

LISTA LUCRARILOR ELABORATE

I. TEZA DE DOCTORAT (T)

T1. Contributii in domeniul biomaterialelor metalice utilizate la executia componentelor femurale ale endoprotezelor totale de sold; 2007

Conducator stiintific: Prof.dr.ing. Cosmeleata Georgeta;

Prof.dr.ing. Daniel Bunea

II. CARTI PUBLICATE (C)

Ca – Carti / cursuri (manuale) pentru uzul studentilor, publicate in edituri recunoscute.

Ca1. Antoniac I; Laptoiu D; Blajan AI; Cotrut C; *Instrumentar si dispozitive chirurgicale* (203 pag.), Editura Printech, Bucuresti, 2011, ISBN 978-606-521-665-5.

Ca2. Dobrescu M; **Antoniac V;** *Stiinta biomaterialelor* (130 pag.), Editura Printech, Bucuresti, 2003, ISBN 973-652-740-9.

Ca3. Purghele F; Badea R; **Antoniac I;** *Notiuni de medicina pentru ingineri* (171 pag.), Editura Printech, Bucuresti, 2001, ISBN 973-652-358-6.

Cb - Carti de specialitate publicate in edituri recunoscute (autor, coautor, editor).

Cb1. Antoniac I; Requena G; *Materials and Technologies for Advanced Engineering Research*, Trans Tech Publications, Switzerland, 165 pagini, 2024.

Cb2. Trus C; Obreja CD; Ghisman V; Buruiana DL; **Antoniac IV;** *Instrumentar si dispozitive chirurgicale*, Galati University Press, Cod CNCIS 281, 209 pagini, 2023.

Cb3. Grosu E; Antoniac A; **Antoniac I;** Deleanu IM; Robu A; *Materiale utilizate in medicina – aspecte interdisciplinare, Capitol: Perspective in sistemele terapeutice transdermice*, Editura Printech, Bucuresti, COD CNCIS 54, 2021, pp. 1-39, ISBN 978-606-23-1306-7.

Cb4. Moldovan H; **Antoniac VI;** Rădulescu B; Gheorghiu D; *Tehnici și dispozitive medicale în chirurgia valvei aortice*, Editura Printech, Cod CNCIS 54, 147 pagini, 2020, ISBN: 978-606-23-1052-3.

Cb5. Antoniac I; editor, *Bioceramics and Biocomposites: From Research to Clinical Practice*, Edit. John Wiley & Sons, Inc., 400 pag., 2019, ISBN: 9781119049340.

Cb6. Niculescu M; Viscopoleanu G; Sarbu A; **Antoniac IV;** *Tehnica cimentarii in artroplastia totala de sold*, Editura Universitara Carol Davila Bucuresti, 152 pag., 2017, ISBN: 978-973-708-753-9.

Cb7. Antoniac I; editor, *BiomMedD VII*, Vol. 752, Trans Tech Publications, 150 pag., 2017, ISBN: 978-3-0357-1153-0.

Cb8. Antoniac I; Cirstoiu C; editor, *Orthopedic Biomaterials - From Materials Science to Clinical Applications*, Vol. 745, Trans Tech Publication, 178 pag., 2017, ISBN: 978-3-03835-565-6.

Cb9. Cavalu S; **Antoniac I;** Voicu SI; editor, *Biomaterials and Regenerative Biomedicine*, Vol. 695, Trans Tech Publications, 334 pag., 2016, ISBN: 978-3-03835-567-0.

Cb10. Antoniac I; editor, *Handbook of Bioceramics and Biocomposites*, Vol. 1-2, Springer International Publishing, 1386 pag., 2016, ISBN: 978-3-319-12459-9 (Print) 978-3-319-12460-5 (Online).

Cb11. Branzei M; **Antoniac I;** editor, *Materials Research and Application*, Vol. 875-877, Trans Tech Publications, 2400 pag., 2015, ISBN: 978-3-03835-498-7.

Cb12. Antoniac I; Albu M; Sinescu C; Miculescu M; editor, *BiomMedD2014*, Vol. 638, Trans Tech Publications, 394 pag., 2015, ISBN: 978-3-03835-432-1.

Cb13. Antoniac I; Cotrut C; Antoniac A; editor, *BiomMedD V*, Vol. 583, Trans Tech Publications, 200 pag., 2014, ISBN: 978-3-03785-866-0.

Cb14. Cavalu S; **Antoniac I;** Traistaru T; editor, *BIOCERAMICS 25*, Vol. 587, Trans Tech Publications, 474 pag., 2014, ISBN: 13 978-3-03785-899-8.

Cb15. Antoniac I; editor; *Biologically responsive biomaterials for tissue engineering, Series: Springer Series in Biomaterials Science and Engineering*, Vol. 1, Ed. Springer, 254 pag., 2013, ISBN 978-1-4614-4327-8, ISBN 978-1-4614-4328-5 (eBook).

Cb16. Antoniac I; *Biomateriale metalice utilizate la executia componentelor endoprotezelor totale de sold*, Editura Printech, Bucuresti, 254 pag., 2007, ISBN 978-973-718-881-6.

Cb17. Ciuca S; **Antoniac I;** Molagic C; Trante O; *Biomateriaux*, Editura Printech, Bucuresti, 189 pag., 2001, ISBN 973-652-358-X.

Cb18. Bunea D; Raducanu D; Ciuca I; Nocivin A; **Antoniac V;** *Implant materials*, Editura Printech, Bucuresti, 143 pag., 1999, ISBN 973-9475-85-X.

