



Anna Zawisza

ASSOCIATE PROFESSOR – UNIVERSITY OF LODZ · VICE DEAN FOR STUDENTS MATTERS – UNIVERSITY OF LODZ

✉ anna.zawisza@chemia.uni.lodz.pl | 🌐 <https://www.uni.lodz.pl/pracownicy/anna-zawisza> | Anna-Zawisza-2 | 0000-0001-8801-8210 | Scopus bibliometric data: citations 401 · documents 46 · h-index 12

Currently held positions

Department of Organic and Applied Chemistry, Faculty of Chemistry

University of Lodz

ASSOCIATE PROFESSOR

Faculty of Chemistry

University of Lodz

VICE DEAN FOR STUDENTS MATTERS

Scientific profile and collaborations

My research focuses on five topics related to organic chemistry: **the chemistry of carbohydrates, homogeneous catalysis with palladium complexes, asymmetric synthesis, the synthesis of new ligands for catalysis and organocatalysis, and the synthesis of biologically active compounds.** As part of my research, I have developed Pd(0)-catalyzed synthesis of O-, S-, and N-glycosides, as well as cyclization and isomerization reactions of allylic substrates under palladium-catalyzed conditions. This part was carried out in cooperation with the Laboratoire de Synthèse Asymétrique in Lyon and the Laboratoire Réactions Sélectives et Applications in Reims. Currently, my interests focus on the synthesis of new chiral phosphine-imine and phosphine-amine ligands derived from D-gluco-, D-galacto-, and D-allosamine, chiral aziridine-phosphines and phosphinoyl-aziridines, as well as bifunctional chiral thiourea and thiosquaramide organocatalysts, which I then apply in a number of asymmetric reactions, e.g., the Betti reaction, the Morita-Baylis-Hillman reaction, the aza-Henry reaction, Friedel-Crafts alkylation, the Mannich reaction, and Pd-catalyzed asymmetric allylic alkylation. In addition, I am involved in the development of new biologically active compounds, such as sugar derivatives of lacosamide (an antiepileptic drug), C-glycosyl-aminoethyl sulfide derivatives (substrates for dopamine β -hydroxylase, hypertension control, adenosine deaminase inhibition, and DNA methyltransferase inhibition), and, more recently, amino acid derivatives of Betti bases, which exhibit cytotoxic and pro-apoptotic properties

Selected publications

- 2020 *Optically Pure Aziridin-2-yl Methanols as Readily Available 1H NMR Sensors for Enantiodiscrimination of α -Racemic Carboxylic Acids Containing Tertiary or Quaternary Stereogenic Centers* [\[link\]](#)
- 2023 *Synthesis, Computational, and Anticancer In Vitro Investigations of Aminobenzyl-naphthols Derived from 2-Naphthol, Benzaldehydes, and α -Aminoacids via the Betti Reaction* [\[link\]](#)
- 2018 *New phosphine-imine and phosphine-amine ligands derived from D-gluco-, D-galacto- and D-allosamine in Pd-catalysed asymmetric allylic alkylation* [\[link\]](#)

Research grants

Principal Investigator: 2 grants: NCN, POIG

Project Manager: 2 grants: FNP

Co-Investigator: 1 grant: NCN

International research stays

Franace, Lyon, Université Claude Bernard Lyon I Laboratoire de Synthèse Asymétrique, in the team of Prof. Denis Sinou

France, Reims, Université de Reims Champagne-Ardenne Laboratoire Réactions Sélectives et Applications, in the team of Prof. Jacques Muzart