

Short-term research projects in Olomouc, Czech Republic for students applying for Erasmus scholarships

Motivation

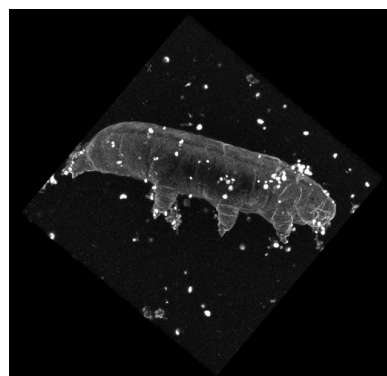
Over the years, I have been contacted by students applying for Erasmus+ grants and interested in research in my laboratory. I usually apologized because establishing projects for 2-3 months was not easy as our primary research focus – high-throughput drug screening on human cells – requires a lot of training. So together with my students, we found research areas that would not require prior experience beyond the standard laboratory courses. If you are interested, do not hesitate to contact me. Longer stays (Erasmus) are welcome as more complex projects can be designed.

Drug screening on nematodes

We use the free-living model nematode *Caenorhabditis elegans* to identify cytoprotective and anti-aging compounds. We also use it as a model parasite; screening hits are validated on parasites of animals and plants. The student would be involved in all phases of drug screening. The work includes the preparation of bacteria and worm cultures and evaluating worm fecundity/motility/viability (wMicrotracker, automated microscopy + image analysis). A candidate should have lab experience, including working under sterile conditions (an MSc student of biochemistry, molecular biology, microbiology, and related fields) and good command of English. Although two-month projects can be designed, longer stays are preferable.

Biology of water bears

We use water bear cultures for radioresistance studies. We are also trying to establish breeding populations from environmental species (moss, soil). The student would be involved in the isolation of new specimens, their initial characterization (bright-field and fluorescent microscopy, preparation of samples for Raman microscopy), identification of suitable culture conditions, and pilot stress studies. Projects are ideal for students of biology programs with good command of English.



Contact

Dr. Jiří Voller

Anti-aging intervention group, Department of Experimental Biology

Faculty of Science, Palacky University

Olomouc, Czech Republic

jirivoller@gmail.com