



Łukasz Pułaski

ASSOCIATE PROFESSOR – UNIVERSITY OF ŁÓDŹ · HEAD OF LABORATORY OF TRANSCRIPTIONAL REGULATION – IMB PAS

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Scopus bibliometric data: citations 1233 · documents 70 · h-index 19

Currently held positions

Department of Oncobiology and Epigenetics, Faculty of Biology and Environmental Protection

University of Łódź

ASSOCIATE PROFESSOR

Institute of Medical Biology of the Polish Academy of Sciences

Łódź

HEAD OF LABORATORY OF TRANSCRIPTIONAL REGULATION

Scientific profile and collaborations

My scientific interests include: mechanisms of transcriptional regulation of gene expression, signalling pathways which regulate cell fate, cellular redox homeostasis, biophysics of biological membrane dynamics, active membrane transporter biochemistry, multidrug resistance in cancer and pathogens, genetics of rare human diseases, blood-brain barrier function and pathology, immune and metabolic hormonal regulation, ecotoxicology (particularly with regard to nanoparticles, persistent organic pollutants and emerging biogenic threats), macrophage development and function, ecology and taxonomy of orchids, application of modern bioimaging techniques to analysis of plant and animal life histories, evolution and molecular physiology of invertebrates. They all involve collaborations with many excellent scientists.

My main activities take place in the field of biotechnology, including:

- practical immunomodulation and design of antibody-based tools;
- engineered nanoparticles for drug delivery and signalling modulation;
- use of atypical expression hosts for bioactive protein production;
- construction of reporter gene-based cellular biosensors;
- FRET-FLIM-based detection of biological molecule interactions;
- synthetic biology tools for preventing and removing ageing-related molecular hallmarks

Selected publications

- 2025 ***Tetrabromobisphenol A, but not bisphenol A, disrupts plasma membrane homeostasis in myeloid cell models - A novel threat from an established persistent organic pollutant*** [\[link\]](#)
- 2021 ***Nanoparticles for Directed Immunomodulation: Mannose-Functionalized Glycodendrimers Induce Interleukin-8 in Myeloid Cell Lines*** [\[link\]](#)
- 2015 ***Endocytosis of ABCG2 drug transporter caused by binding of 5D3 antibody: trafficking mechanisms and intracellular fate*** [\[link\]](#)

Research grants

Principal Investigator: 4 grants: KBN, MNiI, NCN

Task Leader: 3 grants: POIG, EOG

Obtained patents

1 international patent (EPO)

International research stays

Germany Heidelberg, German Cancer Research Centre, in the team of Prof. Dietrich Keppler

USA Bethesda, National Cancer Institute, in the team of Prof. Michael Gottesman

Sweden Uppsala, Ludwig Institute for Cancer Research, in the team of Prof. Carl-Henrik Heldin