

## SCIENTIFIC SPECIALTY: BIOMEDICINE

Analytical research scientist with more than eight years of experience contributing to human health-related studies. Background includes participation in research in the areas of cell biology and protein biochemistry. Proficiency in running bioassays and laboratory bench studies, writing scientific reports and maintaining research operations. Performed wet-lab and molecular biology scientific research, using methods including SDS Page, UV/Vis spectroscopy, enzyme activity assays (radiometry), Western blot, enzyme-linked immunosorbent assay (ELISA), polymerase chain reaction (PCR).

### SCIENTIFIC SKILLS:

- Comprehensive experience in brightfield and fluorescence microscopy (including intravital imaging)
- Cell lines culture (primary, immortalized, cancer) - static and flow conditions
- Rodent Surgery (anesthesia and analgesia, including peri-operative care and monitoring, simple and high-level implantation procedures, microsurgical suture techniques)
- Biostatistics - design of biological experiments, the collection and analysis of data from those experiments, and the interpretation of the results
- Data science - programming in Python and R, machine learning methods, data visualisation

### SELECTED PROJECTS COMPLETED AND CURRENTLY REALIZED:

- 2022-present **Principal investigator**: Endoscopic Computer-aided Diagnostics based on convolution neural network in detection of early phase adenoma. National Centre for Research and Development - Amount of funding: 1 497 500,00 PLN
- 2019-present **Post Doc in project**: Free Fatty Acid receptors (FFAs) as a new pharmacological target in inflammatory bowel disease: validation of hypothesis and design of novel drug candidates. Foundation for Polish Science Amount of funding: 3 150 000,00 PLN
- 2016-2019 **Post Doc in project**: Dual purinoreceptor-dependent approach to prevent thromboembolic events dependent on blood platelets and endothelium – approaches based on animal and cellular models. Foundation for Polish Science Amount of funding: 3 500 000,00 PLN
- 2015-2019 **Principal investigator**: Does PGE2 increase adhesion of platelets to endothelium in flow conditions via activation of EP3 receptor? *In vitro* and *in vivo* studies. National Science Centre - Amount of funding: 150 000,00 PLN
- 2015-2017 **Principal investigator**: [Characterization and assessment of the influence of glycation of cyclic synthase of prostaglandin peroxide type 2 (PGHS-2) on its catalytic activity in the pathophysiology of hyperglycaemia]. National Science Centre - Amount of funding: 88 000,00 PLN
- 2014-2017 **Principal investigator**: [Measurement of platelet reactivity in-vivo using Doppler laser in various vascular beds of mice and rats. Evaluation of blood flow and the formation of platelet occlusions in small blood vessels after administration of ADP, collagen, and thromboxane analogue]. Internal Project of Medical University of Lodz Project Amount of funding: 45 000,00 PLN
- 2014-2017 **Young researcher in project**: May post-translational non-enzymatic modifications of platelet proteins contribute to altered platelet adhesion to endothelium under conditions of severe hyperglycaemia? DM as a model underlying atherothrombosis derived from protein glycation (Project No. 2012/06/A/NZ5/00069). The Project funded by the National Science Center, Amount of funding: 2 515 000,00 PLN
- 2011-2015 **Young researcher in project**: Vascular endothelium in civilisation diseases: from basic knowledge to the offer of innovative drug with endothelial activity, POIG.01.01.00-069/09-00, the project funded by the European Union Structural Funds, Amount of funding (for the task): 2 570 000,00 PLN
- 2011-2015 **Young researcher in project**: How does the glycation of platelet and endothelial cyclooxygenases affect the enzyme susceptibility to non-enzymatic acetylation? Implications for blood platelet and endothelium sensitivity to the influence of ASA in diabetes mellitus, N N401 265839, funded by the Polish Ministry of Science and Higher Education, Amount of funding: 320 000,00 PLN
- 2011-2014 **Young researcher in project**: Production of polyphenol extracts of plant origin with antiplatelet and cardioprotective properties –FLAWOPIRIN, POIG.0 1.03.01- 10- 129/08- 00, the project funded by the European Union Structural Funds, Amount of funding: 7 134 978,00 PLN