



CHARLES UNIVERSITY

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List of Post-Doctoral Fellowships

A new call for applications has been announced !

Applicants can apply in 2021 for positions in projects announced by following faculties:

1. [First Faculty of Medicine](#) : 4 projects
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7. [Faculty of Science](#) : 10 projects
8. [Faculty of Law](#) : 3 projects
9. [Faculty of Medicine in Pilsen](#) : 1 project
10. [Faculty of Pharmacy in Hradec Králové](#) : 1 project
11. [Catholic Theological Faculty](#) : 1 project

Deadlines of submitting of applications you will find under each specific project. More detailed information about general conditions of applying for positions funded by JUNIOR Fund you can find on the website: [JUNIOR Fund \(Post-doc\)](#).

First Faculty of Medicine

[1] Title of the research project:



BIOMIMETIC REMINERALIZATION AND HARD TISSUE BIOMODULATION

Description:

As a consequence of the age-related gingival recession and the frequent exposure of cervical root dentin, the risk of root dentin caries has increased. However, root cavities may be difficult to treat because of the complex etiology and structure. Biomimetic remineralization could be a powerful approach for the treatment of such defects. Specifically, self-assembling peptides (SAPs) are increasingly gaining interest for potential use as scaffolds in tissue engineering [1]. As previous studies reported that cross-linking agents such as proanthocyanidin (PA) reinforced the properties of dentin collagen matrix and improved the bond strength of adhesives to dentin [2], PA could also reinforce the scaffold self-assembled within the body of a subsurface lesion. The remineralization of the scaffold would be stimulated by bioactive glass particles (BAGs) or casein phosphopeptides-amorphous calcium phosphate (CPP-ACP). BAGs are highly biocompatible materials with a wide variety of use in medical and dental fields because of their ability to support the growth of bone cells and formation of hydroxyapatite (Fig. 2) [3]. CPP-ACP is a bioactive material used to initiate and promote the remineralization of enamel and dentin structures as CPP has the ability to stabilize calcium phosphate in solution by binding the ACP with phosphoserine residues, leading to formation of nano CPP-ACP clusters [4].

This project is aimed at evaluating the potential of SAPs combined with BAGs or CPP-ACP to induce biomimetic remineralization of enamel, dentin and bone tissues. The properties of the remineralized tissues would be assessed using various methods including micro-computed tomography, scanning electron microscopy, transmission electron microscopy, microhardness, FTIR spectroscopy, and X-ray diffraction. It is expected that the biomechanical properties of the remineralized tissues and hence the clinical outcome of the treatment would be enhanced if biomimetic remineralization is achieved.

References:

- [1] Alkilzy M, Santamaria RM, Schmoeckel J, Splieth CH. Treatment of carious lesions using self-assembling peptides. *Advances in dental research*. 2018 Feb;29(1):42-7.
- [2] Vidal CM, Leme AA, Aguiar TR, Phansalkar R, Nam JW, Bisson J, McAlpine JB, Chen SN, Pauli GF, Bedran-Russo A. Mimicking the hierarchical functions of dentin collagen cross-links with plant derived phenols and phenolic acids. *Langmuir*. 2014 Dec 16;30(49):14887-93.
- [3] Skallefold HE, Rokaya D, Khurshid Z, Zafar MS. Bioactive glass applications in dentistry. *International journal of molecular sciences*. 2019 Jan;20(23):5960.
- [4] Oshiro M, Yamaguchi K, Takamizawa T, Inage H, Watanabe T, Irokawa A, Ando S, Miyazaki M. Effect of CPP-ACP paste on tooth mineralization: an FE-SEM study. *Journal of oral science*. 2007;49(2):115-20.

Qualifications:

- Ph.D. degree in dental medicine, life sciences, or related fields (max. 5 years from graduation)
- Record of publications in IF journals: at least 3 publications in IF journals (IF above 1.5), at least one as a first author
- Ability to communicate in both spoken and written English (minimum level B2 in the Common European Framework of Reference or equivalent)
- High motivation, ability to conduct collaborative research.

Funding: Cooperatio (Dental medicine)

Workplace/Institution: Institute of Dental Medicine (First Faculty of Medicine of the Charles University and General University Hospital in Prague)

Supervisor: Dr. Antonin Tichy, PhD

E-mail of the supervisor: antonin.tichy@lf1.cuni.cz

Phone of the supervisor: +420 224 96 68 05

Position available from: January 1, 2022

Deadline date for applications: July 18, 2021

Applicants must submit [required documents](#) to: Anna Jezberová anna.jezberova@lf1.cuni.cz

|2| Title of the research project:



PHYSIOPATHOLOGY OF T-TYPE CALCIUM CHANNELS IN MOTOR NEURON FUNCTION

Description:

Amyotrophic lateral sclerosis (ALS) is a neurodegenerative disorder characterized by the progressive loss of cortical, brain stem, and spinal motor neurons that leads to muscle weakness and death. ALS is regarded as a complex genetic disorder with a Mendelian pattern of inheritance in 5-10% of cases (familial ALS), but most patients have no discernable family history of the disease (sporadic ALS). However, several genes in apparent sporadic ALS are believed to increase the risk and/or modify the onset/progression of the disease. Recent studies from our laboratory suggest that CACNA1H encoding for Cav3.2 T-type Ca²⁺ channels may represent a risk factor for the disease. The goal of this research proposal is to address clinically relevant, fundamental questions regarding the role of T-type Ca²⁺ channels in motor neuron function, with a key translational aim of elucidating their pathogenic role in the development of motor neuron disorders such as (ALS).

Relevant literature from our group:

- Stringer RN, Jurkovicova-Tarabova B, Huang S, Haji-Ghassemi O, Idoux R, Liashenko A, Souza IA, Rzhpetsky Y, Lacinova L, Van Petegem F, Zamponi GW, Pamphlett R, Weiss N (2020) A rare CACNA1H variant associated with amyotrophic lateral sclerosis causes complete loss of Cav3.2 T-type channel activity. *Mol Brain* 13:33.
- Weiss N, Zamponi GW (2020) Genetic T-type channelopathies. *J Med Genet* 57:1-10.
- Rzhpetsky Y, Lazniewska J, Blesneac I, Pamphlett R, Weiss N (2016) CACNA1H missense mutations associated with amyotrophic lateral sclerosis alter Cav3.2 T-type calcium channel activity and reticular thalamic neuron firing. *Channels* 10:466-77.

Work environment:

The candidate will benefit from modern instrumentation including a patch clamp electrophysiology, confocal microscopy, efficient animal and cell culture facilities, as well as all the necessary equipment for regular molecular biology and biochemistry. More information can be found on our lab webpage <http://theweisslab.com>

Candidate profile:

The candidate must have a Ph.D or equivalent degree in neuroscience, cell biology or equivalent. Prior experience with patch clamp electrophysiology will be appreciated. Experience with primary neuronal cell culture, basic molecular (PCR, mutagenesis) and biochemistry (western blot) techniques, or confocal imaging microscopy will be an added advantage.

Salary: co-funding 1000 EUR/month is ensured

Project supervisor: Dr. Norbert Weiss, Ph.D (nalweiss@gmail.com)

Department: Institute of Biology and Medical Genetics, First Faculty of Medicine, Charles University

Position available from: January 1, 2022

How to apply: If you are interested in this position, please send a short cover letter describing your scientific interests along with a CV directly to Dr. Norbert Weiss nalweiss@gmail.com no later than June 30, 2021 to discuss and prepare your application

Deadline date for applications: July 18, 2021

Applicants must submit [required documents](#) to: Anna Jezberová anna.jezberova@lf1.cuni.cz

|3| Title of the research project:



DNA DISTRIBUTION IN THE CELL NUCLEUS - A MULTIDISCIPLINARY IMAGING APPROACH

Description:

The cell nucleus is probably the most complex compartment of the cell. It contains the genome and is the site of all related activities such as DNA replication and repair, RNA synthesis, as well as RNA maturation and transport. These activities take place within dynamic three-dimensional non-membrane domains. A comprehensive structural-functional study of these domains requires an approach integrating state-of-the-art in situ imaging methods at various levels of resolution, and a combination of in vivo analysis with a subsequent ultrastructural investigation performed on the same cells.

The major aim of the proposed project is an analysis of the DNA distribution within the nuclear volume including a reconstruction of the large scale three-dimensional (3D) chromatin arrangement in mammalian cell nuclei. This will shed light on the longstanding controversies about chromatin architecture in the interphase nucleus.

This project will be pursued with synchronised cell lines. To visualise transcriptionally active chromatin, the cells will be labelled by in vivo incorporation of uridine marked with halogens and/or stable isotope ¹⁵N or ¹³C. Heavy-metal stains that selectively enhance the contrast of chromatin will be used. For structure and function analysis, transmission and scanning electron microscopy (TEM and SEM) approaches (SEM array tomography and combination of SEM with focused ion-beam milling) together with the nanoscale secondary ion mass spectrometry (NanoSIMS) will be applied.

Funding: Position will be co-financed from projects funded by the Czech Science Foundation (GACR), Ministry of Health of the Czech Republic and by Charles University.

Workplace: Institute of Biology and Medical Genetics, First Faculty of Medicine, Charles University and General University Hospital in Prague

Supervisor: Dusan Cmarko, Ph.D.

E-mail: dusan.cmarko@lf1.cuni.cz

Position available from: January 1, 2021

Deadline date for applications: July 18, 2021

Applicants must submit [required documents](#) to: Anna Jezberová anna.jezberova@lf1.cuni.cz

|4| Title of the research project:



GENETICS AND MECHANISMS OF AMYOTROPHIC LATERAL SCLEROSIS (ALS)

Description:

Amyotrophic lateral sclerosis is the third most common neurodegenerative disorder after Parkinson's and Alzheimer's. ALS is a devastating disorder affecting people in their 40–60 years of age, with an average survival of 2–3 years. There is no cure. Genetic defects have been found in both, familial and sporadic ALS, and twin studies estimate the heritability to about 60 %. Mutations causing ALS leads to various biological consequences disturbing pathways of cellular energy metabolism, protein homeostasis, RNA metabolism, neuroinflammation, cytoskeletal pathways and many others. The diversity of genetic architecture and clinical phenotypes challenges the ultimate goal to find a cure. Up today, defects in more than 30 genes have been identified to cause ALS, including c9orf72, TARDBP, SOD1, FUS, ATXN2, TBK1, and other. Also about 20 genes contribute to disease development as risk factors. Therefore, current drug development focuses on numerous targets, but for clinical

trials we must also cluster patients according to their phenotypes. Therefore, we want to characterize the genotype and phenotype in our cohort of patients with sporadic and familial ALS. We have selected Slavic population from central Europe, characterized by common lifestyle and similar epidemiology. For phenotyping, we will collaborate with Neuromuscular centers to obtain clinical data and questionnaires.

This project aims to

1. design and to build a database for data describing ALS phenotypes
2. analyze genetic and genomic data of Slavic population (NGS, GWAS) and to compare the results with the current studies
3. identify the risk factors affecting the disease or its course

To collect and to analyze the data describing ALS phenotype, we will build secured database, which will be used for further analyses. As inclusion criteria, only patients with certain ALS diagnosis confirmed by a neurologist will be included. General epidemiologic data will be collected as age, sex, occupation, as well as data specific to ALS: the age of onset, site of onset of the disease, contact sports, attendance in military service, ALSFRS-R (a scale describing disease progression).

Results from genetic/genomic analyses from Next Generation Sequencing or Genotyping Arrays (Illumina) will be analyzed with R software.

This is a collaborative work with neuromuscular centers from university hospitals, state-of-the-art facilities (Charles University, BIOCEV), and bioinformatic structures. This work is supported by PRIMUS 21/MED/012 and other funding.

References:

Al Chalabi et al., J Neurol Neurosurg Psyc 2010. (12) 1324-6

Abramzon et al., Front Neurosci 2020; 5:14

McLaughlin R. et al, Nature Comm 2017; 8: 14774

Chio A et al, Neurology 2021; 96 (15)

Manjaly et al, Amyotroph Lateral Scler 2020 11(5):439-442

Brown R et al, N Engl J Med 2017; 377: 162-72

Mc Kay et al, Acta Neurol Scand 2020, 143:39-50

Workplace: Institute of Biology and Medical Genetics, First Faculty of Medicine, Charles University

Supervisor: Lenka Šlachtová, PhD.

E-mail: lenka.slachtova@lf1.cuni.cz

Position available from: January 1, 2021

Deadline date for applications: July 18, 2021

Applicants must submit [required documents](#) to: Anna Jezberová anna.jezberova@lf1.cuni.cz

Faculty of Education

[1] Title of the research project:



CONTEXTUALIZED SECONDARY DATA ANALYSIS OF INTERNATIONAL LARGE SCALE ASSESSMENT DATA (E.G. PISA, TIMSS)

International large-scale assessments (ILSAs - namely PISA, TIMSS, PIRLS, ICCs, TALIS, PIAAC) provide a unique source of data freely available for analysis and allowing international comparisons. Handling such data requires a substantive methodological knowledge, e.g. how to work properly with complex designs, use replication weights, properly work with plausible values, etc. We look for a postdoc with experience and good knowledge of working with such data, ideally using Mplus or R software for multilevel and/or structural equation modelling. Yet substantive quantitative knowledge needs to be backed up with knowledge of educational policy and country specific information, which allows to formulate policy-relevant research question for comparison. We offer the high knowledge of Central and Eastern European Countries and context for analysis of policy relevant issues based on the available ILSAs data which shall be the main emphasis of postdoc work. Also, data from ILSAs in post-Socialist countries are often not sufficiently analysed due to lack of researchers and methodological knowledge. The analysis could be oriented, but is not limited to, the following topics: the effects of early tracking, Big Fish Little Pond Effect, relationship between motivation and self-concept and achievement, socio-economic inequalities, rural-urban differences, gender inequity, class composition and peer effects, teacher quality and teacher beliefs. Applicant shall choose one or two topics to specify in their postdoc application project proposal.

Workplace: Institute for Research and Development of Education

Supervisor: David Greger, Ph.D. - IRDE director

E-mail: david.greger@pedf.cuni.cz

Position available from: January 1, 2022

Deadline date for applications: July 23, 2021

Applicants must submit [required documents](#) to: Lothar Filip Rudorfer lotharfilip.rudorfer@pedf.cuni.cz (faculty coordinator of the Junior Fund)

[Post-Doctoral Fellowships \(Junior Fund\) at the Faculty of Education](#)

[2] Title of the research project:



COMBINING THEORY AND PRACTICE AT TEACHERS' TRAINING

Combining theory and practice at teachers' training Pedagogical practices that combine theory with practice are necessary in order to promote a high-quality teacher education. Although this is a well-known fact in educational theory, students often identify practice only regarding the teaching practice classes. The Department of Pre-primary and Primary Education is on its path to improve classes and assessment methodologies and is looking for a postdoc researcher with teaching and researching experience to enhance its efforts. It will be the task of the postdoc employee to deeply analyze the current situation from teachers' and students' perspectives and design and conduct an intervention study to embed the effective combination of educational theory and practice.

