



PhD position in Biology/Biochemistry

Project title: **The Effect of selected arthropod's compounds on wound healing**

We are looking for 2 motivated PhD students for a joint research project of the team **Dr. Zdeněk Franta, Ph.D.** and **doc. RNDr. Jindřich Chmelař, Ph.D.**, the **Faculty of Science**, University of South Bohemia, the **Biology Centre** of Academy of Science of the Czech Republic and the biotechnology company **Contipro a.s.**

Project introduction: Natural resources represent one of the main trends in the search for new medicinal substances. In this research project, we focus on the identification of new biologics from two organisms that have evolved unique molecular mechanisms possessing intensive effects on the mammalian immune system, including human. The larvae of the green bottle fly *Lucilia sericata* have been approved as an alternative treatment for chronic and hard to heal wound, and its excretory and secretory products contain many substances that facilitate the removal of necrotic tissue and promote healing. The hard tick *Ixodes ricinus* produces hundreds of pharmacologically active substances with anti-haemostatic, anti-inflammatory and immunomodulatory properties in its saliva into the host. Within this research project, various recombinant proteins from fly larvae and tick saliva will be produced and subsequently tested in a series of *in vitro* and *in vivo* experiments to find an effective treatment for chronic wounds.

Student Requirements:

- Mgr/Msc degree in biology, biochemistry or related fields
- hands on experience in molecular and cell biology, biochemistry and/or immunology.
- the experience with recombinant protein production and purification advantageous.
- independent and responsible approach to solving complex questions.

Project job description:

- preparation of recombinant proteins
- protein testing using biochemical, molecular biological and immunological methods
- working with tissue culture - *in vitro* models of inflammation
- working with experimental animals (mice) - *in vivo* models of inflammation
- bioinformatic analysis of the biologics

We offer:

- ✓ work in a young multidisciplinary team, medically oriented research.
 - ✓ close collaboration with Contipro, a Czech leading biotech company, possibility of internships
-



-
- ✓ cooperation with the Biology Centre of Academy of Science of the Czech Republic
 - ✓ international cooperation, possibility of internships abroad
 - ✓ university benefits (5 weeks of vacation, 4 personal sick days per year, a meal card or the option of meals at the USB canteen at a reduced price, Childcare benefits, mobile operator benefits, bank account benefits, language courses)
 - ✓ competitive PhD salary (0,5 postdoc FTE) guaranteed **for 45 months with possible prolongation**
 - ✓ up to 15 000 CZK scholarship

Position starting: in April 2025 or based on availability

How to apply:

Please submit your application electronically via jobs@prf.jcu.cz until **January 15, 2025**.

The application must contain:

- CV
- Contact information from 2 persons for references

More information about faculty at www.prf.jcu.cz.
