996**
2. **European Patent No. 97402117.2-2116 from 12/09/1997** (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL,PT, SE).
D. Bratosin, J.Mazurier, J. Montreuil, J.J.Huart, « Procédé d'évaluation de la phagocytose des érythrocytes par des macrophages in vitro; application au contrôle de qualité de stocks d'érythrocytes ».
3. **French Patent No. 9806288 from 19 /05/1998**

D. Bratosin, J. Estaquier, J.J. Huart, J.C. Ameisen, J. Montreuil, « Composition à base d'inhibiteurs de cysteine-protéases pour retarder la sénescence, l'autodestruction et l'hémolyse des Erythrocytes »

4. **European Patent No. 0707113 from october 10, 2007**
European Patent request PCT/FR2008001396 from october 6, 2008 (NO 2009/080914 A3)
United States Patent Application 20100256234
Inventors: D.Bratosin, L. Buia Takacs, J. Montreuil, A.Heron, "Method for Stimulating the Proliferation of Differentiated Cells Belonging to the Chondrogenic Lineage"
5. **Bratosin D., Gheorghe A-M, Rugina A., Sidoroff M., Ardelean A., Test for detecting autotransfusion at athletes, Application for registration OSIM nr. A/00431 from 05.05.2011**
6. **Application OSIM nr. A/00698 din 24/10/2013**
Petrescu C-M., Turcus V., Ardelean A., Bratosin D., **Method for determining by direct flow cytometry, with *Chlorella* sp. of ecotoxicity for biomonitoring pollution of aquatic environment. (CHLORELLA-TOX biotest)**
7. **OSIM nr.A/00699 din 24/10/2013**
Covaci A., Turcuş V., Ardelean A., Bratosin D., **Toxi - and ecotoxicological test by flow cytometry based on apoptosis batrachians or fish nucleated erythrocytes (HEMO-APOTOX)**
8. **Patent Number RO13065-A0, 27/02/2015**
Bratosin D., Oprita E. I., Rugina A., Dobre A-M., Ciotec A., Sidoroff M., lordachel C. "Growth supplement for cell culture media with beneficial properties upon proliferation and viability of primary cultures and continuous animal and human cell lines"
9. **Patent number RO130042-A0, 27/02/2015**
lordachel C., Bratosin D., Dobre A-M., Rugina A., Stan L., Sidoroff M., Oprita I., "Hydrogel based on Gly-Gly for dermal regeneration (Glyderm)"
10. **Patent number RO129529-A0, 30/06/2016**
Oprita I., Ciotec A., Dobre A-M., Rugina A., Calu L., Lungu M., Sidoroff M., lordachel C., Bratosin D., "Implantable support based on alginate supplemented with gkycylglycine dipeptide, intended for applications in regenerative medicine"