Workplace: Department of Pre-primary and Primary Education
Supervisor: Assoc. Prof. Jana Stará, Ph.D. – head of department
E-mail: jana.stara@pedf.cuni.cz
Position available from: January 1, 2022

Deadline date for applications: July 23, 2021

Applicants must submit [required documents](#) to: Lothar Filip Rudorfer lotharfilip.rudorfer@pedf.cuni.cz (faculty coordinator of the Junior Fund)

[Post-Doctoral Fellowships \(Junior Fund\) at the Faculty of Education](#)

[3] Title of the research project:



"GOOD QUESTION" IN MATHEMATICS AND SCIENCE EDUCATION

Communication plays a crucial role in mathematics and science education. One of the methods to support creative and analytical thinking is the Good questions method. Good questions are a specific type of open question that must meet the following criteria (Sullivan and Lilburn, 2010): a) there exist several answers that can be accepted; b) more than a mere reference to known facts is required; c) discussion is provoked; c) includes a motivational function in lifelong education; d) students may learn something when they answer it and/or discuss it; and, e) teachers can learn something about their pupils from the pupils' answers. The method of Good Questions is developed by a team of experts from the Department of Mathematics and Mathematical Education and the Department of Biology and Environmental Studies. We look for a postdoc with experience in qualitative research.

Workplace: Department of Mathematics and Mathematical Education
Supervisor: Assoc. Prof. Antonín Jančařík, Ph.D.
E-mail: antonin.jancarik@pedf.cuni.cz
Position available from: January 1, 2022

Deadline date for applications: July 23, 2021

Applicants must submit [required documents](#) to: Lothar Filip Rudorfer lotharfilip.rudorfer@pedf.cuni.cz (faculty coordinator of the Junior Fund)

[Post-Doctoral Fellowships \(Junior Fund\) at the Faculty of Education](#)

Faculty of Arts

[1] Title of the research project:



ART AND ARCHAEOLOGY OF THE CENTRAL AND WESTERN MEDITERRANEAN
DURING THE ROMAN PERIOD

Institute of Classical Archaeology is seeking a highly qualified post-doctoral researcher with international experience to join our team for two years with his/her own project focused on art and/or archaeology of the Central and Western Mediterranean during the Roman Period.

Specialisations currently represented in our institute cover the Bronze Ages and the Early Iron Age in the Aegean and the Balkans, the Hellenistic world, Central Asia, Roman Thrace, Iron Age Italy and Central Europe, with field projects in Uzbekistan, Greece, Turkey, Bulgaria, Northern Macedonia, Croatia, and France. We thus seek a dynamic early career researcher who will both match the varied profile of the institute and explicitly complement it with his/her erudition in Roman archaeology, currently missing in our portfolio.

The proposed project should geographically fall broadly within the Central and Western Mediterranean (i.e. from the western Balkans, through Italy, the Alpine area and France up to the Iberian Peninsula, including Northern Africa) during the Roman period. It should show innovative approaches within one (or more) of the following specialisations:

Art and iconography
 Material culture
 Architecture and urban studies
 Landscape archaeology
 Digital humanities
 Archaeological sciences
 Process of 'Romanisation'

In addition to conducting research on the candidate's proposed project, the successful applicant will be expected to offer two semester-long courses on an M.A. level based on his/her research (1 semester = 12 weeks x 90 minutes of instruction per week), ideally one being a lecture course and one being a seminar (i.e. a course involving active interaction with the students); both courses are to be delivered in English, any time during the two years. The researcher is expected to publish results of the conducted research in at least two papers submitted in SCOPUS-ranked peer-reviewed journals. The results of the research project will be presented in a workshop or a smaller conference to be organised by the successful candidate during the second year of the postdoc.

The successful applicant is expected to move to Prague and actively participate in the everyday activities of the Institute, which provides a collegial and highly collaborative environment. We strongly believe in synergies between our projects. Should the collaboration be mutually satisfying, we will encourage the postdoctoral fellow to apply for additional project funding, thus securing continued involvement with our institute.

Profile of an ideal candidate:

Completed PhD degree in excellent standing (within the last 5 years since graduation).
 Excellent knowledge of English (FCE equivalent or better).
 Strong background in Classical archaeology or Mediterranean archaeology.
 High motivation and ability to conduct collaborative research.
 Previous participation in international projects.
 Previous experience in teaching at an undergraduate and/or graduate level is welcomed.
 Due to tax specification, the candidate cannot be employed in any other country than Czech Republic in course of the postdoctoral period.

The applicants should submit:

All documents required by the Charles University's Junior Fund
 A one-page cover letter introducing yourselves
 A two-page description of the proposed project
 Sample syllabi of two proposed courses/seminars
 A short description the final workshop (200-300 words)

Salary: Equivalent to 2000 EUR/month

Workplace: Institute of Classical Archaeology, Faculty of Arts, Charles University (Celetná 20, Prague 1)

Supervisor: Assoc. Prof. Peter Pavúk, Ph.D.

Contact: peter.pavuk@ff.cuni.cz

Phone: +420 608 124 836

Position available from: January 1, 2022 (for 24 months)

Deadline for applications: July 15, 2021

Applicants must submit required documents to: peter.pavuk@ff.cuni.cz (project supervisor)

[2] Title of the research project:



MEDICINE AND MAGIA POSTHUMA BETWEEN THE LATE MIDDLE AGES AND
 THE EIGHTEENTH CENTURY

The Department of Archaeology is inviting applications for a postdoc position combining approaches of archaeology, cultural and social history/anthropology, as well as science and intellectual history. The researcher will focus on the relations between medicine, religion and governance in the pre-modern era, with a special focus on magic, witchcraft and vampirism in Central and/or East-Central Europe. He or she should be ready to take part in the activities of the Department, as well as those of the interdisciplinary Centre for the Study of the Middle Ages, which supports this call.

The researcher is expected to take part in teaching at least one seminar per semester. He or she is also expected to publish at least one high quality article in a database journal per academic year, and, by the end of the project, have a substantial research project submitted on behalf of the Faculty of Arts.

Profile of an ideal candidate:

Ph.D. degree in archaeology or history (less than 5 years since graduation)
 Research interest and publication track record particularly in the field of social and cultural history, history of science/medicine, religious studies
 Previous participation in international projects and interdisciplinary research, experience with preparing project proposals
 Teaching experience is welcome
 Excellent knowledge of English (FCE equivalent or better)
 Strong research skills, creativity, motivation and ability to participate in large research networks.
 Due to tax specification, the candidate cannot be employed in any other country than Czech Republic in course of the postdoctoral period.

The applicants should submit:

All documents required by the Charles University's Junior Fund
 Research proposal (max. 5 standard pages)
 Sample syllabi of two proposed courses/seminars

Salary: Equivalent to 2000 EUR/month
 Workplace: Department of Archaeology (Faculty of Arts, Charles University)
 Supervisor: Assoc. Prof. PhDr. Tomáš Klír, Ph.D.
 E-mail: tomas.klir@ff.cuni.cz
 Phone: +420 221 619 437
 Position available from: January 1, 2021 (for 24 months)

Deadline for applications: July 15, 2021
 Applicants must submit required documents to: tomas.klir@ff.cuni.cz (project supervisor)

[3] Title of the research project:



TRANSLATION IN THE LEGAL DOMAIN AS A SUB-AREA OF INSTITUTIONAL TRANSLATION

The Institute of Translation Studies, Charles University, Prague, offers a vacant position of a post-doctoral fellow. The area of research includes the so-called Institutional Translation Studies. This sub-discipline has emerged rather recently, yet it attracts growing interest by translation scholars around the globe. Many, however, regard Institutional Translation research as a synonym for studying legal translation in institutional contexts. This is too narrow a perspective, which needs to be widened by researching the scope of legal and non-legal translation discourses within institutions. Arguably, for example within EU institutions, the non-legal domain is well represented as a substantial share of the documents translated every year by in-house translators. This observation needs empirical substantiation, and the study of the proportion of legal vs. non-legal discourse in institutions will be the goal of the prospective post-doc fellow. The research will include quantitative and qualitative research as well as targeted enquiry using surveys and structured interviews. The research findings, after publication, will enrich the understanding of Institutional Translation at large.

What do we offer?

The post includes a two-year contract in Prague (i.e., 2022 and 2023), under financial conditions competitive in the Czech Republic
 Teaching opportunities, shadowing, in relevant courses
 Opportunity to get involved in the Institute's Ph.D. study programme as lecturer and/or co-supervisor
 Participation in conferences and training offered by the EMT (European Masters in Translation) network (the Institute is EMT member)

Who is eligible?

Eligibility for a post-doc position (max. 5 years after Ph.D. on Jan 1, 2022)
 Degree and/or thorough qualification in the area of Translation Studies

Due to tax specification, the candidate cannot be employed in any other country than Czech Republic in course of the postdoctoral period.

Expectations

The researcher will teach at least one seminar on either undergraduate or postgraduate level every semester (topics to be discussed)
Two publications in IF academic journals
Drafting and submitting an application for international research funding (subject to availability of funding opportunities and/or specific calls), which will involve other colleagues from the Institute as well
Involvement in organizing an EMT international conference, which will take place in Prague in 2022

The applicants should submit:

All documents required by the Charles University's Junior Fund
A one-page cover letter introducing yourselves
A two-page description of the proposed project

Salary: Equivalent to 2,000 EUR/month

Workplace: Institute of Translation Studies, Faculty of Art, Charles University

Contact: PhDr. Bc. Tomáš Svoboda, PhD.

E-mail: tomas.svoboda@ff.cuni.cz

Position available from: January 1, 2022

Deadline for applications: July 15, 2021

Applicants must submit required documents to: tomas.svoboda@ff.cuni.cz (project supervisor)

[4] Title of the research project:



POSTDOCTORAL GRANT IN MEDIEVAL PHILOSOPHY

The Institute of Philosophy and Religious Studies is seeking a highly qualified international post-doc researcher in the field of medieval philosophy. Her/his research project will focus on one or more of these areas of specialization: theories of intentionality and person, doctrines of the soul, will and freedom, readings of the Aristotelian corpus and its transformations up to Modern Age (13th-17th centuries). Archivistic and paleographic skills as well as the ability to work interdisciplinarily are welcome.

The successful candidate is expected to carry out independent research and teach one course per semester in English, French or German. She or he is also expected to engage in active cooperation with the host institution, as well as in the organization of international workshops and seminars revolving around her/his research. She or he is also expected to publish a series of high-quality articles in peer-reviewed journals, dedicated to the host institution. Moreover, by the end of the project, the successful candidate will be encouraged to apply for a research grant (to be further discussed with the host institution).

The main goal of the fellowship is that of developing a synergy between the candidate and the Institute of Philosophy and Religious Studies. For any questions or doubts, please contact anna.tropia@ff.cuni.cz.

Profile of an ideal candidate:

Completed PhD degree (no more than 5 years since its obtention).
Excellent command of English (FCE equivalent or better).
Strong background in History of Medieval, Renaissance, Early Modern Philosophy.
Ability to carry out collaborative research.
Due to tax specification, the candidate cannot be employed in any other country than Czech Republic in course of the postdoctoral period.

The applicants should submit:

Short research proposal (max 4 pages)
Curriculum vitae
Two samples of publications (articles or chapters of book) relevant to the position

Salary: ca. 2000 EUR/month

Workplace: Institute of Philosophy and Religious Studies (Faculty of Arts, Charles University)

Supervisor: Assoc. Prof. Jan Palkoska, Ph.D.

Position available from: January 1, 2022 (for 24 months)

Deadline date for applications: July 15, 2021

Applicants are expected to submit [required documents](#) to: anna.tropia@ff.cuni.cz

|5| Title of the research project:



GREEK AND/OR LATIN STUDIES

The Institute of Greek and Latin Studies is seeking a highly qualified international post-doc researcher in the field of Greek and/or Latin Studies (Philology, Cultural and Literature Studies, Linguistics, History). Focus on one of these areas is desirable:

- Ancient Greek History
- Modern Greek Linguistics
- Linguistics of Medieval Latin

However, we will consider any proposal dealing with the above-mentioned field.

The successful candidate is expected to take part in teaching at least one seminar per semester. He or she is also expected to publish at least one high quality article in a database journal per academic year, and, by the end of the project, have a substantial research project submitted on behalf of the Faculty of Arts (to be further discussed with the host institution). She or he is also expected to engage in active cooperation with the host institution, as well as in the organization of international workshops and seminars revolving around her/his research.

The main goal of the fellowship is that of developing a synergy between the candidate and the Institute of Greek and Latin Studies. For any questions or doubts, please contact martin.bazil@ff.cuni.cz.

Profile of an ideal candidate:

- Ph.D. degree (less than 5 years since graduation) in Greek/Latin Studies
- Research interest and publication track record
- Previous participation in international projects and interdisciplinary research, experience with preparing project proposals
- Teaching experience is welcome
- Fluent knowledge of English (FCE equivalent or better)
- Strong research skills, creativity, motivation and ability to participate in large research networks
- Due to tax specification, the candidate cannot be employed in any other country than Czech Republic in course of the postdoctoral period

The applicants should submit:

- [All documents](#) required by the Charles University's Junior Fund
- A one-page cover letter introducing yourselves
- A two-page description of the proposed project
- Sample syllabi of two proposed courses/seminars

Salary: Equivalent to 2000 EUR/month

Workplace: Institute of Greek and Latin Studies, Faculty of Arts, Charles University (Celetná 20, Prague 1)

Supervisor: Mgr. Martin Bažil, Ph.D. (Head of the Institute)

E-mail: martin.bazil@ff.cuni.cz

Phone: +420 221 619 739

Position available from: January 2022 (for 24 months)

Deadline for applications: July 15, 2021

Applicants must submit [required documents](#) to: eva.zezulkova@ff.cuni.cz

Faculty of Humanities

|1| Title of the research project:


 MEDIEVAL LITERATURE IN A COMPARATIVE PERSPECTIVE

The Department of Literature and Languages is seeking a highly qualified international post-doc researcher who would join our research team specialized on medieval literature. The applicant should have a manifest interest in comparative medieval literature, translation studies (comparison of Latin and vernacular literature in terms of language or transformation of ideas in the process of translation) or textual transmission and present a relevant up-to-date project in his or her field of expertise. In addition to pursuing his or her own research agenda, the researcher will be expected to take part in the activities of the Department, to work on its internationalization e.g. in organizing international collaboration in medieval literature, preparing new curricula and organizing international conferences at the Faculty.

