

Nine Postdoctoral Positions: Charles University in Prague, Faculty of Science

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Nine Postdoctoral Positions in Chemistry, Life Sciences and Biology starting April 1, 2012

Charles University is one of the most eminent educational and scientific establishments in the Czech Republic. Its Faculty of Science is a research-oriented institution with the main mission to create highly qualified experts in biology, chemistry, geology, geography and environmental sciences. Some of the long-term priority areas are human health, the study of ecosystems, and the development of environmentally friendly materials based on the utilization of renewable resources. Over 400 scientists conduct research and education in the fields of biology, chemistry, geology, geography and environmental studies. We offer a multidisciplinary, stimulating and interactive environment in young research groups. The Faculty is located in the heart of Prague, a cultural crossroad of unique ambiance.

Applicants should have a recent Ph.D. in the corresponding field and a promising publication record; the degree had to be obtained no earlier than on 28 March 2008. Successful candidates will be required to teach in advanced courses related to their specific area of expertise. The courses, aimed at Ph.D. and M.Sc. students, will be held in English and will be organized as intensive courses/workshops at various institutions outside of Prague. The teaching workload will not exceed five hrs/average week.

The positions will initially be for 33 months and will be funded through the European Social Fund in the Czech Republic. Funds for long-term research stay (up to 6 months)/international mobility are provided. The salaries will start at 40K CZK per month.

The Faculty will hold a competitive selection; official call for application will be announced in early 2012. There will be a trial period of two months.

Two Postdoctoral researchers in Chemistry

(Faculty of Science, Department of Organic chemistry)

Two Postdoctoral researchers in Molecular Cell Biology

(Faculty of Science, Departments of Cell Biology and Genetics and Microbiology)

One Postdoctoral researcher in Immunology

(Faculty of Science, Department of Cell Biology)

One Postdoctoral researcher in Comparative Evolutionary Neuroscience

(Faculty of Science, Department of Zoology)

One Postdoctoral researcher in Botany

(Faculty of Science, Department of Botany)

Two Postdoctoral researchers in Ecology

(Faculty of Science, Department of Ecology)

Enquiries and preliminary applications may be sent to postdoc@natur.cuni.cz

To obtain more information about the topics, deadlines and the selection process, please visit:
<http://www.natur.cuni.cz/biologie-en/postdoctoral-position/postdoctoral-positions>

Molecular cell biology

Postdoctoral researcher – Translational control of the eukaryotic gene expression

Postdoctoral position is available for either a molecular biologist or a computational biologist (specialist in bioinformatics) to study a role of physical and functional interactions between translation initiation factors and 5' and 3' untranslated regions (UTRs) in a control of mRNA translation and stability. Both canonical and non-canonical translation initiation factors will be in a focus of the study. The main models currently employed in the laboratory are human cell lines (derived from acute leukemia), budding yeast, hepatitis C virus and the beetle *Tribolium castaneum*. A broad selection of models and used techniques allow us to ask questions ranging from those covering basic functions of translational apparatus to questions concerning associated evolutionary and developmental consequences. Deregulation of translation initiation and mRNA stability plays a key role in many human pathologies including cancer, leukemia and viral infection. We always try to expand our basic science projects to understanding of the corresponding diseases and thus we often co-operate with leading academic institutes and clinics.

Qualification and experience. We are looking for a highly motivated, enthusiastic and qualified researcher who would like to join our team and effort. If molecular biologists, candidates should have an experience either in RNA analyses and biochemistry or in cell biology techniques including confocal microscopy, life cell imaging and FRET. If computational

biologists, candidates should have, besides basic knowledge of molecular genetics, strong background and interest in computational data analysis, experience with Linux/Unix shell, knowledge in database technologies and solid programming skills. Strong communication skills and the ability to interact and co-operate well with other scientists and students in the team are essential.

Lab website: <http://web.natur.cuni.cz/~pospisek/>, **IRESite:** <http://www.iresite.org/>

Postdoctoral Researcher – Splicing in the regulation of gene expression in yeast

Postdoctoral position is available to study the regulation of splicing and the interplay between transcription and pre-mRNA processing in yeast. Candidates should be interested in the molecular mechanisms of gene expression regulation and should have experience in molecular genetics, biochemistry, RNA analyses and cell biology/microbiology.

The Laboratory is interested in the mechanisms of splicing regulation and the relationship between splicing and transcription using yeasts as model organisms. Both *Saccharomyces cerevisiae* and *Schizosaccharomyces pombe* are used to study evolutionarily conserved regulatory factors of the synthesis and maturation phases of transcript production. Introns in *S. cerevisiae* are relatively few and short; the spliceosomes still contain an almost complete array of splicing factors as compared to other organisms (*S. pombe* or higher eukaryotes). The study of splicing factors in an organism with reduced intronome should help to identify interactions that link splicing to other gene expression processes.

Potential aims include:

- Regulation of RNA helicases during the splicing cycle
- Factors and molecular mechanisms of coupling of transcription initiation, elongation, and splicing
- Mechanisms that coordinate transcript production & maturation with cell cycle progression
- Role and regulation of cyclophilins in the spliceosome of *S. pombe*

Additional information on this position and research of the group may be obtained from Petr Folk (postdoc@natur.cuni.cz).