III. ALTE MATERIALE PUBLICATE (I,D)

I - Culegeri si Indrumare publicate.

I1. Antoniac I; Miculescu F; Laptoiu D; Miculescu M; *Biomateriale: Culegere de probleme*, Editura Printech, Bucuresti, 112 pag., 2007, ISBN 978-973-718-880-9.

I2. Bunea D; Antoniac V; Pencea I; Trante O; Dragulin D; Gherghisor G; Paunescu R; *Stiinta materialelor, Culegere de probleme*, Editura Printech, Bucuresti, 141 pag., 1999, ISBN 973-9475-44-2.

D - Alte lucrari publicate: capitole publicate in volume colective, capitole teoretice redactate, etc.

D1. Miculescu F; Mocanu AC; Stan GE; Maidanuc A; Miculescu M; Voicu S.I; Antoniac IV; *Bioceramics and Biocomposites: From Research to Clinical Practice, Chapter: Bioceramics Derived from Marble and Sea Shells as Potential Bone Substitution Materials*, Edit. John Wiley & Sons, Inc., Pag. 87-122, 2019.

D2. Lupescu O; Antoniac I; *Bioceramics and Biocomposites: From Research to Clinical Practice, Chapter: Bone Substitutes in Orthopedic and Trauma Surgery*, Edit. John Wiley & Sons, Inc., Pages 341-366, 2019.

D3. Hua Ai; Anderson J; Anseth K, Antoniac I et. al in *Definitions of Biomaterials for the Twenty-First Century*, Chapter: Attendees at Chengdu Definitions in Biomaterials Conference,

D4. Ivanov D; Antoniac V; *Smart Materials: Integrated Design, Engineering Approaches, and Potential Applications, Chapter: Biomimetic and Smart Biomaterials for Orthopedic Applications: More than the Sum of their Components*, Editor Anca Filimon, Apple Academic Press, Pag. 356-386, 2018, ISBN 9781771886871 - CAT# K345522.

D5. Antoniac I; Laptoiu D; Tecu C; Milea C; Gradinaru S; *Osteochondral Tissue Engineering Nanotechnology, Scaffolding-Related Developments and Translation, Chapter: Synthetic Materials for Osteochondral Tissue Engineering*, Ed. Springer International Publishing, Part of the Advances in Experimental Medicine and Biology book series (AEMB, volume 1058), Pag. 31-52, 2018.

D6. Antoniac IV; Totan N; Dragomir L; Antoniac A; *Cercetarea in Medicina dentara - proprietati optice ale dintilor si materialelor dentare, Chapter: Aplicatii ale microscopiei de forta atomica in caracterizarea biomaterialelor si tesuturilor dentare*; Publisher: Colorama Cluj-Napoca, Aprilie 2017.

D7. Antoniac IV; Miculescu F; Laptoiu D; Antoniac A; Niculescu M; Grecu D; *Handbook of Bioceramics and Biocomposites, Chapter: Retrieval analysis of hip prostheses*, Springer International Publishing, Pag. 901-933, 2016.

D8. Vladescu A; Surmeneva MA; Cotrut CM; Surmenev RA; Antoniac IV; *Handbook of Bioceramics and Biocomposites, Chapter: Bioceramic coatings for metallic implants*, Springer International Publishing, Pag. 703-733, 2016.

D9. Antoniac IV; Albu MG; Antoniac A; Rusu LC; Ghica MV; *Handbook of Bioceramics and Biocomposites, Chapter: Collagen-bioceramic smart composites*, Springer International Publishing, Pag. 301-324, 2016.

D10. Mohan D; Mohan A; Antoniac IV; Ciurea AV; *Handbook of Bioceramics and Biocomposites, Chapter: Current implants used in cranioplasty*, Springer International Publishing, Pag. 1275-1307, 2016.

D11. Niculescu M; Solomon BL; Viscopoleanu G; Antoniac IV; *Handbook of Bioceramics and Biocomposites, Chapter: Evolution of cementation techniques and bone cements in hip arthroplasty*, Springer International Publishing, Pag. 859-899, 2016.

D12. Marinescu R; Antoniac IV; *Handbook of Bioceramics and Biocomposites, Chapter: Clinical limitations of the biodegradable implants used in arthroscopy*, Springer International Publishing, Pag. 935-965, 2016.

D13. Weshler M; Antoniac IV; *Handbook of Bioceramics and Biocomposites, Chapter: Guided bone regeneration for dental implants*, Springer International Publishing, Pag. 1029-1073, 2016.

D14. Petreus T; Antoniac I; Sirbu P; Cotrutz CE; *Biologically responsive biomaterials for tissue engineering, Chapter: Molecular scissors: From biomaterials implant to tissue remodeling*, Springer International Publishing, Pag. 17-42, 2013.

D15. Antoniac I; Laptoiu D; Popescu D; Cotrut C; Parpala R; *Biologically responsive biomaterials for tissue engineering, Chapter: Development of bioabsorbable interference screws: How biomaterials composition, clinical and retrieval studies influence the innovative screw design and manufacturing processes*, Springer International Publishing, Pag. 107-136, 2013.

D16. Rusen E; Mocanu A; Marculescu B; Andronescu C; Stancu IC; Ioncea A; Antoniac I; *Photonic crystals: fabrication, band structure and applications, Chapter: Influence of the solid-liquid adhesion on the self-assembling properties of colloidal particles*, Nova Science Publishers, Inc., Pag. 173-189, 2010.