The researcher is expected to take part in teaching two seminars per semester of Academic Reading and Writing in English.

The researcher is also expected to publish at least one high quality article in a database journal per academic year, and, by the end of the project, have a project submitted on behalf of the Faculty of Humanities.

Qualifications

- Ph.D. degree (less than 5 years since graduation)
- Research interest and publication track record in medieval literature
- Previous participation in local and international projects, experience with preparing proposals
- Extensive experience in English at academic level
- High motivation, ability to conduct collaborative research
- Teaching experience appreciated

Faculty: Faculty of Humanities

Department: Department of Languages and Literature

Supervisor: doc. Mgr. Lucie Doležalová, Ph.D.

E-mail: lucie.dolezalova@ff.cuni.cz

Deadline date: July 16, 2021

Position available from: January 1, 2022

Applicants must submit [required documents](#) to Research Administration Office: jan.belonoznik@fhs.cuni.cz (CC: lucie.dolezalova@ff.cuni.cz)

[2] Title of the research project:


 ECOPHENOMENOLOGY

Faculty of Humanities, Charles University, study programme "German and French Philosophy", is looking for a post-doc researcher speaking German, French and English who would cooperate in following domains of research.

The focus on the world and nature in phenomenology has come to the center of attention in contemporary investigations and represents one of the most promising fields in contemporary research, also very convenient to engage in a fruitful dialogue with other – natural or human – sciences. Faculty of Humanities currently realizes an international research project on cosmology and phenomenology (see "Fink and French Phenomenology", directed by Hans Rainer Sepp at the FHS UK and Alexander Schnell at the Bergische University Wuppertal, supported by the Czech Science Foundation, Nr. 21-23337J, and the Deutsche Forschungsgemeinschaft, 2021-2023). This project is also personally connected to the research project at the Czech Academy of Sciences "Face of Nature in the French Phenomenology", supported by the Czech Science Foundation, Nr. 21-22224S, 2021-2024, directed by Karel Novotný who recently published a book *Welt und Leib* in this field of research. One of the most recent advancements of contemporary phenomenological theories of the world is the development of a systematic eco- or more precisely oikological approach, that is elaborated by Hans Rainer Sepp at the Faculty of Humanities. He is editor of the following recent contributions to this field of research: *Natur und Kosmos*, Nordhausen 2020, *Phänomenologie und Ökologie*, Würzburg 2020, *Wohnen als Weltverhältnis*. Eugen Fink *über den Menschen und die Physis*, Freiburg 2019. The ecological approach in phenomenology stresses the importance of our bodily installation in the world, of finding a home in the world and deploying a bodily environment that is living space of dwelling. However, the world as the place of our dwelling is not only a horizon, but reveals our interconnectedness with other living beings and the finite materiality of the environment we dwell in. The oikological approach could thus be brought into a fruitful discussion with other ecological advances in contemporary social and human sciences. The latest research in this field calls for new ecological approaches of our being-in-the-world (eg. Bruno Latour on *Face à Gaïa* 2015, *Où atterir?* 2018; Timothy Morton on *Dark Ecology* 2016) and phenomenology has to offer conceptual and heuristical resources in order for new developments to come to light.

More precisely, the proposed research project aims at developing a phenomenological concept of the elemental and describing the elemental nature of appearing. By the elemental nature of appearing, we refer to an inherent phenomenological materiality that makes up the very fabric of appearing. In this sense, the elemental is at the same time a characteristic of the world and the environment and reveals the material and consubstantial embeddedness of the self in nature. In this project we will study the different historical occurrences of the notion of the elemental in order to dig out the field of problems that this notion makes visible. The historical research will then serve for an original

contribution to the study of the elemental nature of appearing. We will focus on an eco-logical and an aesthetic approach to this inherent phenomenological materiality that we understand as a concrete materiality and we will distinguish it from an abstract concept of materiality implied by natural sciences, the mathematization of nature or thinking in functions and prospects.

Aims:

Development of a phenomenological notion of the elemental as concrete materiality of the appearing of the world and the embodied self. Engaging in a dialogue with contemporary ecological approaches. Questioning the phenomenological significance of an aesthetic approach to nature. Support for the study programme "German and French Philosophy" at the Faculty of Humanities, Charles University.

Faculty: Faculty of Humanities

Department: Department of Philosophy

Supervisor: prof. Karel Novotný, M.A., Ph.D.

E-mail: karel.novotny@fhs.cuni.cz

Deadline date: July 16, 2021

Position available from: January 1, 2022

Applicants must submit [required documents](#) to Research Administration Office: jan.belozoznik@fhs.cuni.cz (CC: karel.novotny@fhs.cuni.cz)

[3] Title of the research project:



DEVELOPMENTAL MECHANISMS OF CHILDHOOD EXPERIENCE EFFECTS ON ADULT INTIMATE RELATIONSHIP FUNCTIONING, SEXUAL INTERESTS AND BEHAVIOR

Evolutionarily-informed theories view human intimate relationship behavior as being shaped by adaptations which come into effect during a variety of interpersonal processes from attraction and courtship all the way to securing a partner and maintenance of a relationship (Gangestad & Simpson, 2000). Current etiologic theories attempt to explain how sexual interests and dyadic (normophilic as well as unusual or even clinically relevant) behavioral patterns develop. They usually propose a framework based on a combination of both biological factors, such as genetic predispositions or brain alterations, and learning processes, life events, or epigenetic activations (Bailey et al., 2016; Pfaus, 2012). Neurodevelopmental theories of sexuality describe a gradual course of development from innate preferences and behavioural tendencies, to the formation of specific preferences and aversions to sexual partners, objects and intimate activities by various learning processes occurring both during general social activities and sexual experiences. Evidence in this area is, however, weak, with many knowledge gaps. The implementation of evolutionary developmental models such as the adaptive calibration model (del Giudice et al. 2011) might help to determine the kinds of early life formative experiences as well as the neural and endocrine mechanisms that potentially underlie this process. Moreover, one of the underexplored topics is the development of the ability to connect sexuality and the process of dyad formation, which is a matter of normal early childhood and pubertal development. Three levels of childhood experience with social and dyadic behavioral interactions are relevant for the development of this ability and functional, non-disrupted dyadic intimate behaviour in adulthood: 1) behaviour of closed others towards children, 2) social networks and relationships including children, and 3) social behaviour, social learning and social skills of the children.

We currently offer a Postdoc position where the candidate would focus on the role of childhood experience in the development of sexual interests, adult intimate behaviour and relationship functioning via a) mapping the factors influencing adult intimate relationship functioning using Czech national representative questionnaire data focused on early life sexual and romantic experiences; b) exploring associations between age-typical social behavioural patterns, dyadic relationships and social skills in children aged 7, 10 and 13 years using recordings of children's social interactions (including video and motion capture recordings); c) testing the associations between childhood experiences, and later sexual interests, behaviors and brain/hormonal responses in intimate contexts in a sample of individuals with disruptions of sexual interests and dyadic intimate behaviours.

The researcher will work with the data previously obtained by Faculty of Humanities in cooperation with the National Institute of Mental Health. He or she is also expected to suggest and organise further follow up studies.

Specific requirements set by the Department of Psychology and Life Sciences FHS CU:

We expect that our new colleague will be able to work independently and will bring new experience and ideas to our team. She or he should have a reasonable experience with the advanced techniques of quantitative and qualitative methods of psychology-related data obtained from longitudinal questionnaire studies, psychophysiology measurements and behavioral observations. Skills in the field of neuropsychology (e.g. experience with the analysis of brain and hormonal samples) is invited.

Faculty: Faculty of Humanities

Department: Department of Psychology and Life Sciences

Supervisor: MSc. Kateřina Klapilová, Ph.D.

E-mail: katerina.klapilova@nudz.cz

Deadline date: July 16, 2021

Position available from: January 1, 2022

Applicants must submit [required documents](#) to Research Administration Office: jan.belonoznik@fhs.cuni.cz (CC: katerina.klapilova@nudz.cz)

[4] Title of the research project:

ANTHROPOLOGICAL STUDIES

Philosophical anthropology is a well-established discipline at the Faculty of Humanities. In the Anthropological Studies program (formerly known as the Department of General Anthropology), philosophical anthropology is understood as a philosophical investigation of paradigms of humanity in the modern intellectual tradition. Special attention is dedicated to a certain turn in the way man was grasped, thus launching an „era of anthropology“, with its insistence on a better understanding of who we are as human beings.

A significant part of this new paradigm was a transformation of first philosophy, as understood by the tradition. Instead of cosmology, theology or general ontology, the focus now shifted towards psychology – not as a study of the soul, but an investigation of embodied subjectivity. On the one hand, the search for the conditions of possibility of our being-in-the world was supposed to find the golden mean between scepticism and dogmatism, and on the other hand, to avert the danger of a radical refusal of man’s philosophical grounding brought about by empiricism and materialism.

The project announced by the Anthropological Studies program is thus focused on the philosophy of Friedrich Nietzsche. The aim of the project does not cover the full complexity of Nietzsche’s notoriously famous concepts (Übermensch, the Eternal Return, etc.), however, its significance in the context of philosophical anthropology is beyond doubt. What are the reasons behind and the consequences of Nietzsche’s rejection of three traditional candidates for first philosophy (cosmology, theology and ontology)? What is the impact of this situation on the value of a philosophical life (how the philosopher appears to non-philosophers, to himself and to other philosophers)? To what extent is Nietzsche’s turn to psychology based on his critique of Descartes, especially on the Cartesian conception of thought itself as immediate conscious awareness? What is the relationship between Nietzsche’s definition of the will to power and the lightning-flash analogy in *On the Genealogy of Morals*? Nietzsche’s treatment of the noble and the base or common (gemein) or Nietzsche’s treatment of pleasure and pain as “epiphenomena” is yet another problem relevant to the topic.

The goals of the project correspond to the research interests of the Anthropological Studies program. However, there is also a clear connection between the project and the Philosophy in the Context of Humanities study program, too. The project might also be of great help to several dissertation theses which are currently being supervised. Texts published as part of this project can also be used for the Individualism in Czechoslovak Philosophy 1918-1948 GAČR project.

Faculty: Faculty of Humanities

Department: Department of Philosophy

Supervisor: Mgr. Jakub Chavalka, Ph.D.

E-mail: jakub.chavalka@fhs.cuni.cz

Deadline date: July 16, 2021

Position available from: January 1, 2022

Applicants must submit [required documents](#) to Research Administration Office: jan.belonoznik@fhs.cuni.cz (CC: jakub.chavalka@fhs.cuni.cz)

Faculty of Social Sciences

[1] Title of the research project:

INNOVATIVE APPLICATIONS OF VIRTUAL REALITY TECHNOLOGY IN CONFLICT STUDIES

Department of Security Studies at the Faculty of Social Sciences consistently and systematically pursues advanced research at the crossroads of security and technology, as demonstrated by the activities of its centre of excellence Periculum / Human-Machine Nexus and International Order (<https://periculum.cuni.cz>). To continue and expand this tradition, the department now seeks a candidate with outstanding research skills and provable track record in various possible areas which could be related to further inquiry into the interconnection between the study of security or conflict and the technology of virtual reality (VR).

Given the novel and fast-evolving nature of the field, we encourage and will gladly assess applicants with various backgrounds, including – but not limited to – security studies, conflict studies, political science, psychology and technology. We seek innovative researchers with experimental leanings, willing to cross disciplinary boundaries. Specifically, we are interested in young scholars with an ability to bridge and creatively work with the technology-social science divide. The successful candidate is expected to substantially contribute to establishing and developing a VR-based conflict research centre situated at the department, including involvement in activities to secure additional funding for the endeavour.

Expected outcomes of the post-doctoral fellowship include two high-quality journal articles (Jsc or Jimp), partial involvement in the training of Ph.D. candidates and mutually enriching interaction with other members of the Department. Upon further agreement, the post-doctoral fellow will also have an opportunity to be involved in existing teaching activities and is envisioned to prepare her or his general course on the core topic of the research.

Workplace: Institute of Political Studies

Contact: PhDr. JUDr. Tomáš Karásek, Ph.D.

E-mail: tomas.karasek@fsv.cuni.cz

Position available from: January 1, 2022

Deadline date for applications: July 23, 2021

Applicants must submit [required documents](#) or queries to: Tomáš Karásek: tomas.karasek@fsv.cuni.cz

[2] Title of the research project:



ACTORS AND DEMOCRATIC PROCESSES IN CENTRAL EUROPE AND THE RISE OF NEW THREATS

During the first twenty years following the 1989 revolutions in Central Europe, we witnessed and analyzed the consolidation of democracy (construction and stabilization of institutions, the institutionalization of the parties and the party system, and so on). During this period, political science research focused mainly on questions such as the transition from the communist regime to democracy, Europeanisation, etc. However, this has changed during the last decade - since the onset of the economic and financial crisis, but also strongly influenced by the migration crisis and the COVID-19 pandemic crisis, the region and the scholars studying it are faced with some new questions, while many initial questions about democracy in the region gained new urgency.

Thus an opportunity emerges to revisit traditional themes and study new ones while redefining the scope of our research. The quality of democracy, linkages between parties and citizens, varieties of populism(s) regained prominence. And new phenomena emerged - including but not limited to novel concepts such as illiberal democracy, backsliding, and swerving. Especially the rise of populism in Western and Central-European countries offers the opportunity for new comparative research - broadening the scope beyond the post-communist space and bridging the East-West divide prevailing in comparative politics.

Revisiting the classical paradigms about populism and democracy (cf. Canovan 1981) is a possible starting point in reconsidering the extent to which (some forms of) populism might be considered antithetic to democratic pluralism due to the emphasis on the supremacy of the general will (cf. Urbinati 2018). At the same time, the nature of populism is contested and multifaceted (Zulianello 2020). The definitions of populism and its effects (both positive and negative) on democracy vary according to the author's views of democratic politics. Scholars analyze the relationship between populism and democracy differently, and we wish to encourage further research in this area.

We are searching for a post-doc candidate that would focus on the general topic of populism. The candidate should focus on specific aspects of this large phenomenon, but he has to address the relationship of populism(s) to democracy. The candidate is expected to be equipped with a strong theoretical and methodological background.

Workplace: Institute of Political Studies

Contact: Assoc. Prof. Michel Perottino, Ph.D.

E-mail: michel.perottino@fsv.cuni.cz

Position available from: January 1, 2022

Deadline date for applications: July 23, 2021

Applicants must submit [required documents](#) or queries to: Michel Perottino: michel.perottino@fsv.cuni.cz

[3] Title of the research project:



INTERNATIONAL RELATIONS IN THE TIME OF UNCERTAINTY

During several previous decades, world politics rested on an evolving, but still rather persistent type of an international order. This order was to a large extent based on the dominant position of the United States (USA). Yet it also involved several important normative elements, represented by liberal principles, intensive global economic cooperation, or international institutions. To a high extent, the US-led order was sustained by the demand coming from the other states, which saw it as an enabling arrangement for dealing with global problems such as the spread of weapons of mass destruction, terrorism, global economic crises, or environmental degradation.

