

# Curriculum Vitae

## STANCU Izabela-Cristina

**Current positions:** **Prof, Dr.Habil.Eng.**, University Politehnica of Bucharest (UPB), Faculty of Chemical Engineering and Biotechnology; **Team Leader** in Advanced Polymers Materials Group (APMG); **Vice Dean of Research and International Relations**, *ERASMUS+* responsible, Faculty of Medical Engineering.

### ↪ **Degrees, diplomas, research fellowships:**

• 2020: Habilitation in Chemical Engineering, UPB, **Engineering Bioinspired Hydrogels for Cell-Instructive Scaffolds and Surfaces**, defence 6.11.2020; • 2013: Postdoctoral degree Postdoctoral programme for advanced research in the field of **nanomaterials**, POSDRU/89/1.5/S/54785, UPB(2010–2013); • 2004: **PhD in Chemistry**: UPB, **PhD in Biological and Medical Engineering**: Univ. Angers(2000 –2003), co-tutored thesis *Biodegradable and biocompatible polymers in bone pathology*; • 2000: Dipl. Engineer, Chemical Engineering/ Organic Chemistry, UPB, Faculty of Engineering in Foreign Languages (1995–2000); •2006–2007: Postdoctoral Researcher (12 months), FP6-STRP-NMP3-CT-2005-013912/*Injectable macroporous biomaterials based on Calcium Phosphate cements for bone regeneration*, Ghent Univ; •2005-2006: Marie Curie Postdoctoral fellow (13 months), FP5-HPMD-CT-2001-00077/*Molecular Imaging for Label Free Detection in Functional Proteomics*; Dresden Univ. of Technology; • 2020: PhD student fellowship (11 months)/ *biomimetic scaffolds for bone regeneration*, Univ Angers.

### ↪ **Professional experience and jobs:**

**In Romania:** 2017→, **full professor. Habil./UPB**; 2015→, **Vice Dean**, Faculty of Medical Engineering, UPB; 2016-2020, **Project Team leader @APMG**; **Technical Responsible** INOVABIOMED project, ID: P\_36\_611 | 145/26.10.2016; 2012–2017, Associate prof./UPB; 2007–2012, Lecturer/UPB; 2002–2007 Assistant Prof./UPB; Disciplines introduced by PL: Master: Bioactivation and Protein Engineering for TE and Regenerative Medicine, Tissue analogues; Chemical Modification of Polymers for Medical and Biological Applications; Biofunctionalized Polymers for Tissue Engineering and Regenerative Medicine; Bachelor: Biomaterials-Tissue Interface Phenomena; project director;

### **Abroad:**

\*A **Marie Curie postdoctoral fellow** at Dresden Univ. of Technology, allowed the PL to approach **bioconjugation** techniques for the design of SPRi biosensors for the early detection of **cancer**.

\*As **postdoctoral researcher @Ghent Univ**, she **biofunctionalized polymers for injectable bone substitutes**. As postdoc @UPB, she developed **nanocomposites with mineralization potential**.

↪ **Management of research labs** Since 2015 the PL prepared the funding application and from 2016, as **Technical Responsible**, in the implementation of INOVABIOMED project, Innovative Technologies for Materials Quality Assurance in Health, Energy and Environment Center for Innovative Manufacturing Solutions of Smart Biomaterials and Biomedical Surfaces, POC ID: P\_36\_611 |145/26.10.2016 (~16e10 Euro, director H. Iovu). This brought in UPB *a state-of-the-art research infrastructure with applications in biomaterials, tissue engineering and regeneration*, with **10 new labs** (4 for APMG and 1 for the Faculty of Medical Engineering – essential in this application) and 6 modernized.

↪ The **PL coordinates** the following: **Lab. Laboratory of Nanostructured Surfaces Engineering and Biomimetism (LISNB) (INOVABIOMED/2016) – essential in Next3DBone**; **Biological Investigation Lab. – essential in Next3DBone**, Lab. for Biomaterial-Tissue Interface Phenomena (2010) and **Lab of Polymer Biofunctionalization (2008) – essential in this project**

↪ **Mentorship:** over 100 Students for Bachelor, Master theses and participated to the supervision of Phd theses in Chemical Engineering and Medical Engineering (6 Phd (i.e. A. Serafim, DM Dragusin, S Cecoltan, E. Olaret). She coordinated >60 Romanian students for Erasmus stages abroad (Italy, Spain, Greece, NL, Irland, Germany, France, UK, Sweeden); coordination of 3 foreign students in her labs (G. Barillaro and J. Atene / Italy, Margaux Molina/France). Since 2021 - 1st Phd Student as habil. (C. Nicolae); 2018→ tutor Smart Biomaterials and Applications master progr; scientific advisory board member (T. Haroche, GEROM/Univ. Angers); evaluation committees member and opponent at PhD theses (Yang Sun/KTH, Royal Institute of Technology,2014; Mohamed Ibrahim/Univ Bergen, 2017; Seyed Mohammad Hossein Dabiri/ Univ degli Studi di Genova; Birgit