D17. Antoniac V; Neculescu A; Cosmeleata G; *Tratat de Stiinta si Ingineria Materialelor*, volum 3, Capitol 25. *Materiale biocompatibile si aliaje cu memoria formei*, Editura AGIR, Pag. 1463-1495, 2009.

D18. Antoniac V; *Advanced Materials, Chapter: Biocompatibility and biofunctionality*, Editura Orizonturi Universitare, Timisoara, Pag. 37-56, 2002.

IV. ARTICOLE / STUDII IN EXTENSO PUBLICATE (R, V)

Ris - Reviste de specialitate de circulatie internationala recunoscute (cotate / indexate ISI Thomson Reuters).

Ris1. Ghiban B; Antoniac A; Bordeasu I; Antoniac I; Petre G; Rau JV; Bordeasu D; Micu LM; *Biodegradability and Cavitation Erosion Behavior of Some Zinc Alloys from the System ZnCuMg*, METALS, Volume 15, Issue 2, 2025.

DOI10.3390/met15020161

Accession Number WOS:001430347000001

Ris2. Robu A; Kaya MGA; Antoniac A; Kaya DA; Coman AE; Marin MM; Ciocoiu R; Constantinescu RR; **Antoniac I**; *The Influence of Basil and Cinnamon Essential Oils on Bioactive Sponge Composites of Collagen Reinforced with Hydroxyapatite*, MATERIALS, Volume 18, Issue 3, 2025.

DOI10.3390/ma18030626

WOS:001418621100001

Ris3. Oprea M; Pandele AM; Nechifor AC; Nicoara AI; **Antoniac IV**; Semenescu A; Voicu SI; Enachescu CI; Fratila AM; *Improved Biomineralization Using Cellulose Acetate/Magnetic Nanoparticles Composite Membranes*, POLYMERS, Volume 17, Issue 2, 2025.

DOI10.3390/polym17020209

Accession Number WOS:001403857600001

Ris4. Cardoso GC; Correa DRN; Fosca M; Pometun EV; **Antoniac IV**; Grandini CR; Rau JV; *Current Strategies in Developing Antibacterial Surfaces for Joint Arthroplasty Implant Applications*, MATERIALS, Volume 18, Issue 1, 2025.

DOI10.3390/ma18010173

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Ris5. Deleanu IM; Grosu E; Ficai A; Ditu LM; Motelica L; Oprea OC; Pircalabioru GG; Sonmez M; Busuioc C; Ciocoiu R; **Antoniac VI**; *New Antimicrobial Materials Based on Plasticized Polyvinyl Chloride for Urinary Catheters: Preparation and Testing*, POLYMERS, Volume 16, Issue 21, 2024.

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WOS:001351846700001

Ris6. Ioana TR; Boeru; **Antoniac I**; Mitrut; Staicu IE; Rauten AM; Uriciuc WA; Manolea HO; *Surface Analysis of Orthodontic Mini-Implants after Their Clinical Use*, JOURNAL OF FUNCTIONAL BIOMATERIALS, Volume 15, Issue 9, 2024.

DOI10.3390/jfb15090244

Accession Number WOS:001323935900001

Ris7. Manescu V; **Antoniac I**; Paltanea G; Nemoianu IV; Mohan AG; Antoniac A; Rau JV; Laptoiu SA; Mihai P; Gavrilă H; Al-Moushaly AR; Bodog AD; *Magnetic Hyperthermia in Glioblastoma Multiforme Treatment*, INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES, Volume 25, Issue 18, 2024.

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Accession Number WOS:001323759100001

Ris8. **Antoniac I**; Valeanu N; Niculescu M; Antoniac A; Robu A; Popescu L; Manescu V; Anusca D; Enachescu CI; *Outcomes of Birmingham Hip Resurfacing Based on Clinical Aspects and Retrieval Analysis of Failed Prosthesis*, MATERIALS, Volume 17, Issue 16, 2024.

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Accession Number WOS:001305826300001

Ris9. Cordunianu MA; Cordunianu AGV; **Antoniac I**; Luca A; Niculescu M; Chiriac CO; Corneschi I; Mohor CI; *Experimental Analysis of a Failed Gamma Nail: A Case Report and Literature Review*, HEALTHCARE, Volume 12, Issue 16, 2024.

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Accession Number WOS:001304663100001

Ris10. Cordunianu MA; Corneschi I; Bita AI; Ciocoiu R; Robu A; **Antoniac I**; Enachescu CI; *Surface analysis of a titanium plate implant used for humerus fracture after mechanical testing*, ACTA TECHNICA NAPOCENSIS SERIES-APPLIED MATHEMATICS MECHANICS AND ENGINEERING, Volume 67, Issue 2, Page 283-290, 2024.

Accession Number WOS:001398967500018

Ris11. Cardoso GC; Barbaro K; Kuroda PAB; De Bonis A; Teghil R; Monteleone V; Imperatori L; Ortenzi M; **Antoniac I**; Grandini CR; Rau JV; *Silver Containing Antimicrobial Coatings on Innovative Ti-30Nb-5Mo β -Alloy Prepared by Micro-Arc Oxidation for Biomedical Implant Applications*, COATINGS, Volume 14, Issue 2, 2024.

