# Prof. Paweł Bednarek

## Institute of Bioorganic Chemistry, Polish Academy of Sciences

### ACADEMIC AND RESEARCH CAREER

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| 2020- | Professor, Institute of Bioorganic Chemistry, Polish Academy of Sciences, Poznań, Poland |
| 2019- | Coordinator, Poznań Doctoral School of the Institutes of the Polish Academy of Sciences |
| 2011- | Guest lecturer, Faculty of Biology, Adam Mickiewicz University, Poznań, Poland |
| 2011-2020 | Associate professor, Institute of Bioorganic Chemistry, Polish Academy of Sciences, Poznań, Poland |
| 2010-2011 | Assistant professor, Institute of Bioorganic Chemistry, Polish Academy of Sciences, Poznań, Poland |
| 1996-2001 | Assistant, Institute of Bioorganic Chemistry, Polish Academy of Sciences, Poznań, Poland. |

### MAJOR RESEARCH PROJECTS

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| 2020- | National Science Centre grant - "Interspecies metabolic engineering as a tool to investigate immune functions of plant specialized metabolites" |
| 2019- | National Science Centre grant - "Impact of subcellular localization on the specificity of selected enzymes involved in the biosynthesis and metabolism of bioactive sulfur-containing compounds from Brassicaceae plants" |
| 2016-2020 | National Science Centre grant - "Function of plant secondary metabolites in microbe-induced growth promotion" |
| 2016-2019 | National Science Centre grant - "Molecular mechanisms underlying loss of a defensive metabolic pathway in a phylogenetic clade of plant species closely related to *Capsella rubella*" |
| 2013-2018 | National Science Centre grant - "Plant secondary metabolites controlling microbial colonizers" |
| 2011-2015 | EMBO Installation Grant - "Functional characterization of pathogen inducible secondary metabolites in model plants" |

### RESEARCH VISITS

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| 2003-2011 | Department of Plant Microbe Interactions, Max Planck Institute for Plant Breeding Research, Cologne, Germany |
| 2001-2002 | Department of Biochemistry, Max Planck Institute for Plant Breeding Research, Cologne, Germany |

### PUBLICATION (5 MAJOR PUBLICATIONS, LAST 5 YEARS)


Pastorczyk, M., Kosaka, A., Piślewska-Bednarek, M., López, G., Frerigmann, H., Kułak, K., Glawischnig, E., Molina, A., Takano, Y., and **Bednarek, P.** (2020). The role of CYP71A12 monooxygenase in pathogen-triggered tryptophan metabolism and Arabidopsis immunity. New Phytol. 225:400-412.

Piślewska-Bednarek, M., Nakano, R.T., Hiruma, K., Pastorczyk, M., Sanchez-Vallet, A., Singkaravanit-Ogawa, S., Ciesiołka, D., Takano, Y., Molina, A., Schulze-Lefert, P., and **Bednarek, P.** (2018). Glutathione Transferase U13 Functions in Pathogen-Triggered Glucosinolate Metabolism. Plant Physiol. 176, 538-551

Nakano, R.T., Piślewska-Bednarek, M., Yamada, K., Edger, P.P., Miyahara, M., Kondo, M., Böttcher, C., Mori, M., Nishimura, M., Schulze-Lefert, P., Hara-Nishimura, I., and **Bednarek, P.** (2017). PYK10 myrosinase reveals a functional coordination between endoplasmic reticulum bodies and glucosinolates in *Arabidopsis thaliana*. Plant J. 89, 204-220

Frerigmann, H., Piślewska-Bednarek, M., Sánchez-Vallet, A., Molina, A., Glawischnig, E., Gigolashvili, T., and **Bednarek, P.** (2016). Regulation of pathogen triggered tryptophan metabolism in *Arabidopsis thaliana* by MYB transcription factors and indole glucosinolate conversion products. Mol. Plant. 9, 682-695.

Piasecka, A., Jedrzejczak-Rey, N., and **Bednarek, P.** (2015). Secondary metabolites in plant innate immunity: conserved function of divergent chemicals. New Phytol. 206, 948-964.