At this moment, this order that has so far characterized international politics is facing several important challenges. One of the factors that weaken it is the increasing activism and influence of some of the developing countries. Those countries often hold different views about the appropriate form of international order, putting a greater emphasis on the principles of sovereignty and justice. The unipolar arrangement is

also questioned by the changing distribution of power in the international system, marked by the decreasing position of the USA and the strengthening of the so-called rising powers. Last but not least, a part of the turbulent development can be attributed to social and ideological changes taking place in the developed countries.

Within this topic, we are searching for a post-doc candidate that would identify and explore an important issue that has to do with the contemporary transformative processes in international politics. The candidate should definitely dispose with a strong theoretical and methodological background. This background should enable him/her to contribute to the international academic debates. As for a concrete research topic, we are rather flexible. The concrete topic would need to be in some way connected with the changing characteristics of world politics. In this context, we welcome proposals that may deal with the cooperative, as well as conflictual aspects of world politics. In terms of issue areas, we are ready to consider proposals that may be concerned with security issues, international economic relations, or any other substantive field of the contemporary international relations.

Workplace: Institute of Political Studies

Contact: Assoc. Prof. Jan Karlas, Ph.D.

E-mail: jan.karlas@fsv.cuni.cz

Position available from: January 1, 2022

Deadline date for applications: July 23, 2021

Applicants must submit [required documents](#) or queries to Jan Karlas: jan.karlas@fsv.cuni.cz

Faculty of Mathematics and Physics

[1] Title of the research project:



CALL FOR JUNIOR (POSTDOC) POSITION IN THE AREA OF THE GAME THEORY ON GRAPHS

Post-doc position for one-year period from 1st January 2022

Research Project

Applications are invited for a postdoc position at Department of Applied Mathematics, Charles University in Prague, Czech Republic. The position is for one year, and the starting date is negotiable between October 1, 2021, and January 1, 2022, with possibility of one renewal.

Methods of algorithmic game theory start to extensively expand to the everyday life of our society. Large part of these efforts concern networks which are modelled by graphs. The research of this project will be conducted in particular in some of the following directions and their applications:

- fairness in networks
- algorithmic aspects of fairness
- cooperative game theory
- games and packing subgraphs
- games on queues

Candidates should have a completed PhD in Mathematics or Computer Science, and demonstrate strong potential for excellence in research. Strong background in algorithmic game theory and/or graph theory is a plus. Skills in programming are appreciated as well.

Workplace: Department of Applied Mathematics (Faculty of Mathematics and Physics, Charles University)

Contact person: prof. RNDr. Martin Loebel, CSc.

E-mail: loebel@kam.mff.cuni.cz

Position available from: January 1, 2022

Deadline date: July 26, 2021

Applicants should submit [required documents](#):

- Application form
- Letters of Reference
- Detailed CV
- List of publications
- Copy of university diploma

to: loebel@kam.mff.cuni.cz (project supervisor) and in a copy to brozkova@dekanat.mff.cuni.cz (faculty coordinator of the Junior Fund)

[2] Title of the research project:



CALL FOR JUNIOR (POSTDOC) POSITION IN THE AREA OF THE NOBLE LIQUID
CALORIMETRY FOR FUTURE CIRCULAR COLLIDER

Post-doc position for two – years period from the 1st January 2022

Future Circular Collider (FCC) [1] is a proposal for the next circular collider at CERN. The project foresees two stages – the lepton collider FCC-ee followed by the hadron collider FCC-hh with the centre-of-mass energy of 100 TeV. High granularity noble liquid calorimetry is a part of the reference design of an FCC-hh experiment [2] and also considered as an option for an FCC-ee experiment.

The noble liquid calorimeters has proved a very good performance in current experiments, e.g. in ATLAS (linearity and stability of the response, high resolution energy measurement, high position and timing resolution, particle identification, radiation hardness). However, up to now, such calorimeters were limited in granularity and therefore not optimized for particle flow energy reconstruction of jets or 3D imaging. A new design with finely segmented straight read-out electrodes (multi-layer PCBs) allows for high segmentation (10x more channels compared to ATLAS Liquid Argon calorimeter). The proposed calorimeter proved very good performance in Monte Carlo simulations for FCC-hh [2]. Several R&D projects were approved to improve and test the abilities of such calorimeter. IPNP is involved in the R&D project on the read-out electrodes. Our group performs optimisation studies of the detector design and granularity for FCC-ee based on the Monte Carlo simulations. We are working on the development of the software for the advanced reconstruction techniques. The implementation of the particle flow algorithm is crucial for showing the advantage of the high granularity of the calorimeter.

We are looking for a candidate with experience in experimental particle physics, experience in calorimetry and software development is an advantage. The candidate will join our group working on noble liquid calorimetry for FCC. The work will include simulations needed for optimisation of the calorimeter design and software development of the reconstruction algorithms in FCCSW [3].

References:

[1] Future Circular Collider Study Volumes I – III, <https://fcc-cdr.web.cern.ch>.

[2] M. Aleksa et al, Calorimeters for the FCC-hh, arXiv:1912.09962

[3] FCCSW, <https://github.com/HEP-FCC/FCCSW>

Workplace: Institute of Particle and Nuclear Physics (Faculty of Mathematics and Physics, Charles University)

Contact person: Mgr. Jana Faltová, Ph.D.

E-mail: jana.faltova@mff.cuni.cz

Position available from: January 1, 2022

Deadline date: July 26, 2021

Applicants should submit required documents:

- Application form
- Letters of Reference
- Detailed CV
- List of publications
- Copy of PhD. Diploma

to: jana.faltova@mff.cuni.cz (project supervisor) and in a copy to brozkova@dekanat.mff.cuni.cz (faculty coordinator of the Junior Fund)

[3] Title of the research project:



CALL FOR JUNIOR (POSTDOC) POSITION IN THE AREA OF THE CRYSTAL
GROWTH AND CHARACTERIZATION OF METAL HALIDE PEROVSKITES

Post-doc position for two – years period from the 1st January 2022

Research Project

Metal halide perovskites (MHP) have attracted global interest in the last decade as highly efficient and inexpensive materials for optoelectronics applications. Perovskites upgraded to the top of the most investigated materials in the past few years. According the Web of Science, the number of papers showing 'perovskite' in title reached 5681 in 2020 growing from 606 in 2010. Within a decade, the power conversion efficiency of single-junction MHP solar cells progressed from 3% to a certified value of 25.5%, the highest value obtained for the thin-film photovoltaics. Mobility-lifetime product of MHP radiation detectors reaches the value of 1.2×10^{-2} cm²/Vs similar to the highest quality commercially available room-temperature radiation detectors. MHP therefore show great promise for deployment as the next generation of optoelectronics applications. Recent studies, however, suggest that the trap-assisted recombination connected with the structure defects strongly affects the long-term stability of MHP applications. Therefore understanding the defect properties and an optimization of the crystal growth technology is of primary challenge in the field of MHP.

The proposed project is focused to the investigation of single crystal growth technology of MHP from the melt and to the characterization of prepared crystals including electric contacts manufacture by experimental techniques installed in our lab or accessible at cooperating laboratories. The post-doctoral fellow will join the Group of Optoelectronics and Magneto-optics in the Institute of Physics, Charles University

and will be primarily responsible for the development of the single crystal growth technology of MHP from the melt and for the basic characterization of prepared crystals conforming to particular properties of MHP.

Qualification requirements and experience:

We are looking for a highly motivated, enthusiastic and qualified researcher who would like to join our team and effort. Strong communication skills and the ability to interact and co-operate well with other scientists and students in the team are essential. The applicant should have a doctoral degree in the Solid state physics or inorganic chemistry with the specialization to semiconductors. Previous experience with the semiconductor single crystal growth and semiconductor characterization is highly advisable. The candidate ought to be familiar with techniques used at the characterization of perovskites. An acquaintance with theory of solid state and computational background are welcome as well.

More detailed information may be provided on demand.

Workplace: Institute of Physics (Faculty of Mathematics and Physics, Charles University)

Contact person: Assoc. prof. Ing. Eduard Belas, CSc.

E-Mail: eduard.belas@mff.cuni.cz

Web page: <http://fu.mff.cuni.cz/semicond/welcome/>

Position available from: January 1, 2022

Deadline date: July 26, 2021

Applicants should submit required documents:

- Application form
- Letters of Reference
- Detailed CV
- List of publications
- Copy of PhD. Diploma

to: eduard.belas@mff.cuni.cz (project supervisor) and in a copy to brozkova@dekanat.mff.cuni.cz (faculty coordinator of the Junior Fund)

[4] Title of the research project:



CALL FOR JUNIOR (POSTDOC) POSITION IN THE AREA OF MATERIALS SCIENCE

Post-doc position for two – years period from the 1st January 2022

Research Project

Traditional metallic alloys are based on one or two principal elements with minor additions of alloying elements. In terms of phase diagrams, when developing traditional alloys, material scientists explore corners of multi-element phase diagrams. In the recent years there is a growing interest in exploring central parts of these phase diagrams. This new approach resulted in the development of a new class of alloys often referred to as Complex Concentrated Alloys (CCA). The increasing number and content of alloying elements in such materials enhances the role of configurational entropy. To emphasize the effect of entropy, the alloys composed of at least five elements with concentrations between 5 and 35 at. % are called High Entropy Alloys (HEA). Refractory HEA (RHEA) contain at least four of the nine refractory elements: Cr, Hf, Mo, Nb, Ta, Ti, V, W and Zr. In addition, Al is often used to decrease the alloy density. Refractory HEA are either single-phase disordered bcc phase (A2) or multi-phase containing ordered bcc structure (B2, CsCl), Laves phase, hcp phase and various binary and pseudo-binary intermetallic compounds. The alloys are potentially applicable in aerospace industry, nuclear energy and utilization of fusion power (i.e. application under extreme conditions).

Complicated chemical and phase composition requires detailed microstructural analysis including analysis using transmission electron microscopy (TEM).

The successful candidate will join the Department of Physics of Materials and will be primarily responsible for the TEM studies of newly developed RHEA including analytical methods of electron diffraction and energy dispersive spectroscopy. In addition, the candidate will cooperate on SEM and XRD studies of these materials.

The applicant should have a doctorate in materials science of materials engineering. Previous experience with transmission electron microscopy is essential.

Workplace: Department of Physics of Materials (Faculty of Mathematics and Physics, Charles University), Ke Karlovu 5, 121 16, Praha 2

Contact person: prof. RNDr, Miloš Janeček CSc.

E-mail: janecek@met.mff.cuni.cz

Position available from: January 1, 2022

Deadline date: July 26, 2021

Applicants should submit required documents:

- Application form

- Letters of Reference
- Detailed CV
- List of publications
- Copy of PhD. Diploma

to: janecek@met.mff.cuni.cz (project supervisor) and in a copy to brozkova@dekanat.mff.cuni.cz (faculty coordinator of the Junior Fund)

[5] Title of the research project:



CALL FOR JUNIOR (POSTDOC) POSITION IN THE AREA OF THE RAMSEY THEORY IN THE CONTEXT OF MODEL THEORY AND NETWORK SCIENCE

Post-doc position for two-year period from 1st January 2022

Research Project

This proposal is related to one of the most active areas of contemporary combinatorics, graph theory a network science. The classical Ramsey theory is set here in new surprising connections related to large networks and unavoidable configurations. This is an interdisciplinary area which assumes knowledge among others of topological dynamics and model theory.

Workplace: Computer Science Institute (Faculty of Mathematics and Physics, Charles University)

Contact person: prof. RNDr. Jaroslav Nešetřil, DrSc.

E-mail: nesetril@iuuk.mff.cuni.cz

Position available from: January 1, 2022

Deadline date: July 26, 2021

Applicants should submit required documents:

- Application form
- Letters of Reference
- Detailed CV
- List of publications
- Copy of university diploma

to: nesetril@iuuk.mff.cuni.cz (project supervisor) and in a copy to brozkova@dekanat.mff.cuni.cz (faculty coordinator of the Junior Fund)

Faculty of Science

[1] Title of the research project:



ANTI-INVASIVE AND ANTI-METASTATIC EFFECTS OF NOVEL TGF BETA INHIBITOR ANALOGUES

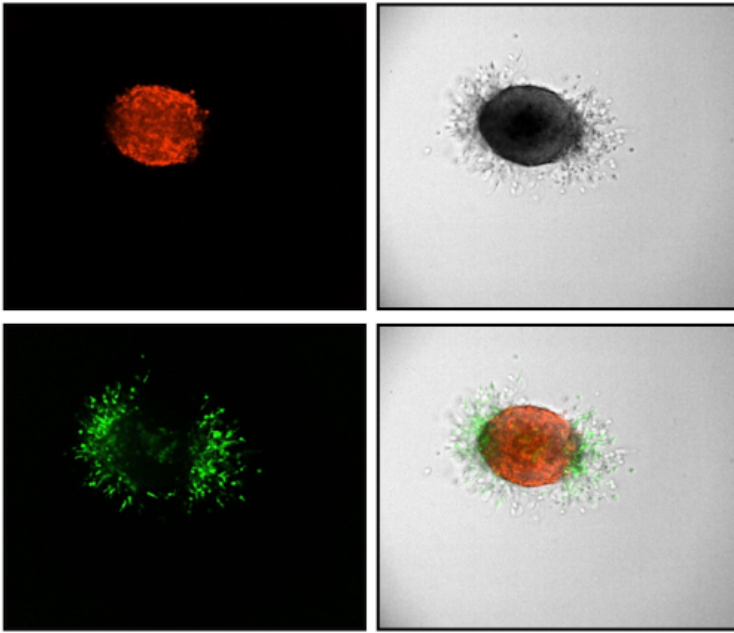
Local invasion and metastasis are the deadliest characteristics of cancer, as they account for the majority of cancer associated deaths. However, the wide range of invasive phenotypes, and the ability of cancer cells to switch among them, has prevailed the development of antimetastatic therapies. Recently, we have established the concept of migrastatics as drugs targeted against common features of invasion modes, stressing the requirement to evaluate drugs based on anti-invasive, rather than anti-proliferative, properties.

The aim of the proposed project would be to investigate novel migrastatic candidates identified based on a large screen of TGF beta inhibitors analogues. The most promising compound shown to inhibit cancer cell invasion in our pilot screen was further modified in order to enhance its migrastatic properties. The ability of the novel compounds to inhibit cancer cell invasion will be extensively studied by the applicant both in vitro and in vivo, together with the molecular mechanisms underlying their migrastatic properties.