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Ris12. Şolea MR; Semenescu A; Ileana A; Ciucă I; Ciocoiu R; Bița AI; **Antoniac I**; *A study of the surface free energy of stainless-steel surgical instruments*, UNIVERSITY POLITEHNICA OF BUCHAREST SCIENTIFIC BULLETIN SERIES B-CHEMISTRY AND MATERIALS SCIENCE, Volume 86, Issue 4, 217-230, 2024.

Accession Number WOS:001380943500016

Ris13. Iordachescu (Şolea) MR; Semenescu A; Ileana A; Ciocoiu R; Bița AI; **Antoniac I**; *Preliminary study of tin and TiCN coatings for stainless steel surgical instruments*, UNIVERSITY POLITEHNICA OF BUCHAREST SCIENTIFIC BULLETIN SERIES B-CHEMISTRY AND MATERIALS SCIENCE, Volume 86, Issue 4, 291-300, 2024.

Accession Number WOS:001380943500022

Ris14. Bololoi AE; Manea CA; **Antoniac IV**; Bololoi RV; Cojocar V; Talpeanu D; Patroi D; Geambazu LE; *The influence of spark plasma sintering parameters on the physical properties of CoCrMoNbTi Bio-HEA*, UNIVERSITY POLITEHNICA

OF BUCHAREST SCIENTIFIC BULLETIN SERIES B-CHEMISTRY AND MATERIALS SCIENCE, Volume 86, Issue 3, 227-236, 2024.

Accession Number WOS:001301114000018

Ris15. Nasrabadi HN; Ciuca S; Robu A; Stere A; **Antoniac I**; Valeanu N; Ciocoiu R; Enachescu CI; *Comparative analysis of surface properties of Ti6Al4V femoral stem hip prostheses and plate for long bone fractures used in orthopedic surgery*, UNIVERSITY POLITEHNICA OF BUCHAREST SCIENTIFIC BULLETIN SERIES B-CHEMISTRY AND MATERIALS SCIENCE, Volume 86, Issue 3, 237-246, 2024.

Accession Number WOS:001301114000019

Ris16. Manescu V; **Antoniac I**; Antoniac A; Laptoiu D; Paltanea G; Ciocoiu R; Nemoianu IV; Gruionu LG; Dura H; *Bone Regeneration Induced by Patient-Adapted Mg Alloy-Based Scaffolds for Bone Defects: Present and Future Perspectives*, BIOMIMETICS, Volume 8, Issue 8, 2023.

DOI10.3390/biomimetics8080618

Accession Number WOS:001131224100001

Ris17. **Antoniac I**; Manescu V; Antoniac A; Paltanea G; *Magnesium-based alloys with adapted interfaces for bone implants and tissue engineering*, REGENERATIVE BIOMATERIALS, Volume 10, 2023.

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Ris18. Petrova A; Mamin G; Gnezdilov O; Fadeeva I; Antonova O; Forsyenskova A; **Antoniac IV**; Rau JV; Gafurov M; *Magnetic Resonance-Based Analytical Tools to Study Polyvinylpyrrolidone-Hydroxyapatite Composites*, POLYMERS, Volume 15, Issue 22, 2023.

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Ris19. Streza A; Antoniac A; Manescu V; Ciocoiu R; Cotrut CM; Miculescu M; Miculescu F; **Antoniac I**; Fosca M; Rau JV; Dura H; *In Vitro Studies Regarding the Effect of Cellulose Acetate-Based Composite Coatings on the Functional Properties of the Biodegradable Mg3Nd Alloys*, BIOMIMETICS, Volume 8, Issue 7, 2023.

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Ris20. Gheorghita D; Antoniac I; Moldovan H; Antoniac A; Grosu E; Motelica L; Fica A; Oprea O; Vasile E; Ditu LM; Raiciu AD; *Influence of Lavender Essential Oil on the Physical and Antibacterial Properties of Chitosan Sponge for Hemostatic Applications*, INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES, Volume 24, Issue 22, 2023.

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Ris21. Robu M; Radulescu B; Margarint I; Stiru O; **Antoniac I**; Gheorghita D; Voica C; Nica C; Cacoveanu M; Iliuta L; Iliescu VA; Moldovan H; *Surgical Strategy for Sternal Closure in Patients with Surgical Myocardial Revascularization Using Mammary Arteries*, JOURNAL OF CARDIOVASCULAR DEVELOPMENT AND DISEASE, Volume 10, Issue 11, 2023.

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Ris22. Izci A; Yavas B; **Antoniac I**; Goller G; Investigation of the Effects of Spark Plasma Sintering Parameters on Equiatomic CoCrFeNiMo High Entropy Alloy, JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE, 2023

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Ris23. Bololoi AE; Geambazu LE; **Antoniac IV**; Bololoi RV; Manea CA; Cojocaru VD; Patroi D; *Solid-State Processing of CoCrMoNbTi High-Entropy Alloy for Biomedical Applications*, MATERIALS, Volume 16 Issue 19, 2023.

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Ris24. Dawod N; Miculescu M; **Antoniac IV**; Miculescu F; Agop-Forna D; *Metal-Ceramic Compatibility in Dental Restorations According to the Metallic Component Manufacturing Procedure*, MATERIALS, Volume 16, Issue 16, 2023.

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Ris25. Serboiu CS; Alius C; Dumitru A; Tapoi D; Costache M; Nica AE; Alexandra-Ana M; **Antoniac I**; Gradinaru S; Gallbladder Pancreatic Heterotopia-The Importance of Diagnostic Imaging in Managing Intraoperative Findings, MEDICINA-LITHUANIA, Volume 59 Issue 8, 2023.

