

Curriculum Vitae

Work Experience

- October 2018 until present: **Research Assistant** at the Nano-bio-photonics and Laser Microspectroscopy Center, Institute for Interdisciplinary Experimental Research in Bio-nano-science, Babes-Bolyai University, Cluj-Napoca, Romania – Member in 3 research projects

Education

- October 2018 until present: **PhD in Physics** at the Faculty of Physics, Babes-Bolyai University, Cluj-Napoca, Romania
- October 2016-June 2018: **Master of Science** in Biomaterials at the Faculty of Physics, Babes-Bolyai University, Cluj-Napoca, Romania
- October 2013-June 2016: **Bachelor in Science** in Medical Physics at the Faculty of Physics, Babes-Bolyai University, Cluj-Napoca, Romania
- September 2008-May 2012: **Matriculation examination** and Highschool Student at Colegiul National Mihai Eminescu, Satu Mare, Romania

Scientometry

- Publications: **6 ISI articles**, from which 4 as main author
- International Conferences: 1 poster presentation
- National Conferences: 2 oral presentations

Personal Skills

- Mother tongue: **Romanian**
- Foreign languages: **English level C1**

- Driving license: **B category**
- Job-related skills: **Synthesis, optimization and spectroscopic characterisation of protein-based nanoparticles; Nanoparticles biofunctionalization for targeted delivery therapy and fluorescence-guided imaging; Optical Spectroscopy** (UV-Vis Spectroscopy; Dynamic Light Scattering, Zeta Potential; Fluorescence Spectroscopy), **Optical Microscopy** (Confocal Microscopy, Fluorescence Microscopy).
- Digital skills: **Information processing** – Proficient user, **Communication** – Proficient user, **Content creation** – Independent user, **Safety** – Independent user, **Problem solving** – Independent user; Very good command of **Microsoft Office** and job-specific software such as **Origin, GaussView, Gaussian, ImageJ, ChemDraw, GraphPad Prism**

List of publications

- ❖ Fluorescent Phthalocyanine-Encapsulated Bovine Serum Albumin Nanoparticles: Their Deployment as Therapeutic Agents in the NIR Region; **R Borlan**, D Stoia, L Gaina, A Campu, G Marc, M Perde-Schrepler, M Sillion, D Maniu, M Focsan, S Astilean; *Molecules*, 26, 15, 4679.
- ❖ Antibody-functionalized theranostic protein nanoparticles for the synergistic deep red fluorescence imaging and multimodal therapy of ovarian cancer; **R Borlan**, M Focsan, M Perde-Schrepler, O Soritau, A Campu, L Gaina, E Pall, B Pop, O Baldasici, C Gherman, D Stoia, D Maniu, S Astilean; *Biomaterials Science* 2021.
- ❖ Interventional NIR Fluorescence Imaging of Cancer: Review on Next Generation of Dye-Loaded Protein-Based Nanoparticles for Real-Time Feedback During Cancer Surgery; **R Borlan**, M Focsan, D Maniu, S Astilean; *International Journal of Nanomedicine* 16, 2147-2171.
- ❖ Folic acid functionalized gold nanoclusters for enabling targeted fluorescence imaging of human ovarian cancer cells; AM Hada, AM Craciun, M Focsan, **R Borlan**, O Soritau, M Todea; *Talanta* 225, 121960.
- ❖ ICG-loaded gold nano-bipyramids with NIR activatable dual PTT-PDT therapeutic potential in melanoma cells; A Campu, M Focsan, F Lerouge, **R Borlan**, L Tie, D Rugina, S Astilean; *Colloids and Surfaces B: Biointerfaces* 194, 111213.
- ❖ Design of fluorophore-loaded human serum albumin nanoparticles for specific targeting of NIH: OVCAR3 ovarian cancer cells; **R Borlan**, AS Tatar, O Soritau, D Maniu, G Marc, A Florea, M Focsan; *Nanotechnology* 31 (31), 315102.