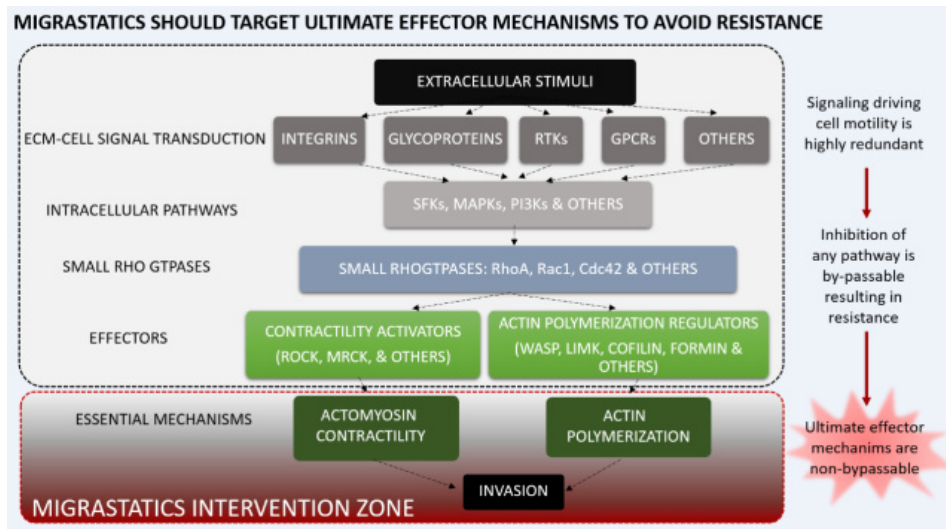
The work of the applicant will concentrate on three main aims: i) to analyze the anti-invasive effects of novel TGF beta inhibitors analogs in vitro, ii) to elucidate the molecular mechanisms, through which the anti-invasive effects of compounds are exerted, iii) to analyze the effect of selected compounds on experimental tumors and metastasizing in vivo.

The proposal will lead to the development of novel anti-invasive and anti-metastatic compounds with considerable potential for the translation into the clinics.

Picture 1.



Picture 2.



Salary: co-founding 1000 EUR/month is ensured

Co-founding resources: CENTRE FOR TUMOUR ECOLOGY. Research of the Cancer Microenvironment Supporting Cancer Growth and Spread.

Reg. No. CZ.02.1.01/0.0/0.0/16_019/0000785

Department: Department of Cell Biology, Biocev

Supervisor: Assoc. Prof. Jan Brábek, Ph.D.

E-mail: brabek@natur.cuni.cz

Phone: +420 32587 3900

Position available from: January 1, 2022

Deadline date for applications: July 23, 2021

Applicants must submit [required documents](#) to: brabek@natur.cuni.cz (project supervisor).

[2] Title of the research project:



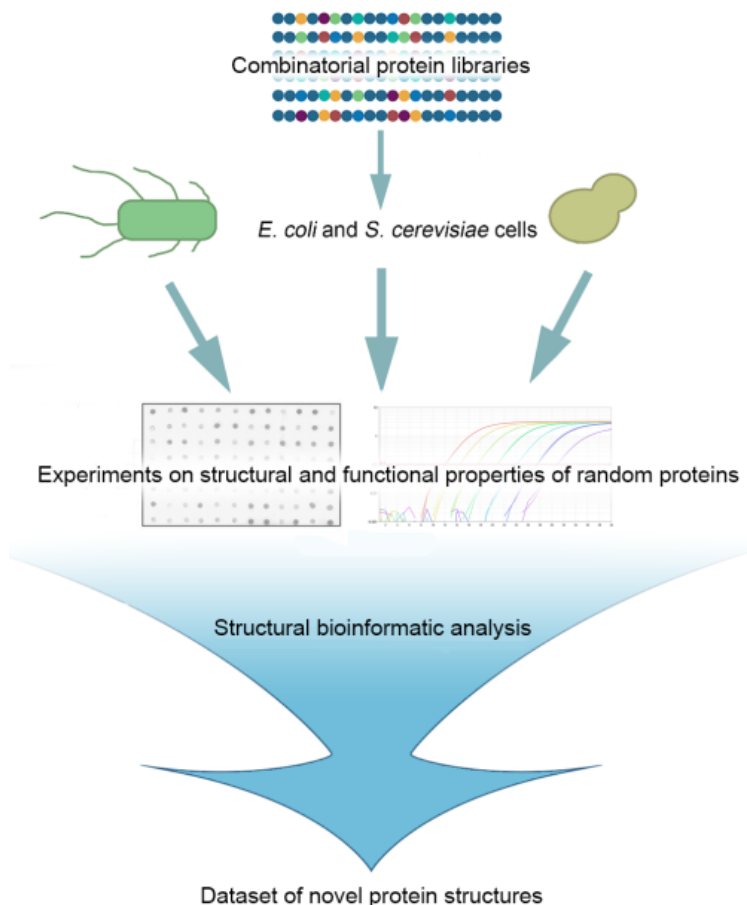
STRUCTURAL PROPERTIES OF UNEVOLVED AND SYNTHETIC PROTEINS

The aim of this postdoc project will be to map the structural properties of synthetic compact and folded protein sequences. Today's biology uses protein that have been assigned to only ~2000 structural families, despite the large variability of their functions and the organisms that they come from. While it has been assumed for long that Nature explored all the possible protein structure space, recent studies (including, but not limited to *de novo* proteins) suggest otherwise. It seems that new protein structures can be constructed and it remains to be elucidated why the natural protein space is limited in its structural repertoire and whether the evolved protein folds are of any specific advantages to their alternatives.

Ongoing projects in our laboratory study the occurrence of structure/function in random/combinatorial sequence libraries. One of the specific aims is to select for specific proteins with function (using *in vivo* functional selection systems) and/or structure (using both *in vitro* and *in vivo* selection pipelines). These subprojects are yielding first hits of proteins that are being structurally characterized. The aim of the advertised project will be high-throughput structural analyses of protein structures gained in these studies with specific focus on the evolutionary aspects. Strong bioinformatic and computational skills should enable the candidate to model the protein structural information or work with experimental data to produce a library of the selected protein structures. Databases of biological protein families will be used to compare the selected structures with natural protein folds and derive any potential similarities. Bioinformatic analyses will be used to design further modifications to stabilize any new potential folds.

The advertised project will open up a window into artificial protein worlds that will inform us about how easy/hard it is to find novel protein structure outside the evolved biological space. The output of the project should be a collection/database of novel protein structures selected from artificial sequence space and besides its value for the field of protein evolution, it might fuel new strategies of protein design.

Picture 1.



Salary: co-founding 1000 EUR/month is ensured

Co-founding resources:

Human Frontiers Science Program Research Grant

Exploration of the structure/function space of prebiotic to biological proteins

06/2019-05/2022

Primus (Charles University) grant

In vivo response to unevolved protein sequences: systematic mapping of fitness landscape

01/2020-12/2022

VW Stiftung grant

Ghost in the protein: how do new proteins come about?

1/2021-12/2025

Further grant applications are submitted and in preparation.

Department: Department of Cell Biology, Faculty of Science

Supervisor: Klara Hloučová, Ph.D.

E-mail: klara.hloucova@natur.cuni.cz

Phone: +420 325873906

Position available from: January 1, 2022
 Deadline date for applications: July 23, 2021

Applicants must submit required documents to: klara.hlouchova@natur.cuni.cz (project supervisor).

[3] Title of the research project:

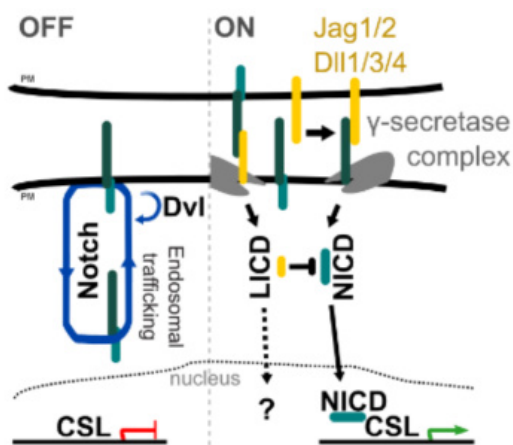


CHALLENGING THE "BI-DIRECTIONAL" SIGNALING OF NOTCH LIGANDS IN MAMMALS

FINDING THE DIFFERENT ROLES OF "BI-DIRECTIONAL" JAG1ICD-MEDIATED SIGNALING IN ALAGILLE SYNDROME AND EXTRAHEPATIC BILIARY ATRESIA

The Juxtacrine "Canonical" Notch signaling relies on direct cell-cell contact between the transmembrane ligands expressing "sender" cells and receptors expressing "receiver" cells (Fig.1). Interaction of the Notch receptor with the Notch ligand lead to γ -secretase dependent cleavage of both signaling proteins, followed by respective intracellular domain release (LICDs/NICDs)¹⁻⁶. NICD directly translocate into the nucleus to drive transcription of Notch target genes through switching the CSL transcriptional repressor conformation into activator^{7,8}. The LICDs were shown to elicit response in the "sender" cells expressing Jag^{16,9-12}, Delta/Dll1/4^{4,5,13-17}. Importantly, Jag1ICD destabilizes N1ICD11 by direct interaction with the tumour-suppressor Fbw7 E3 ligase^{12,18-20}, and its interaction with Afadin protein suggests it could play a role also in signaling cross-talks^{21,22}, however the full extent of its role in vivo is unknown.

Figure 1: Scheme of the "Canonical" Notch and "Bi-directional" Ligand signaling



Extrahepatic biliary atresia (EHBA) together with Alagille syndrome (ALGS) (manifesting intrahepatic bile duct paucity) are two major pediatric liver pathologies requiring surgical intervention, reviewed in²³⁻²⁵. While disrupted Notch signaling is a well-known driver of ALGS, with mutations in JAGGED1 (JAG1) causing up to 94% ALGS cases^{26,27}, its role in EHBA²⁸ remains severely understudied. EHBA-associated symptoms strongly overlap with processes regulated by Notch. As reviewed in²⁴, 5-15% of EHBA patients show defects in L-R asymmetry, known to be co-regulated by Notch signaling²⁹⁻³¹, these also include developmental heart defects, a feature shared with ALGS^{32,33}. Interestingly, expression of bona fide Notch transcription factor RBPJ- κ and its target gene HES1 was suppressed in the postnatal liver of rhesus rotavirus-induced mouse model of EHBA³⁴.

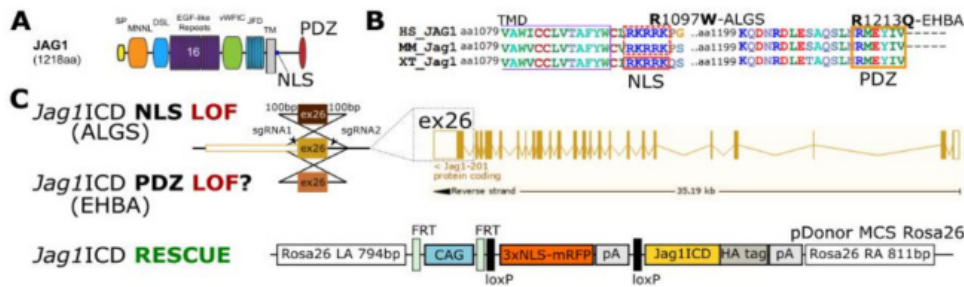
Collectively, this data provides strong support for addressing the potential role of Notch in EHBA in a mouse model that would recapitulate the disease-causing mutation.

The JAG1ICD represents 1/10 of the full-length JAG1 protein, yet, only 1 ALGS-causing mutation was reported in the JAG1ICD region from the almost 400 identified so far (HGMD database)²⁵. This suggests the ICD region is either more tolerant to mutagenesis or so sensitive that its alteration leads to embryonic lethality. The 1 ALGS causing missense mutation targets the putative NLS sequence^{11,35} of the JAG1ICD (R1097W) with an unknown effect on Notch signaling³⁶. The other functional motif of the ICDs of DLL1/4 and JAG1 is the c-term PDZ domain³⁷, which interacts with the structural protein Afadin (AF6)^{9,38} that can down-regulate Notch signaling²¹. Afadin binding affinity was further increased by the JAG1PDZ mutation R1213Q³⁸. Strikingly, this mutation can cause EHBA²⁸ (Fig.2A, B).

Hypothesis: Notch Ligand ICDs act through multiple mechanisms and in biological contexts as "Non-canonical" modulators of Notch signaling by down-regulating the NICD levels in the ligand-expressing cells.

AIM: To reveal the requirements of NLS and PDZ motifs in Notch ligand ICD signaling, we will develop and characterize novel mice strains carrying the ALGS (R1097W) and EHBA (R1213Q) disease-causing mutations in Jag1ICD, and perform a "rescue" experiments using mouse strain with inducible expression of the wild-type JAG1ICD (JAG1ICD GOF) (Fig.2C).

Figure 2: JAG1 ICD. (A) Scheme of JAG1 proteins. (B) JAG1 NLS sequence is conserved across vertebrates (C) Planned new mouse strains



Expected outcomes and significance

This project will expand our knowledge of the indispensable inter-cellular communication, and provide the liver community with a new genetic model of EHBA and a unique, JAG1ICD-focused model of ALGS. Our findings on the roles of LICD NLS and PDZ motifs in bi-directional and "Non-canonical" Notch would open new avenues of research for the Notch field and can lead to development of therapeutics for Notch genetic disorders and cancer.

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Salary: co-founding 1000 EUR/month is ensured

Co-founding resources: This project is currently supported by the PRIMUS Funding PRIMUS/21/SCI/006 (600000Euro/5y).

Department: Department of Cell Biology

Supervisor: Jan Mašek, PhD.

E-mail: jan.masek@natur.cuni.cz

Web: <https://www.maseklab.org/>

Phone: +420 221 951 624

Position available from: January 1, 2022

Deadline date for applications: July 23, 2021

Applicants must submit required documents to: jan.masek@natur.cuni.cz (project supervisor).

[4] Title of the research project:



DEVELOPMENT OF TOOLS FOR COMPREHENSIVE INTERROGATION OF METHIONINE SULFOXIDE AS A POST-TRANSLATIONAL MODIFICATION

Methionine sulfoxide as a redox post-translational modification of proteins affects a number of biological processes and its role is implicated in serious conditions such as cancer or neurodegenerative diseases. However, our understanding of this new modification is only rudimentary, as there are no effective tools to study this problem. The aim of this project is to develop such tools based on aptamers and chemical probes that would allow a detailed study of this modification. These tools will allow the accurate identification of methionine sulfoxide in proteins, the localization of methionine sulfoxide formation, and the effective identification of reductases that are able to reverse this modification. This information in the context of different phenotypes of model organisms will enable a more detailed insight into the molecular biology of this modification and thus into the nature of related diseases.