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Accession Number WOS:001057155700001

Ris26. Dragomir L; **Antoniac I**; Manescu V; Antoniac A; Miculescu M; Trante O; Streza A; Cotrut CM; Forna DA; *Microstructure and Corrosion Behaviour of Mg-Ca and Mg-Zn-Ag Alloys for Biodegradable Hard Tissue Implants*, CRYSTALS, Volume 13, Issue 8, 2023.

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Ris27. Sprio S; **Antoniac I**; Chevalier J; Iafisco M; Sandri M; Tampieri A; *Recent advances in bioceramics for health*, FRONTIERS IN BIOENGINEERING AND BIOTECHNOLOGY, Volume 11, 2023.

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Ris28. Radoi MA; Osiac E; Lascu LC; Gîngu O; Mitrut I; Salan AI; Mercut R; **Antoniac I**; Manolea HO; A digital approach for the analysis of the optical coherence tomography evaluation of hydroxyapatite - based bone graft materials, ROMANIAN JOURNAL OF ORAL REHABILITATION, Volume 15, Issue 3, Page 42-53, 2023.

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Ris29. Gharbi A; Oudadesse H; el Feki H; Cheikhrouhou-Koubaa W; Chatzistavrou X; Rau J; Heinämäki J; **Antoniac I**; Ashammakhi N; Derbel N; *High Boron Content Enhances Bioactive Glass Biodegradation*, JOURNAL OF FUNCTIONAL BIOMATERIALS, Volume 14 Issue 7, 2023.

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Ris30. Gheorghita D; Moldovan H; Robu A; Bitu AI; Grosu E; Antoniac A; Corneschi I.; **Antoniac I***; Bodog AD; Bacila CI; *Chitosan-Based Biomaterials for Hemostatic Applications: A Review of Recent Advances*, INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES, Volume 24, Issue 13, 2023.

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Ris31. Georgeanu VA; Gingu O; **Antoniac IV**; Manolea HO; *Current Options and Future Perspectives on Bone Graft and Biomaterials Substitutes for Bone Repair, from Clinical Needs to Advanced Biomaterials Research*, APPLIED SCIENCES-BASEL, Volume 13, Issue 14, 2023.

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Ris32. Bitu T; Antoniac A; Ciuca I; Miculescu M; Cotrut CM; Paltanea G; Dura H; Corneschi I; **Antoniac I***; Carstoc ID; Bodog AD; Effect of Fluoride Coatings on the Corrosion Behavior of Mg-Zn-Ca-Mn Alloys for Medical Application, MATERIALS, Volume 16, Issue 13, 2023.

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Ris33. Dragomir L; Antoniac A; Manescu V; Robu A; Dinu M; Pana I; Cotrut CM; Kamel E; **Antoniac I**; Rau JV; Vladescu A; Preparation and characterization of hydroxyapatite coating by magnetron sputtering on Mg-Zn-Ag alloys for orthopaedic trauma implants, CERAMICS INTERNATIONAL, Volume 49, Issue 16, Page 26274-26288, 2023.

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Ris34. Forysenkova AA; Fadeeva IV; Deyneko DV; Gosteva AN; Mamin GV; Shurtakova DV; Davydova GA; Yankova VG; **Antoniac IV**; Rau JV; Polyvinylpyrrolidone-Alginate-Carbonate Hydroxyapatite Porous Composites for Dental Applications, MATERIALS, Volume 16, Issue 12, 2023.

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Ris35. Fosca M; Streza A; **Antoniac IV**; Vadala G; Rau JV; Ion-Doped Calcium Phosphate-Based Coatings with Antibacterial Properties, JOURNAL OF FUNCTIONAL BIOMATERIALS, Volume 14, Issue 5, 2023.

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Ris36. Fadeeva IV; Deyneko DV; Knotko AV; Olkhov AA; Slukin PV; Davydova GA; Trubitsyna TA; Preobrazhenskiy II; Gosteva AN; **Antoniac IV**; Rau JV; Antibacterial Composite Material Based on Polyhydroxybutyrate and Zn-Doped Brushite Cement, POLYMERS, Volume 15, Issue 9, 2023.

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Ris37. Gharbi A; Oudadesse H; Ashammakhi N; Cheikhrouhou-Koubaa W; Blaeser A; Rau JV; **Antoniac I**; Derbel N; El Feki H; Thermodynamic behavior of bioactive glass in relationship with high fluorine content, CERAMICS INTERNATIONAL, Volume 49, Issue 11, Page 18238-18247, 2023.

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Ris38. Forna DA; Robu A; Budacu C; Petre M; Topoliceanu C; Dana SM; Stamatin O; **Antoniac I**; Forna N; Study regarding the role of barrier membranes in guided bone regeneration techniques, ROMANIAN JOURNAL OF ORAL REHABILITATION, Volume 15, Issue 2, Page 13-25, 2023.

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Ris39. Paltanea G; Manescu V; **Antoniac I***; Antoniac A; Nemoianu IV; Robu A; Dura H; A Review of Biomimetic and Biodegradable Magnetic Scaffolds for Bone Tissue Engineering and Oncology, INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES, Volume 24, Issue 5, 2023.

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Ris40. Dawod N; Antoniac A; **Antoniac I**; Miculescu M; Robu A; Ungureanu E; Agop-Forna D; Cârstoc ID; Dura H; Dragomir BR; *Corrosion behavior and microstructural analysis of some Co-Cr alloys used for metal-ceramic restorations in dentistry*, UNIVERSITY POLITEHNICA OF BUCHAREST SCIENTIFIC BULLETIN SERIES B-CHEMISTRY AND MATERIALS SCIENCE, Volume 85, Issue 4, Page 317-330, 2023.

