

Study programme: IMMUNOPHARMACOTHERAPY

ANOTATION

Ph.D. students are profiled for deep orientation in the principles of basic, clinical and applied immunology and pharmacology. They will be trained in the field of analysis of host immune responses including analyses of intracellular signalling pathways. They will get experience in vaccine and biologicals design and their physicochemical and biological characterization. Students will get experience in the construction, expression and characterization of recombinant proteins; in antigen modification supporting targeting of cytotoxic T cell responses, inducing regulatory T cells, or inducing neutralizing antibodies; in formulation of proteoliposomes and other corpuscular forms of antigen; in principles of the design, expression, and testing proteins for tumor diagnostics and therapy.

The dissertation topics proposed by the Department of Immunology, Faculty of Medicine and Dentistry and University Hospital Olomouc, reflect the experimental focus of individual research groups and their collaboration with other academic and clinic departments and collaborating commercial subjects. The programme benefits from cooperation conducted by the Palacký University Olomouc and Veterinary Research Institute Brno with academic institutions in the USA, France, UK, Taiwan, and commercial partners in the Czech Republic, UK, France, Netherland, and Germany.

ADMISSION PROCEDURE 2026/27

Contact details of the training department:

Department of Immunology, Faculty of Medicine and Dentistry, Palacký University Olomouc and University Hospital Olomouc, Hněvotínská 3, Olomouc, phone: +420 585 632 752.

Dissertation topics of the training department:

1. **Study of the mechanisms involved in activation of dendritic cells applicable for development of anti-infection or anti-tumor vaccines**
1 position in the full-time form of study
Supervisor: Mgr. Kateřina Zachová, Ph.D.
2. **Approaches to biological therapy of inflammatory bowel diseases**
1 position in the full-time form of study
Supervisor: prof. Mgr. MUDr. Milan Raška, Ph.D.
3. **Immune check points in diagnostics and therapy of selected cancers**
1 position in the full-time form of study
Supervisor: RNDr. Leona Rašková Kafková, Ph.D.
4. **Application of small binding proteins in the development of anti-viral vaccines inducing broadly neutralizing antibodies**
1 position in the full-time form of study
Supervisor: prof. Mgr. MUDr. Milan Raška, Ph.D.

5. Oral mucoadhesive drug formulations for controlled release of therapeutics and vaccines

1 position in the full-time form of study

Supervisor: prof. RNDr. Jaroslav Turánek, CSc.

Application deadline: **15 May 2026**

Date and location of entrance exam: **4 June 2026 at 10 a.m. CET**
on-line through Zoom Cloud Meeting

Alternative entrance exam: **18 June 2026 at 10:00 a.m.**

Anticipated maximum number of admitted students:
Full-time form: 5 students

Examination format: oral

General content of the oral entrance examination:

The candidate must meet the requirements for professional knowledge of Molecular Biology and fundamentals of Immunology corresponding to the master's degree level.

Evaluation criteria:

MSc, MD or equivalent degree in natural or medical sciences.

The level of knowledge of molecular biology and immunology will be evaluated, as well as the motivation towards commencing PhD studies and the current scientific research activities.

The annual tuition fee for the post-graduate study programme conducted in English is set at EUR 100.