The main goal of this project is the development of chemical-biological tools for the study of methionine sulfoxide as a new post-translational modification. These tools will allow the scientific community involved in redox biological processes to assess the impact of this modification in context.

The successful applicant will have a PhD degree in Chemistry and will have experience with synthesis and characterization of small molecules. Experience with protein/DNA manipulation is beneficial but not required. The applicant is expected to be fluent in English.

Salary: co-founding 1000 EUR/month is ensured

Co-founding resources: 2700-110-112700

Department: Dept. of Organic Chemistry, Faculty of Science, Charles University.

Supervisor: Jiří Míšek, PhD.

E-mail: misek@natur.cuni.cz

Phone: +420 777 148 178

Position available from: January 1, 2022

Deadline date for applications: July 23, 2021

Applicants must submit required documents to: misek@natur.cuni.cz (project supervisor).

[5] Title of the research project:



STRUCTURAL ANALYSIS OF 14-3-3 PROTEIN COMPLEXES INVOLVED IN APOPTOSIS

Phosphorylation by kinases governs key cellular and extracellular processes, such as transcription, cell cycle progression, differentiation, secretion and apoptosis. Precise kinase regulation is a prerequisite for normal cell functioning and kinase dysregulation often leads to disease. Many kinases are regulated through protein-protein interactions, often mediated by phosphorylated motifs and involving associations with the scaffolding and chaperon protein 14-3-3. Such mode of regulation has already been demonstrated for more than 30 kinases, and more than 170 kinases contain phosphorylated motifs closely resembling 14-3-3-binding sites. However, many details concerning these interactions, especially the exact role of 14-3-3 binding and the mechanism of action of 14-3-3-mediated kinase regulation, remain elusive because only a few 14-3-3:kinase complexes have been structurally characterized so far.

This project aims to study the 14-3-3 protein-dependent inhibition of Apoptosis signal-regulating kinase 1 (ASK1) and Death-associated protein kinase 2 (DAPK2).

ASK1 belongs to a group of mitogen-activated protein kinase kinase kinases (MAP3Ks). The aberrantly enhanced ASK1-MAPK signaling leads to many disorders and neurological diseases, such as amyotrophic lateral sclerosis, multiple sclerosis and Parkinson's, Alzheimer's, and Huntington's disease. Under normal, non-stress conditions, inactive ASK1 interacts with several other proteins, including thioredoxin (TRX) and 14-3-3, forming a high molecular mass complex known as the ASK1 signalosome. However, the role of 14-3-3 in the inhibition of ASK1 is still unclear. Low-resolution structural analysis has indicated that 14-3-3 might inhibit ASK1 by modulating the structure of its active site, by sterically blocking the phosphorylation of the activation loop and by blocking the interactions between ASK1 and its substrates.

DAPK2 is a CaM-regulated Ser/Thr protein kinase, involved in apoptosis, autophagy, granulocyte differentiation and motility regulation, whose activity is controlled by autoinhibition, autophosphorylation, dimerization and interaction with the 14-3-3 protein. The mechanism of the 14-3-3-mediated DAPK2 inhibition has not been elucidated yet. Our recent results have suggested that the 14-3-3 protein might stabilize the DAPK2 dimerization and protect regulatory phosphorylation sites of DAPK2 against dephosphorylation.

In both cases, the high-resolution structures are needed to fully understand the exact role of 14-3-3 in the regulation of these protein kinases. Therefore we propose to investigate the structural basis for the inhibition of these protein kinases by performing the structural analysis of their complexes with 14-3-3 by a combination of single particle cryo-electron microscopy (cryo-EM), protein crystallography and fluorescence spectroscopy. The acquired results will enable to decipher the molecular mechanism of the allosteric regulation of ASK1 and DAPK2 by 14-3-3 and aid in design of novel alternative strategies to suppress the activity of these kinases.

Specific aims are:

1. Preparation and structural characterization of the ASK1:14-3-3 and ASK1:ASK2:14-3-3 complexes using cryo-EM and protein crystallography.
2. Preparation and structural characterization of the DAPK2:14-3-3 complex using cryo-EM and protein crystallography.
3. Characterization of the DAPK2 dimerization mediated by the 14-3-3 protein using fluorescence spectroscopy.

The structural biology of 14-3-3 protein complexes is a long-term research interest of prof. T. Obsil's group and the proposed project builds on the results of previous research done by this group.

Salary: co-founding 1000 EUR/month is ensured

Co-founding resources: Co-founding resources will be provided by the Dept. of Physical and Macromolecular Chemistry.

Department: Dept. of Physical and Macromolecular Chemistry, Faculty of Science

Supervisor: Prof. RNDr. Tomáš Obšil, Ph.D.

E-mail: obsil@natur.cuni.cz

Phone: +420221951303

Position available from: January 1, 2022

Deadline date for applications: July 23, 2021

Applicants must submit [required documents](#) to: obsil@natur.cuni.cz (project supervisor).

[6] Title of the research project:



POSTDOCTORAL RESEARCHER IN PROTEIN/RNA BIOCHEMISTRY AND
STRUCTURAL BIOLOGY

Postdoctoral position is available for a biochemist / molecular biologist / structural biologist. Two projects are available. The first project is focused on study of synthesis and translation of 5' uncapped and polyadenylated viral mRNAs discovered by us in poxviruses and yeast DNA viruses. The second project is dedicated to cellular role of cap-binding translation initiation factors from the eIF4E family in cancer and development.

Poxviruses are highly contagious animal and human viruses. Prominent examples are variola virus, which is a causative agent of smallpox and was eradicated by WHO vaccination program 40 years ago, and vaccinia virus which is used as a smallpox vaccine. The study will be focused on deciphering structural details how closely related RNA polymerases from yeast DNA viruses and vaccinia virus synthesize uncapped 5' poly(A) mRNA leaders (Vopalensky et al., *Front. Microbiol.* 2019; Sykora et al., *PLoS Pathog.* 2018; Vopalensky et al. *bioRxiv* 2020)

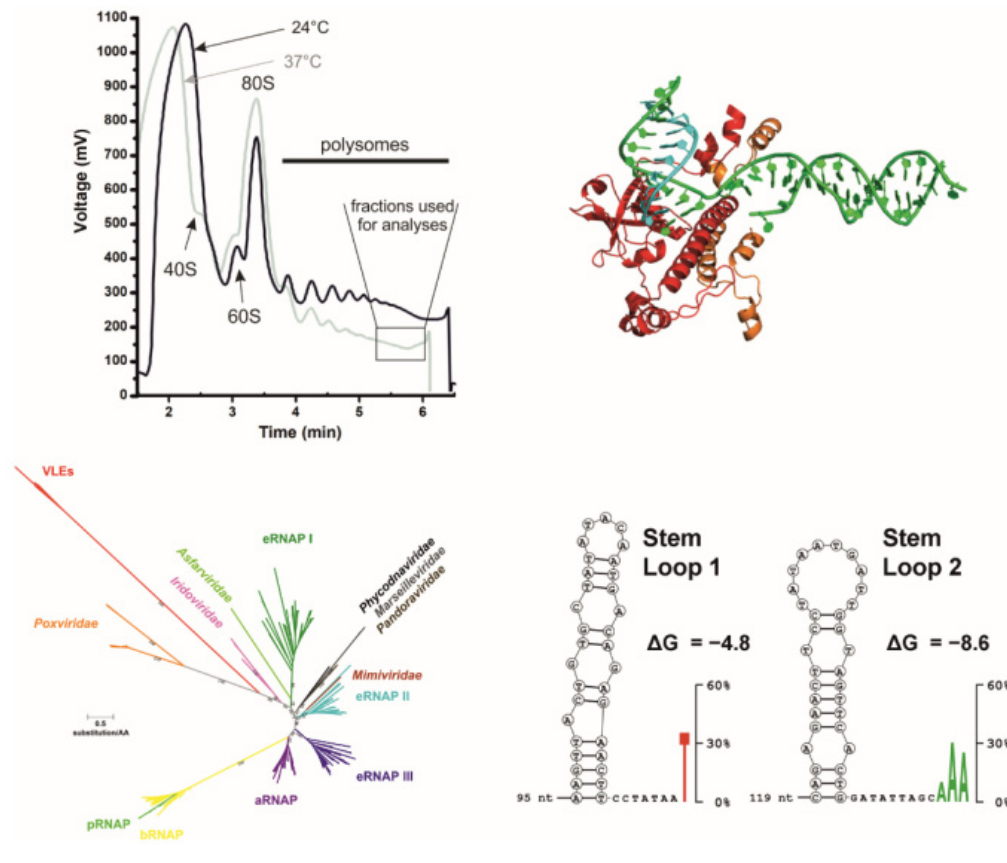
Human genome encodes three independent members of the eIF4E family, each of them existing in several variants arising mainly due to alternative mRNA splicing. All the eIF4E isoforms have been shown to play an important role in development, cancer and cellular response to stress. eIF4E1 is a canonical cap-binding eukaryotic translation initiation factor. It's cellular level and activity are tightly regulated, the latter by mTOR and Mnk kinases. Over-expression of eIF4E1 can lead to cellular transformation and indeed, up to one-third of human cancers demonstrate an increase in the eIF4E1 level. eIF4E2 protein is mainly recognized for its role in mRNA silencing. eIF4E2 also belongs among proteins, deregulation of which creates a part of metastatic cells signature. It has been shown to substitute eIF4E1 as a main cap-binding translation initiation factor during hypoxia. Contrary to all of that, eIF4E3 has been proposed to act as a tumor suppressor protein. The objective will be to map and analyze active protein complexes in which the non-canonical members of the eIF4E family, factors eIF4E2 and eIF4E3, take place in human cells and/or mouse oocytes and early embryos. We use both models and both of them offer an excellent opportunity to investigate less known, yet important members of the eIF4E factors family. (Frydryskova et al., *BMC Mol. Biol.* 2016; Mrvová et al., *Mol. Genet. Genomics* 2018; Masek et al., *Int. J. Mol. Sci.* 2020; Del Llano et al., *Aging Cell* 2020).

We offer an enthusiastic team and well equipped laboratories located in the very centre of Prague with access to the top-notch service facilities in the Faculty of Science (<https://www.natur.cuni.cz/biology/service>) and Biocev (<https://www.biocev.eu/en/services>). We closely co-operate with several laboratories in EMBL, Heidelberg (mainly with the Genomics Core Facility) and for the high-demanding programming and computing with the Department of Computer Science of the Czech Technical University in Prague. We have developed several lines of study for both projects, involving different biological models and a palette of approaches ranging from biochemical purification and characterization of the protein-protein and protein-RNA complexes to cell biology methods relying on microscopic techniques. A specific direction of the research will be discussed with the candidate taking into the account candidate's skills and scientific interests.

Qualification and experience. We are looking for a highly motivated, enthusiastic and qualified researcher who would like to join our team and effort. Strong background in biochemistry, especially purification and further structural characterization of proteins and protein-protein and/or RNA-protein complexes will be advantageous.

Strong communication skills and the ability to interact and co-operate well with other scientists and students in the team are essential.

Figure 1.



Lab website:

https://www.natur.cuni.cz/biology/genetics/veda-a-vyzkum-1/laborator-biochemie-rna?set_language=en

Publication list:

<https://pubmed.ncbi.nlm.nih.gov/?term=pospisek+m&sort=pubdate>

Salary: co-founding 1000 EUR/month is ensured

Co-founding resources:

- GAČR 19-13491S (2019-2021): In vitro oocyte culture vs in vivo oocyte development - is their physiology really comparable?

- ELIXIR CZ research infrastructure project (2020-2022)(MEYS Grant No: LM2018131)

- GA ČR 21-25504S (2021 - 2024): Yeast linear plasmids as a model for poxviral transcription.

Department: Department of Genetics and Microbiology, Faculty of Science

Supervisor: RNDr. Martin Pospíšek, Ph.D.

E-mail: martin.pospisek@natur.cuni.cz

Phone: +420221951719

Position available from: January 1, 2022

Deadline date for applications: July 23, 2021

Applicants must submit required documents to: martin.pospisek@natur.cuni.cz (project supervisor).

[7] Title of the research project:



EVOLUTION OF THE GERM-LINE RESTRICTED CHROMOSOME AND ITS ROLE IN THE SONGBIRD RADIATION

In multicellular organisms, all cells of an individual normally contain the same genetic information and cell differentiation is controlled by turning on or turning off different combinations of genes. An alternative but rare way to change the developmental fate of cells is the loss of specific DNA sequences. A striking example of such programmed DNA elimination occurs in birds, where a whole chromosome is eliminated from somatic cells, while being maintained only in the germline. Although the existence of this germline restricted chromosome (GRC) has been known for more than two decades from zebra finch (*Taeniopygia guttata*), only recently it has been shown that this chromosome is very likely present in all songbirds, the largest and most diverse group of birds, comprising about 4500 species. The evolutionary significance of the GRC is, however, still largely unexplored.

The GRC is present in two copies in females and only in a single copy in males. The male's single copy is excluded from spermatocytes during male gametogenesis and therefore the GRC is normally inherited only through the female lineage. A recent study, however, showed the possibility of incomplete GRC elimination from sperms and rare inheritance from males. Interestingly, recent research, including our ongoing work, suggests that the GRC varies dramatically in size, even among closely related species. In some species, the GRC represents the largest element in the karyotype, while in others the GRC is a tiny microchromosome. This suggests an intriguing possibility: that rapid turnover of the GRC gene content could contribute to the origin of reproductive isolation between species and thus to the rapid radiation of songbirds, compared to other bird groups.

The main aim of this project will be to study the evolutionary dynamics of the GRC and its possible role in songbird speciation using a model system of two closely related Muscicapidae songbirds, the common nightingale (*Luscinia megarhynchos*) and the thrush nightingale (*L. luscinia*). These sister species diverged approximately 1.8 Mya and still hybridize in nature, producing viable F1 hybrids.

Hybrid males are fertile, but hybrid females seem to be sterile. The two nightingale species also differ markedly in their sperm length, which might contribute to the postmating prezygotic isolation between the two species. Within our ongoing project, we have sequenced and assembled the GRC in the common nightingale and revealed about 180 protein coding genes on this chromosome, most of them arising as duplicates from standard chromosomes. The aim of this project will be to sequence and assemble the GRC additionally in the thrush nightingale and compare the gene content as well as the size of this chromosome in both species.