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Ris41. Streza A; Antoniac A; Manescu V; Paltanea G; Robu A; Dura H; Verestiuc L; Stanica E; Voicu SI; **Antoniac I***; Cristea MB; Dragomir BR; Rau JV; Manolea MM; *Effect of Filler Types on Cellulose-Acetate-Based Composite Used as Coatings for Biodegradable Magnesium Implants for Trauma*, MATERIALS, Volume 16, Issue 2, 2023.

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Ris42. Gharbi A; Kallel AY; Kanoun O; Cheikhrouhou-Koubaa W; Contag CH; **Antoniac I**; Derbel N; Ashammakhi N; A Biodegradable Bioactive Glass-Based Hydration Sensor for Biomedical Applications, MICROMACHINES, Volume 14, Issue 1, 2023.

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B5. Antoniac I; Semenescu A; Orban HB; Adam R; Mates IM; *Multimaterial rod for external fixation device*; OSIM Patent 131543/2019.
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B6. Popescu D; Amza CG; Laptoiu DC; Amza G; Semenescu A; **Antoniac I;** Cicic DT; *Method and intelligent system based on X rays for training surgeons in inserting pedicle screws*, OSIM Patent 128174/2015.

B7. Moldovan M; Musat O; **Antoniac VI;** Prejmerean C; Trif M; Sarosi C; Boboia S; Silaghi-Dumitrescu L; *Biomimetic biodegradable composition meant for osseous implants*, OSIM Patent RO127484-A2/2012.

B8. Alionte CG; Alupeî COD; **Antoniac VI;** Ghiban B; Ghiban N; Hadar A; Ionescu LV; Laptoiu DC; Marin A; Semenescu A; *Orthopedical screw rod and process for increasing bio-compatibility*, OSIM Patent RO125357-A0/2010.

B9. Bunea D; Orban G; Moldovan L; **Antoniac VI;** Gheorghiu D; Semenescu A; *Femoral component for total hip prosthesis*, OSIM Patent 117890B/2002.

B10. Semenescu A; Bunea D; Ranea C; **Antoniac I;** *Discontinuous regenerative firing plant*; OSIM Patent 117972/2002.

VI. CONTRACTE SI RAPOARTE STIINTIFICE (P, F)

P – Proiecte de cercetare-dezvoltare – inovare obtinute prin competitie, pe baza de contract/grant, in tara/strainatate (Pi –internationale, Pn – nationale).

Pi – Proiecte internationale de cercetare-dezvoltare-inovare obtinute prin competitie, pe baza de contract/grant la care am fost director de proiect / responsabil al partenerului.

Pi1. Investigation Physico-chimique, Mécanique et Biologique des Biomateriaux Céramiques: Développement de Biocapteurs pour des Applications Médicales- ASBiomat, Finantator: L’Agence Universitaire de la Francophonie, **Director de proiect** (2022-2023).

Pi2. Delivering Nanotechnologies, Advanced Materials and Production to REgional Manufacturing, Program Interreg Europe, Cod proiect PGI00023 -NMP-REG, **Director proiect UPB** (2016-2021).
Pi3. Biogenic Inks combining marine collagen and ionic-doped calcium phosphate for bone tissue engineering, Program Cadru 7 – PC7, Schema ERA-NET, Contract 70/2017, **Director proiect UPB** (2017-2020).
Pi4. Novel biofunctional polymer scaffolds and techniques for the regeneration and repair of degenerate intervertebral disc, FP7-NMP-2007-LARGE-1, Proiect nr. 293104: Acronym - Disc Regeneration, **Director proiect UPB** (2008-2012).

Pic - Proiecte internationale de cercetare-dezvoltare-inovare obtinute prin competitie, pe baza de contract/grant la care am fost membru in colectivul de lucru.

Pic1. Contract SEE 6/2016 - *Exploring materials structure when interacting with geothermal steam for producing renewable energy*, Director de proiect: Ioana Csaki, (2016-2017).
Pic2. Program de colaborare bilaterala Romania-Bulgaria, *Investigation of the hydrogen diffusion, permeability and solubility in titanium and titanium based alloys intended for application aero-space industry*, Institute of Metal Science – Bulgarian Academy of Sciences; Director de proiect: Buzatu Mihai, (2010-2012).
Pic3. CMST COST Action TD0903 - *Understanding and manipulating enzymatic and proteomic processes in biomineralization - towards new biomimetic strategies, the creation of tailored nano-scale architectures and environmental monitoring*; Responsabil pentru Romania - Management Committee Member; 2009-2013.
Pic4. MPNS COST Action MP1005 - *From nano to macro biomaterials (design, processing, characterization, modeling) and applications to stem cells regenerative orthopedic and dental medicine (NAMABIO)*; Responsabil pentru Romania - Management Committee Member; 2011-2015.
Pic5. Biomaterials and advanced physical techniques for regenerative cardiology and neurology, BIONECA, CA COST Action CA16122 (2017-2019).
Pic6. FP6-Marie Curie Actions-ToK; Contract nr. 014059; *Intensive Program for Transfer of Knowledge to Eastern Europe Reference Pole for Micro- and Nanotechnologies (NANOTEC-EST)*; Director de proiect: Meghea Aurelia/Bunea Daniel, (2005-2008).

