

## **Project 2.3 Palladium-catalyzed cascades for the rapid and enantioselective construction of polycyclic scaffolds of alkaloids by dearomative Heck reactions**

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**Unit:** Group XIV

**www:** [www.icho.edu.pl/zespol/rafal-loska](http://www.icho.edu.pl/zespol/rafal-loska)

### **Background:**

The work will involve multi-step syntheses of the precursors for the Pd-catalyzed cascade reactions, optimization of the cascade reactions, spectroscopic and HPLC analysis of the products, preparation of the results for publication.

### **Aim:**

The aim of the project is the development of palladium-catalyzed cascade reactions forming polycyclic nitrogen-containing structures, corresponding to the skeletons of natural alkaloids and their analogues. An important goal is to design and optimize these catalytic reactions also in enantioselective manner by performing them in the presence of chiral ligands.

### **Requirements:**

- A MSc degree in chemistry obtained before the envision start date,
- good knowledge of organic chemistry,
- dedication to the project, interpersonal skills,
- good English skills, sufficient for research work in chemistry,
- the candidate must be qualified for the Doctoral Studies at the Warsaw PhD School in Natural and BioMedical Sciences (Warsaw-4-PhD) by the Recruitment Commission (see: <http://www.warsaw4phd.eu/index.php#rekrutacja>)