To assemble the GRC, the selected candidate will sequence the whole genomes of the somatic and germinal tissues using combination of long-read nanopore and short-read Illumina sequencing and by their comparison identify GRC sequences which are present only in the germline tissues. We will also sequence ovary and testis transcriptomes in both species to study possible expression differences on the GRC between the species. Genomic and bioinformatic work will be complemented with cytogenetic experiments with the aim to visualize the size of the GRC in both species.

The project will be realized at the Department of Zoology, Faculty of Science, Charles University in the lab of Population and speciation genetics under the supervision of Radka Reifová (<http://web.natur.cuni.cz/~radkas>). Furthermore, the project will be realized in close collaboration with the group of Alexander Suh, Uppsala University, Sweden. The ideal candidate should have experience with bioinformatic analyses of next generation sequence data including whole genome assembly.

Picture 1.



Salary: co-founding 1000 EUR/month is ensured
Co-founding resources:

- 2020–2022, Czech Science Foundation, Standard grant (20-23794S): Germline restricted chromosome in songbirds: understanding its origin, function and evolutionary significance (Principal Investigator: Radka Reifová).

- 2019–2021 (application for extension until 2023 has been submitted), Charles University, Primus grant (PRIMUS/19/SCI/008). Postcopulatory sexual selection and speciation in nightingales (Principal Investigator: Radka Reifová).

Department: Department of Zoology

Supervisor: RNDr. Radka Reifová, Ph.D.

E-mail: radka.reifova@natur.cuni.cz

Web: <http://web.natur.cuni.cz/~radkas>

Phone: +420221951852

Position available from: January 1, 2022

Deadline date for applications: July 23, 2021

Applicants must submit [required documents](#) to: radka.reifova@natur.cuni.cz (project supervisor).

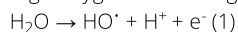
[8] Title of the research project:



STUDY OF ELECTROCHEMICAL AND ADSORPTION PROCESSES ON SP³
CARBON SURFACES IN RELATION TO THEIR PHYSICO-CHEMICAL
CHARACTERISTICS

Sp³ (diamond) carbon-based materials hold an eminent position in electrochemistry, a discipline which has a range of applications from laboratory to industrial scale and from analytical science to energy storage. Typically, their conductivity is achieved by incorporation of boron atoms in the diamond lattice during the chemical vapor deposition (CVD) preparation procedure. The conditions during CVD strongly influence structural, electronic, optical, spectroscopic, and electrochemical properties of prepared boron doped diamond (BDD) [1].

Electrochemical applications of BDD electrodes are intertwined to the water decomposition reaction (1) at high anodic potential enabled by the high oxygen overvoltage ($E_0(\cdot\text{OH}/\text{H}_2\text{O}) = +2.8 \text{ V vs. SHE}$) at the diamond surface.



Hydroxyl radicals (HO[•]), formed at the diamond surface, are powerful oxidizing agents capable of anodic 1/ incineration of a wide range of organic compounds for water disinfection, or 2/ production of intermediate reactive compounds for electrosynthesis and electrocatalysis. Applications in electroanalysis rely on direct oxidation or reduction of analytes within the wide potential window of BDD electrodes. The importance of surface morphology and pre-treatment on electron transfer rates and adsorption proclivity of redox active species is stressed frequently [2].

UNESCO Laboratory of Environmental Electrochemistry has built a strong collaboration with the Materials for Nanosystems and Biointerfaces (MNB) research group at the Institute of Physics of the Czech Academy of Sciences, who has acquired unique know-how on the synthesis and characterization of BDD coatings. Their last achievements include on one hand synthesis of structured BDD layers including porous BDD [3], but on the other hand preparation of relatively smooth BDD surfaces including chem-mechanically polished BDD or single crystal BDD differing in crystal orientation. The preliminary results indicate significantly enhanced electron-transfer rates on some of the surfaces and changes in adsorption proclivity for simple organic molecules.

Within this context, the proposed project aims to study the interplay between the surface and bulk properties of BDD and electrochemical performance. The objectives include:

- Intentional structuring of BDD surfaces (e.g., using ultra-fast laser technologies) or modification of the surface (introduction of oxygen-containing groups) and complex physico-chemical characterization of the parent and structured/modified BDD surfaces using spectroscopic, microscopic and electrochemical techniques.
- Comparative studies using model redox-active (bio)molecules to address the interplay between morphology, surface termination, and other specific features (e.g., boron doping level, incidence of surface boron sites, content of sp² carbon) on one side and electrochemical behaviour and proclivity to adsorption/desorption (via hydrophobic vs. electrostatic forces) processes with dependence on the structural characteristics of the model organic compounds on the other side.

This project is focused on the preparation and systemic characterization of conductive diamond-based materials. A transition of the newly acquired knowledge to application fields of these materials as anodes in incineration of organic compounds, electrosynthesis or as electrodes in electroanalysis is a desired outcome, for which the project solution will create a strong background.

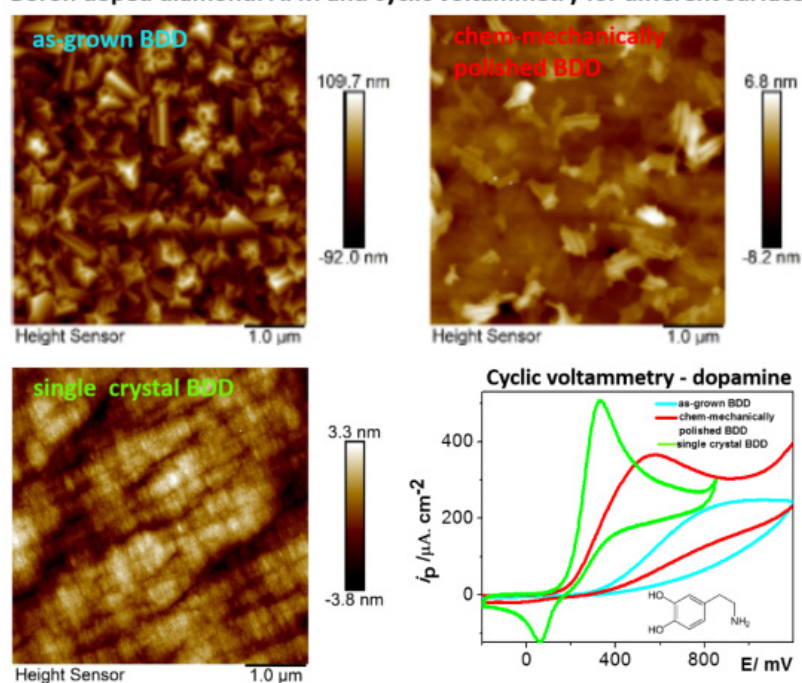
The project will be solved in close cooperation with Institute of Physics (MNB research group, HiLASE centrum (Dr. Andy Taylor)) and Institute of Biophysics (Prof. Miroslav Fojta). High publication activity of all of the participating laboratories, including joint articles, and extensive experience with international collaboration together with enthusiasm and high professionalism of the staff will ensure successful outcomes of the project.

[1] 10.1039/c7cs00757d

[2] 10.1016/j.aca.2019.05.041

[3] 10.1016/j.electacta.2019.135025

Figure 1.

Boron doped diamond: AFM and cyclic voltammetry for different surfaces

Salary: co-founding 1000 EUR/month is ensured

Co-founding resources: Department of Analytical Chemistry

Department: Department of Analytical Chemistry, UNESCO Laboratory of Environmental Electrochemistry

Supervisor: Assoc. Prof. Karolina Schwarzová

E-mail: karolina.schwarzova@natur.cuni.cz

Phone: +420221951228

Position available from: January 1, 2022

Deadline date for applications: July 23, 2021

Applicants must submit [required documents](#) to: karolina.schwarzova@natur.cuni.cz (project supervisor).

[9] Title of the research project:



LATITUDINAL PATTERNS IN SPECIALIZATION OF POLLINATION INTERACTIONS: METABARCODING OF BEE POLLEN LOADS ALONG A CROSS-CONTINENTAL GRADIENT.

This project will contribute to the elementary question of ecology, biogeography and evolution: Are niches of tropical species narrower than species in higher latitudes? The project will perform an intensive cross-continental study of latitudinal patterns of specialisation in plant-pollinator interactions. It will combine modern NGS metabarcoding analyses of pollen from bees, the most important pollinators in terrestrial ecosystems, with a standardised observational sampling of interactions at a whole-community level. Along a long latitudinal gradient, our group has already established seven study sites from temperate and subtropical South Africa, through the Afrotropics, up to Mediterranean, temperate and subarctic European ecosystems. From each study site and study season, we will metabarcode DNA from pollen loads of bees, and compare them with the reference libraries established during the project.

The post-doc will be responsible for the NGS metabarcoding of pollen loads, representing an up-to-date and highly sensitive method for accurate identification of all interactions within the network. She/he will be in charge of the wet lab, as well as the data analyses. We offer the opportunity of field sampling, depending on the selected applicant's preferences. Such data sampled along the large geographical scale will be unique.

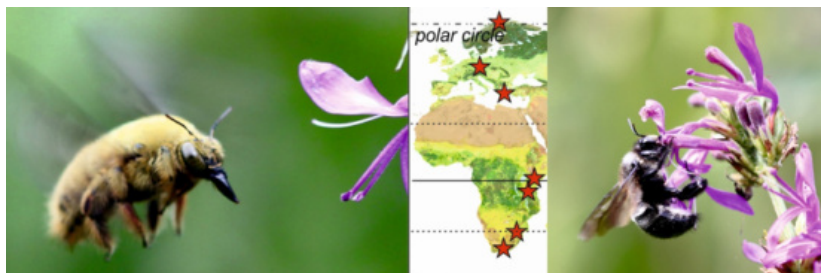
The results will be combined with the other parts of the project, mainly an intensive video-recording of plant-pollinator interactions and detailed information on the individual plant pollination systems and reproduction strategies, all performed by the other members of our study group (<http://www.insect-communities.cz/>). Altogether, the project will not only describe the latitudinal patterns in plant-pollinator interactions, but also crucially contribute to our understanding to the responsible mechanisms.

Specific requirements for the position:

- Strong experience with DNA metabarcoding or other NGS sequencing approaches, both wet lab and data analyses.

- Enthusiasm to answer interesting ecological questions by the modern laboratory methods.
- Ability of independent work, but also as a team member.
- Reasonable publication record.

Picture 1.



Salary: Monthly salary, co-funded by the Junior Fund and the Junior Star projects of the supervisor, equals 70,000 CZK monthly (incl. 37% of health and social insurance), which more than sufficiently covers living expenses in the Czech Republic (the national average income is ca. 38,000 CZK monthly).

Funding: The project is an integral part of the Junior STAR project funded by the Grant Agency of the Czech Republic, which will cover all its expenses.

Workplace: Insect Community Ecology Group (www.insect-communities.cz), Department of Ecology, Faculty of Science, Charles University

Project supervisor: Robert Tropek

E-mail: robert.tropek@gmail.com

Phone: +420 221 95 1854

Position available from: January 1, 2022

Deadline date for applications: July 1, 2021

Applicants must submit: CV, publication record, motivation letter, and two contacts for possible references to: robert.tropek@gmail.com (project supervisor), and in a copy to lenka.storchova@natur.cuni.cz (project manager).

The candidate selected by the project supervisor will prepare (in collaboration with the supervisor) a final application submitted to the University rectorate.

|10| Title of the research project:



EXPLORING THE ROLE OF TEMPERATURE ON LANDSLIDE PATTERNS AND TRENDS IN A CHANGING CLIMATE

Climate change is affecting our lives in multiple ways. More frequent draughts or storms, wildfires, land use changes will alter the patterns and frequency of slope instability phenomena and, consequently, the risk they pose to populations, infrastructures, and ecosystems. The key to study the short-term response of slopes to climate change has always been a hydro-meteorological one – precipitation being a major trigger of landslides. Indeed, regional-scale studies generally focus on well-recognised triggers and controls (rainfall, seismic shaking, morphology, lithology). At the same time, they systematically neglect the possible role of thermal variables (Figure 1). In doing so, they disregard the direct effect of temperature on the hydro-mechanics of geomaterials or deem it insignificant.

In high-pressure and high-temperature domains, such as in seismic faults and slip zones of giant rock avalanches, thermo-hydro-mechanically coupled processes are well known and well investigated. These processes are also accounted for in specific engineering infrastructures, such as underground heat exchangers or deep geological repositories of radioactive waste.

However, laboratory experiments, demonstrate a significant dependence of hydro-mechanical properties on temperature (especially in clay-rich materials) even in ranges naturally experienced at the ground surface and in the near subsurface (Figure 2).

It is thus reasonable to hypothesise that temperature fluctuations and trends, propagating from the surface to the subsurface, may exert a quantifiable, direct effect on the stability of slopes (Figure 3), the kinematics of landslides, and, in the long term, the erosion rates.

In ongoing and proposed projects (GA ČR, MSCA, MSCA-IV), we are tackling the problem at multiple scales and in a variety of geomaterials, with a particular focus on the geomechanic role of temperature in mild climates. In the laboratory, we are performing or will perform temperature controlled experiments to relate physical (e.g., porosity, mineralogy) and thermal properties (e.g., heat capacity, irradiance, cooling rates) with changes in permeability, volume and strength under climatic (heating-cooling, wetting-drying) and mechanical (loading-unloading) forcing.

In modelling environment, we plan to analyse the stability of slopes using a fully coupled thermo-hydro-mechanical approach. In the field, we are going to perform comprehensive monitoring (including remote, surface and in-borehole measurements of temperature and moisture) at selected sites affected by slope instability, to gain insight into the dominant physical / thermodynamic processes controlling landsliding. We

wish to complete the picture by investigating, over larger areas, whether the role of temperature, so evident in a controlled laboratory environment, can emerge and be significant in regional studies. At the same time, we wish to develop physically-based tools, stemming from the advanced coupled models available at smaller scales, to demonstrate the significance/insignificance of temperature effects in complex, heterogeneous landscapes.

Within this framework, the proposed postdoctoral project aims at investigating, through geostatistical and physically-based modelling, the role of temperature and other thermal variables on the patterns and trends of landslides in various soil and rock types at catchment/regional scale in mild climates. The ideal candidate will have strong analytical and computational skills and be familiar with geographical information software environment (including machine learning algorithms and satellite/UAV data processing) but also with advanced constitutive and numerical modelling of geomaterials. This way, the candidate will be able to propose and implement upscaling strategies linking results on laboratory samples all the way to catchment/regional studies. Potentially, this project can yield more reliable landslide risk scenarios in the light of climate change.

Figure 1. Frequency of thematic variables in landslide susceptibility modelling (data set: 565 models published in 1983–2016). Note the low frequency of geotechnical and climatic variables. Within them, temperature is never accounted for explicitly. Legend: EO, Earth observation; GEOM, geomorphological; GEOT, geotechnical; LR, landslide related; OA, other anthropic; OC, other climatic; SE, seismic (mod from. Reichenbach et al., 2018, doi: 10.1016/j.earscirev.2018.03.001).