Pn – Proiecte nationale de cercetare-dezvoltare-inovare obtinute prin competitie la care am fost director proiect/responsabil al partenerului.

Pn1. Contract PCE 100/2021, *Meta-structuri formate din acoperiri compozite ale unor implanturi biodegradabile din aliaj Mg-Ca pentru regenerare osoasa (MAGICBONE)*, PN III – Cercetare fundamentala si de frontiera, Proiecte de cercetare exploratorie, **Director de proiect** (2021-2023).
Pn2. Contract 60PCCDI/2018, *Obtinerea si expertizarea unor noi materiale biocompatibile pentru aplicatii medicale (MedicalMetMat)*, PN III – Dezvoltarea sistemului national de cercetare-dezvoltare, **Responsabil proiect** (2018-2020).
Pn3. Contract 22BM/2018, PN-III-P3-3.1-PM-RO-CN-2018-0201, *Composite scaffolds with biological functions for bone tissue engineering*, **Director proiect** (2018-2019).
Pn4. Contract 122BG/2016, *Formulari de avangarda pe baza de eugenol nanocapsulat cu adresabilitate in medicina dentara (NANOEUcaps)*, PN III – Cresterea competitivitatii economiei romanesti prin cercetare, dezvoltare si inovare, **Responsabil proiect** (2016-2018).
Pn5. Contract 271/2014, *Obtinerea de implantate bioresorbabile din aliaje de magneziu, utilizabile in chirurgia gleznei si a piciorului*, PN II-Parteneriate in domenii prioritare, Domeniul 7, **Director de proiect** (2014-2017).
Pn6. Contract 132 /2014, *Suporturi magnetice biomimetice ca strategie alternativa pentru ingineria si repararea tesutului osos*, PN II-Parteneriate in domenii prioritare, Domeniul 4, **Responsabil proiect** (2014-2017).
Pn7. Contract 72-192/01.10.2008, *Implante resorbabile utilizate in artroscopie realizate din biomateriale biomimetice - PROGRAMUL 4 -PARTENERIATE IN DOMENIILE PRIORITARE*; Domeniul 7, **Director de proiect** (2008-2011).
Pn8. Contract 72-180/01.10.2008, *Materiale nanostructurate pentru functionalizarea suprafetelor endoprotezelor articulare cu uzura redusa*, PROGRAMUL 4 - PARTENERIATE IN DOMENIILE PRIORITARE; Domeniul 7, **Responsabil proiect** (2008-2011).
Pn9. Contract nr. 42-132/01.10.2008, *Dispozitiv medical pentru tratarea afectiunilor articulare bazat pe nanomateriale si efectele campului magnetic*, PROGRAMUL 4 - PARTENERIATE IN DOMENIILE PRIORITARE; Domeniul 4, **Responsabil proiect** (2008-2011).
Pn10. Contract nr. 235/2006, *Biofunctionalizarea suprafetei implanturilor pentru osteosinteza*, Programul CEEEX RELANSIN, **Director de proiect** (2006-2009).
Pn11. Contract nr. 165/2006, *Dezvoltarea de tehnici inovative in chirurgia abdominala bazate pe utilizarea unor structuri biointegrabile si dezvoltarea de noi metode de evaluare a biodegradabilitatii acestora*, Programul CEEEX- VIASAN, **Responsabil proiect** (2006-2009).
Pn12. Contract nr. 269/2006, *Metode complementare de testare a biomaterialelor utilizate in artroplastie, in vederea limitarilor testelor in vivo*, Programul CEEEX- RELANSIN, **Responsabil proiect** (2006-2009).
Pn13. Contract nr. 2146/2004, *Gama de departatoare autostatice cu multiple aplicatii chirurgicale*, Pogramul PNCDI - RELANSIN, **Director de proiect** (2004-2007).

Pn14. Contract nr. 267/2004, *Realizarea si dezvoltarea unui echipament modern destinat ambalarii produselor alimentare portionate, prin metoda top sealing*, Programul PNCDI - AGRAL, **Responsabil proiect** (2004-2007).

Pn15. Contract nr. 33/2003, *Ghid multimedia pentru educatie medicala*, Programul PNCDI - RELANSIN, Parteneriat in cadrul contract nr.1771/2003, **Responsabil proiect** (2003-2006).

Pn16. Contract nr.101/2003, *Componenta femurala pentru proteza totala de sold*, Programul PNCDI INVENT, **Responsabil proiect** UPB (2003-2004).

Pn17. Contract nr. 34967/2001, *Cercetari privind stabilirea unei tehnologii ecologice de reciclare a deseurilor de titan in vederea obtinerii unui nou aliaj de titan utilizabil ca biomaterial*, Grant tip A, Tema nr.15, Cod CNC SIS 600/2001 si 318/2002, **Director de proiect** (2001-2003).

Pn18. Contract nr. 5076/1999, *Cercetari privind selectia si utilizarea materialelor biocompatibile pentru obtinerea implanturilor ortopedice prin turnare de precizie, cu ajutorul modelelor usor fuzibile*, Grant tip T, Tema B48, 1999 si 2000 (act ad. 6028/2000, tema A39), **Director de proiect**.

Pnc - Proiecte nationale de cercetare-dezvoltare-inovare obtinute prin competitie la care am fost membru in colectivul de lucru.

Pnc1. Contract PN-III-P1-1.2-PCCDI-2017-0407, *Smart materials for medical applications*.

