



Institute of Zoology and Biomedical Research
Jagiellonian University, Krakow, Poland

PhD student position

We seeking a highly motivated and enthusiastic **PhD candidate** to study **host-bacterial interactions**.

Most infectious diseases are caused by bacteria residing in a complex niche referred to as **biofilm**, which protects pathogens from the host and limits the penetration of drugs. One example of such a biofilm is dental plaque. Reports show a connection between **oral infections** and life-threatening disorders such as **cardiovascular** or **neurodegenerative diseases**, but the mechanism of bacterial spreading is unknown.

We will examine **(i)** dynamic interaction of complex human oral bacterial **biofilms** with **host immune cells**, **(ii)** bacteria-driven **vascular damage** as a potential mechanism for bacterial spreading, **(iii)** anti-biofilm agents such as **nanoparticles** as potential treatments to combat oral pathogens and associated diseases.

We will utilise **state-of-the-art microscopy** and **transgenic zebrafish (*Danio rerio*) lines**, widely used in biomedical research as a model organism.

Requirements:

- **MSc degree in life science**
- preferentially experience in **molecular/microbiological/microscopy** techniques
- **good oral and written English**
- experience with **zebrafish** model would be an advantage

Opportunities:

- international and supportive environment
- part of a pioneering team investigating oral pathogens- hosts interactions using zebrafish.
- collaboration/exchange with researchers from top ranking Universities:



England



Scotland



Scotland

- **competitive salary** - doctoral school stipend + additional PhD scholarship

Further information:

The candidate needs to apply to the Doctoral School of Exact and Natural Sciences and undergo the process of recruitment into the program of „PhD in Biology” (4 years). For more details visit https://science.phd.uj.edu.pl/en_GB/join/biology-english/topic-/journal_content/56_INSTANCE_qGwJAhJX2inA/142594442/155792211

Interested candidate should send CV to **Dr. Magdalena Widziolek-Pooranachandran**,

Department of Evolutionary Immunology, Jagiellonian University, e-mail: magdalena.widziolek@uj.edu.pl.

Deadline:

23.06.2024 (**final registration to the Doctoral School**) but please consider that advanced contact is required in order to prepare necessary documentation.