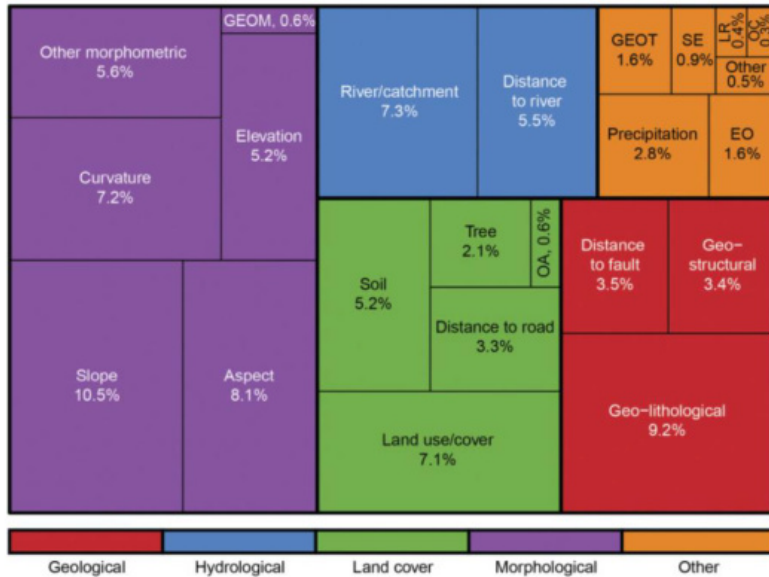


Figure 2. An example of thermal response on the residual shear strength of a smectite-rich soil, indicating a beneficial effect of temperature on slope stability, in this case (mod. from Shibasaki et al., 2017, doi: 10.1002/2016JB013241).

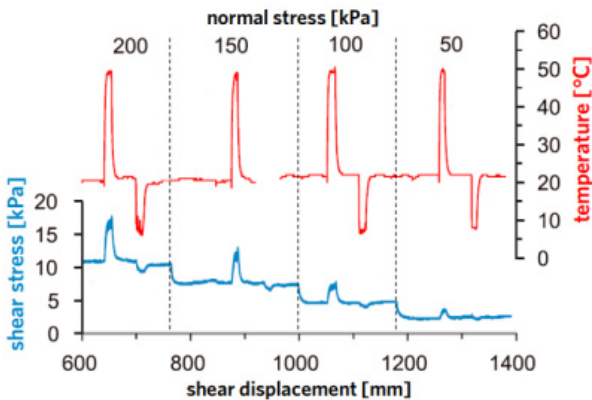
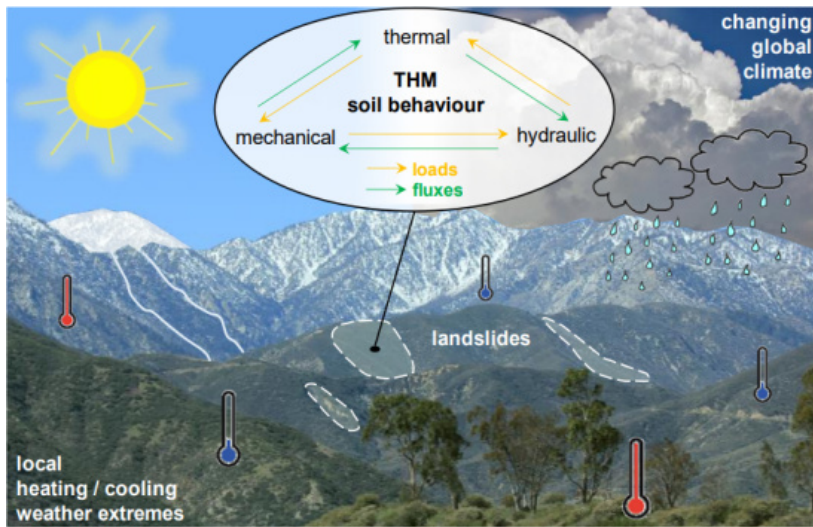


Figure 3. Climate change, thermo-hydro-mechanical coupling, landslides: a conceptual sketch of multi-scale interaction.



Salary: co-founding 1000 EUR/month is ensured

Co-founding resources:

- GA ČR grant No. 20-28853Y: "Effects of thermo-hydro-mechanical coupling on slope deformation in expansive clays: advanced experiments and hypoplastic modelling" (covering the year 2022);

- eventual extension of the fellowship subject to successful awarding of one of the GA ČR grant proposals currently under evaluation: 22-06576S "Rock strength and slope stability in a temperate climate: is climate change a threat?" and 22-30977S "Landslides in a changing climate: exploring how temperature controls the strength of clayey soils".

Department: Institute of Hydrogeology, Engineering Geology and Applied Geophysics, Faculty of Science

Supervisor: Gianvito Scaringi, Ph.D.

E-mail: gianvito.scaringi@natur.cuni.cz

Phone: +420 777 546 432

Position available from: January 1, 2022

Deadline date for applications: July 23, 2021

Applicants must submit required documents to: gianvito.scaringi@natur.cuni.cz (project supervisor).

Faculty of Law

[1] Title of the research project:



DIGITAL EVIDENCE IN THE CRIMINAL INVESTIGATION

There is no doubt that cyber crime manifests a high rate of latency, and that the responsible authorities are failing in its investigation. Even in cases when the crime is detected, it is difficult to identify an individual culprit and to prove his guilt. Not only in the cyberspace, but also outside of it, a whole array of processes is automated due to the use of computers. Tracks of a crime therefore have digital form. This digital evidence has several specifics, by which it differs from other forms of evidence (e.g., papers, things), whether regarding its detection or performance. These problems plague the criminal authorities all over the world.

We are looking for a postgraduate candidate, who would focus his/her research on the issue of digital evidence, specifically for the area of criminal procedure. We expect that he/she would focus on specifics of digital evidence, that set them apart from other evidence in theory, perform international comparison, how these forms of evidence are approached in other countries, regarding their conservation and use. Findings of application practice of higher courts would be immensely helpful. Comparison with both European countries and USA is expected.

Workplace: Department of Criminal Law (Faculty of Law, Charles University)

Contact/supervisor: Assoc.Prof. Tomáš Grivna, Ph.D.

E-mail: grivna@prf.cuni.cz

Position available from: January 1, 2022

Deadline date for applications: July 22, 2021

Applicants must submit required documents or queries to: grivna@prf.cuni.cz and in copy to international@prf.cuni.cz.

[2] Title of the research project:



COMPENSATION FOR THE LOSS OF LIFE IN COMPARATIVE PERSPECTIVE

In most jurisdictions around the globe, the loss of life itself is not compensable. This situation has a logical reason since there is no person who could be compensated. However, it also leads to several unfortunate consequences. It is paradoxically "cheaper" to kill than to cause a grave bodily harm; in some countries, the families of seriously injured persons are forced to file a lawsuit before their loved one dies, being cruelly distracted from focusing on the last things in life; etc. To solve these problems, some jurisdictions have struggled to define and apply compensation for the loss of life. While it is most established in Portugal (under the name *dano morte*), a lively debate has been ongoing for years in several other countries such as Brazil or Italy.

The project focuses on possible approaches to compensation for harm resulting from the loss of life including secondary damages (material and immaterial) but most importantly the concept of compensation for the loss of life itself. In its course, these various approaches will be analysed, compared, and proposed based both on their practical consequences and legal and philosophical suitability and consistency. The researcher will obtain and analyse data from various countries in order to compare their legal approaches and propose a possible regulatory frame necessary to ensure a just and sustainable solution.

Workplace: Centre for Medical Law (Faculty of Law, Charles University)

Contact/supervisor: Assoc. Prof. Petr Šustek, Ph.D.

E-mail: sustek@prf.cuni.cz

Position available from: January 1, 2022

Deadline date for applications: July 22, 2021

Applicants must submit [required documents](#) or queries to: sustek@prf.cuni.cz and in copy to international@prf.cuni.cz.

[3] Title of the research project:



LEGAL ASPECTS OF ALLOCATION OF SCARCE HEALTH RESOURCES IN A PANDEMIC

The Covid-19 pandemic has made countries all over the world face new and unprecedented questions in many areas including law. Among many other problems, health systems have faced the pressing need to define, refine, and apply criteria for scarce resources allocation in situation of their severe shortage. The principles of patient triage, known mainly from war and disaster medicine, have been variously concretized and used in many wealthy countries which are not used to them in such a wide scope. As our research strongly suggests, legal uncertainty has been a problem in all of the affected jurisdictions. Health care providers and health professionals must have made very difficult decisions while they could have not known for sure whether they comply with the law. Possible consequences of unlawful conduct, both in the area of tort law and criminal law, could be significant.

The project will consist in obtaining data from many jurisdictions on the applied rules for scarce health resources allocation and their legal and social context, their careful analysis, definition of common traits and principles, and proposal of suitable solutions for the possible next global health crises.

Workplace: Centre for Medical Law (Faculty of Law, Charles University)

Contact/supervisor: Assoc. Prof. Petr Šustek, Ph.D.

E-mail: sustek@prf.cuni.cz

Position available from: January 1, 2022

Deadline date for applications: July 22, 2021

Applicants must submit [required documents](#) or queries to: sustek@prf.cuni.cz and in copy to international@prf.cuni.cz.

Faculty of Medicine in Pilsen

[1] Title of the research project:



EPIGENETIC REGULATION OF EARLY EMBRYONIC DEVELOPMENT

Input premise

The process of early pre-implantation development of the individual is highly orchestrated and, therefore, several mechanisms remain unelucidated. The project is focused on the beginning of embryonic development, in particular the fertilization, pronucleus formation, and embryonic genome activation. Along with these processes, upstream epigenetic regulators will be studied, such as histone deacetylases, histone methyltransferases, and ubiquitin ligases. For this, mouse knock-out models will be used, followed by in vitro embryo culture, immunocytochemistry, and transcriptome analyses. Results will promote knowledge transfer to human reproductive medicine.

Qualifications

- PhD or equivalent degree, max. 5 year from graduation
- adequate publication activity
- skills with gamete isolation and manipulation
- experience with embryo analyses, i.e. immunocytochemistry, image analysis
- excellent communication in English and ability to work in a team

Gross wage: min. 40 000,- CZK per month (approx. 1 600 €)

Laboratory: Laboratory of Reproductive Medicine

Department: Biomedical Center

Supervisor: Jan Nevoral

E-mail: jan.nevoral@lfp.cuni.cz

Phone: +420 377 593 808

Position available from: January 1, 2022

Deadline date for applications: July 20, 2021

Applicants must submit [required documents](#) to: Jitka Černohousová - Jitka.Cernohousova@lfp.cuni.cz

Faculty of Pharmacy in Hradec Králové

[1] Title of the research project:



STUDY OF DRUG RESISTANCE IN ACUTE MYELOID LEUKAEMIA, EFFECT OF CELL-TO-CELL COMMUNICATION AND BONE MARROW MICROENVIRONMENT

Description (Annotation):

Acute myeloid leukaemia (AML) is a highly heterogenous blood cancer disease still characterized by very poor curability, numerous relapses, and low survival rate. The therapy failure and relapse induction is mainly driven by resistant leukemic stem cells (LSCs) characterized with increased expression of genes ensuring better survival and proliferation. This project focuses on the study of the drug resistance mechanisms in context of bone marrow microenvironment and LSC growth promotion through cell-to-cell communication. The applicant will be involved in addressing the mechanisms of intercellular communication (organelle exchange and EV/miRNA) with the particular focus on affected membrane transport characteristics and metabolic enzyme activity of LSCs, with the main goal to enable precise in time minimal residual disease detection and treatment optimisation.

Requirements for applicant:

PhD in pharmacology, molecular biology, molecular genetics, haematology or related discipline, max. 5 years after graduation.

Excellent English skills both in oral and written form.

High motivation, ability to conduct collaborative research.

The applicant must have excellent technical skills in cell culture (cell lines, primary cells) and advanced experience in molecular and cell biology field (e.g. PCR technique and/or gene sequencing, western blotting, immunocytochemistry, fluorescence microscopy, biostatistics). Knowledge and skills in flow cytometry/cell sorting and liquid biopsy field is an advantage.

Track record of publications in peer-reviewed journals: at least 3 publications in IF journals (IF>1.5), at least one as the first author.

Workplace/Institution:

Research Group of Cellular Pharmacology and Oncology, Charles University, Faculty of Pharmacy in Hradec Králové.

Supervisor: Assoc. Prof. Dr. Martina Ceckova, Ph.D.

Email: martina.ceckova@faf.cuni.cz

Phone: +420 495 067 218

Position available from: 1st of January 2022

Deadline date for applications: 12th of July 2021

Applicants must submit all [required documents](#) including description of prior research, technical skills and scientific experience, to the project supervisor, Assoc. Prof. Dr. Martina Ceckova, Ph.D. (martina.ceckova@faf.cuni.cz)

Catholic Theological Faculty

Department of Systematic Theology and Philosophy is seeking a highly qualified post-doctoral researcher with international experience to join our team for one year with a project focused on the relationship between late antique Christology and Neoplatonic psychology with a particular aim towards late antique Christological debate (docetism, theopaschism, subordinationism, dyophysitism, monophysitism) in light of Neoplatonic stances on pure souls' relationships with the body and passions, immanence and transcendence, humanity and divinity. In addition to conducting research on the candidate's proposed project, the successful applicant will be expected to offer a semester-long course on an M.A. level and organize seminars based on his/her research. The researcher is expected to publish results in ranked peer-reviewed journals and participate in international conferences (travelling and publishing expenses will be covered). Moreover, he/she should submit her/his own grant application.

Profile of an ideal candidate:

- Completed PhD degree in excellent standing (within the last 5 years since graduation)
- Publications in peer-reviewed journals
- Excellent knowledge of English (FCE equivalent or better)
- Previous participation in international projects
- Previous experience in teaching welcomed
- Due to tax specification, the candidate cannot be employed in any other country than Czech Republic in course of the postdoctoral period

The applicants should submit:

Documents required by the Charles University's Junior Fund

A one-page cover letter introducing yourselves

A two-page description of the proposed project

Salary: Equivalent to 1000 EUR/month + additional funding and expenses

Workplace: Catholic theological faculty, Charles University, Thákurova 3, 160 00 Praha 6

Supervisor: doc. David Vopřada, Dr.

Contact: voprada@ktf.cuni.cz

Phone: +420 220 181 271

Position available from: January 1, 2022 (for 12 months)

Deadline for applications: July 15, 2021

Applicants must submit all required documents to: voprada@ktf.cuni.cz (project supervisor)

Last change: June 26, 2021 09:28

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