Pnc2. Contract PN-III-P2-2.1-BG-2016-0338, *Spectral Technology for Advanced Securing of the Documents*.

Pnc3. Contract nr. 175/2012, *Straturi subtiri biocompatibile pentru imbunatatirea aderenței ceramice-metal in restaurarile dentare*, UEFISCDI, Director de proiect Cosmin Cotrut (3 ani).

Pnc4. Contract nr.71-080/2007, *Materiale multifunctionale cu efect bioactiv destinate implantologiei*, Programul PARTENERIATE IN DOMENIILE PRIORITARE, Director de proiect Cosmeleata Georgeta (3 ani).

Pnc5. Contract nr. 71-059/2007, *Tehnologii inovative de realizare a unor produse din aliaje tip permalloy competitive la export*, Programul PARTENERIATE IN DOMENIILE PRIORITARE, Director de proiect Saban Rami (3 ani).

Pnc6. Contract nr. 194/2006, *Cercetari fundamentale si experimentale privind biomaterialele cu memoria formei cu aplicabilitate in realizarea stenturilor vasculare*, Programul CEEX, Director de proiect Ion Ciuca (2 ani).

Pnc7. Contract nr.1157/2005, *Cercetarea comparativa a diferitelor tipuri de proteze de sold, in ceea ce priveste supravietuirea lor, efectele secundare si rezultatele imediate si tardive*, Program CEEX-VIASAN, Director de proiect Tudor Andrei (3 ani).

Pnc8. Contract nr. 4-116/2004, *Cercetari privind gradul de prelucrare al suprafetei biomaterialelor metalice asupra proceselor de osteointegrare in tesuturile biologice*, Program PNCDI-CERES, Director de proiect Bunea Daniel (2 ani).

Pnc9. Contract nr.1868/2003, *Realizarea si dezvoltarea unui echipament de ambalat etans, in folie termo-contractibila si termosudabila a produselor sau gruparilor de produse alimentare si nealimentare*, Programul PNCDI – RELANSIN, Director de proiect Moldovan Laurentiu (2 ani).

Pnc10. Contract nr.1771/2003, *Laborator mobil pentru determinarea la distanta a amprentei termice a tehnicii militare in gama spectrala 2-5µm si 8-12 µm*, Program PNCDI-RELANSIN, Director de proiect Pencea Ion (2 ani).

Pnc11. Contract nr.1717/2003, *Tehnologii moderne de obtinere si prelucrare a biomaterialelor metalice destinate implanturilor dentare*, Program PNCDI-RELANSIN, Director de proiect Simona Zamfir (2 ani).

Pnc12. Contract nr.107/2003, *Managementul si dezvoltarea unui suport integrat multimedia pentru persoanele cu handicap locomotor*, Program PNCDI-INFOSOC, Director de proiect Augustin Semenescu (2 ani).

Pnc13. Contract nr.1776/2003, *Aparat pentru determinarea timpilor de coagulare*, Program PNCDI-RELANSIN, Director de proiect Aurelia Meghea (2 ani).

Pnc14. Contract nr.84/2002, *Tehnologie ecologica de reciclare a deseurilor de aliaje de titan din industria aeronautica*, Program PNCDI – CERES, Director de proiect Georgeta Cosmeleata (2 ani).

Pnc15. Contract nr.12/2001, *Realizarea si dezvoltarea unei familii de aparate de ambalat in folie elastica tip stretch, destinate comercializarii produselor alimentare sau de panificatie*, Program PNCDI - AGRAL, Director de proiect Daniel Bunea (3 ani).

Pnc16. Contract nr. 1476/2001, *Baza de date pentru biomateriale, implante si tehnologii de procesare a biomaterialelor in vederea obtinerii implantelor*, Program PNCDI - RELANSIN, Director de proiect Mihai Tarcolea (3 ani).

Pnc17. Contract nr.18/2001, *Centru virtual de selectie a biomaterialelor*, Program PNCDI-INFOSOC, Director de proiect Mihai Tarcolea (3 ani).

Pnc18. Contract nr. 58/2001, *Cresterea calitatii implantelor (ortopedice, dentare) prin depuneri de straturi subtiri cu proprietati biocompatibile superioare*, Program PNCDI - MATNANTEH, Director de proiect Simona Zamfir (3 ani).

Pnc19. Contract nr.82/2001, *Modelarea si cuantificarea interactiilor biomaterialelor si implantelor cu mediul gazda si/sau tesut-implant prin metode avansate*, Program PNCDI - BIOTECH, Director de proiect Caloianu Maria (3 ani).

Pnc20. Contract nr.133/2000, *Tehnologii de acoperire in vederea imbunatatirii sculelor*, Programul PNCDI - RELANSIN, Director de proiect Simona Zamfir (3 ani).

Pnc21. Contract nr.1474/2001, *Realizarea protezelor articulare de sold*, Program PNCDI - RELANSIN, Director de proiect Branzei Mihai (3 ani).

Pnc22. Contract nr. 1473/2001, *Centrul de Biomateriale BIOMAT*, Program PNCDI - RELANSIN, Responsabil de proiect

Zamfir Simona (3 ani).

Pnc23. Contract nr. 1472/2001, *Sistem integrat de educatie in domeniul biomaterialelor*, Program PNCDI - RELANSIN, Director de proiect Dan Gheorghe (3 ani).

Data

07.07.2025

Semnatura

Prof.univ.habil.dr.ing. Vasile Iulian Antoniac