Stubbe/University Ghent, 2018)

↳ Young team members international training - the PL sent her team members to collaborators: DE Giol and DM Drăgușin – doctoral training at PBMG/Gent Univ, Dr. A. Serafim – doctoral training at Univ. Angers, E.Olăreț – master training @ Univ. Angers and Univ. Bergen, F Curti training @Univ. Bergen

#### ↳ Prizes:

\*2016 *Award for „the most relevant contribution in the field of biomaterials in Romania”* Romanian Society for Biomaterials (SRB) @ BiomMedD'2016;

\*2008 *SRB Scholarship* for 2008 (Medical Ortovit Scholarship), @ BiomMedD'2008; 2010-2020 UEFISCDI prizes for research results

↳ **Membership of Professional+Scientific Bodies/ Other:** 2021→ROHEALTH cluster – *National Representative for Bioeconomy Group*; 2014-2018 Member *Education Committee /European Doctoral Award/European Society for Biomaterials (ESB)*; 2010-2016: Secretary/Vice President/Romanian Society for Biomaterials (SRB); 2008-2013: (Co-)Establisher +National representative of Romanian Young Scientist Forum (YSF)@SRB; 2009-2017: *Secretary of YSF@ESB*; Evaluator ERC, FWO, UEFISCDI; CNSC scientific officer; Plenary lecture Rytro 2018, 27th Conference of Biomaterials for Medicine and Veterinary Medicine, Poland; invited lectures AMBA2014; BIOMMEDD 2016, BIOREMED2015, BIOMMEDD2014. Guest Editor: Polymers 2021, Recent advances in biomaterials science, Int. J. Nano and Biomaterials, 3(4), 2011, Inderscience Enterprises Ltd.

↳ **Collaborations relevant for this project:** Prof. K. Mustafa, Tissue Engineering Group, Univ Bergen; Prof. L. Moroni, MERLN; Prof. K. Syverus, RISE PFI, Trondheim; Prof S. Van Vlierberghe and Prof. P. Dubruel, PBM Group, Univ Ghent; Dr. S. Dinescu, Prof. M. Costache – Univ. Bucharest, D. Steinhilber-Nethl, DiaCoating Austria.

#### ↳ Research grants (amounting for approx 1.100.000 Euro)

##### 6 national grants as project director:

\*PCA2022/1.06.2022 - Integrating mechanically-tunable 3D printing with new bioactive multi(nano)materials for next functional personalized bone regenerative scaffolds – 1200000 lei

\*133PED din/ 01/02/2017 (PN-III-P2-2.1-PED-2016-1683) – *Personalized* meshes for hernia repair using surface engineering with hydrogels [BIOWALL] – 600000 lei / 125000 Euro

\*183 / 03/07/2012 (PN-II-PT-PCCA-2011-3.2-0885) Bioactive injectable macroporous biomaterials for *bone regeneration* - 3250000 lei / 677083 Euro

\*6 / 02/08/2010 (PN-II-RU-TE-2010-0080) Study of the *biomimetic mineralization* using specifically functionalized 3D hydrogels - 594440 lei/1233842 Euro

\* IDEI 729/2009, PCE-2008 Polymer biomaterials for *bone regeneration. Biomimetism* for surface nanostructuring - 452498 lei/113125 Euro

\* CEEEX 5853/18.09.2006, High performance hybrid polymers for *bone regeneration*; innovative combination of *template mineralization and cell adhesion* - 136000 lei /37778

**1 national/UPB responsible:** PNII-PT-PCCA-2013-4-0816 201/2014, Rational Design and Synthesis of Bioactive Smart Scaffolds for The *Personalized Treatment* of Wounds – ZETTAskin;

**1 national /UPB responsible for project 2:** PN-III-P1-1.2-PCCDI-2017-0782, PCCDI65/2018, Advanced Innovative approaches for *predictable regenerative medicine*, project2: Biocompatible system for assisting peripheral nerve regeneration (NERVE)

##### 1 international project as partner:

\*2020-2024, *3D Printed Engineered Nano-Composite Templates for Bone Regeneration (3DPRENT)*, Project 302043/2020, coordinated by Prof. Kamal Mustafa (University Bergen), Research Council of Norway (NANO2021) – 300.000 NOK (approx 30.000 Euro)

↳ **Congress organization (selection): Member International Advisory Committee:** 31st European Conference on Biomaterials, ESB2021; ESB2018; Advanced Materials for Biomedical Applications, AMBA2014, 18-21.11.2014, Ghent, Belgium; **Member Scientific Committee:** BiomMedD'2014, 17–20.09.2014, Constanta, Romania, **Member Organizing Committee:** YSF workshop on entrepreneurship @ESB2014, Liverpool; 2013 YSF workshop on scientific writing of research proposals and journal publications, @ESB2013 Madrid; YSF workshop @ESB2011, Tampere; BiomMedD'2010 Sinaia.