

Application form hCOMET COST training in Latvia, 2018

Name	Anna Kalužová
Female/male	Female
Affiliation	RECETOX - Research Centre for Toxic Compounds in the Environment, Faculty of Science, Masaryk University Brno
Address	Kamenice 753/5, 625 00
City	Brno – Bohunice
Country	Czech Republic
E-mail	kaluzova.anicka@gmail.com
Current status (post-doc, PhD-student)	MSc student
Years of PhD or after PhD:	1 st year MSc student
Passport number or ID	205731960
Do you need help with accommodation?	Yes
Head of the team (name & full address/e-mail):	Pavel Čupr cupr@recetox.muni.cz

Field of interest

Biochemistry and genotoxicology – effects of occupational exposure of fire-fighters to polycyclic aromatic hydrocarbons and perfluorinated compounds, their fates in human organisms and their impact on DNA damage and oxidative stress.

Experience with comet assay technique

In recent years our team has optimised and introduced comet assay to our laboratories due to my colleagues' involvement in hComet course in Oslo and Rome. We perform the comet assay in classical mode, but even in modified versions for assessment of oxidative base damage (with FPG) and level of DNA methylation. During carrying out the pilot study, my colleagues were routinely performing this assay on isolated lymphocytes and whole blood samples collected from firemen exposed during occupational intervention to polycyclic aromatic hydrocarbons in the air and perfluorinated compounds in fire extinguishers. This fact caused that I am theoretically very well acquainted with this technique. A couple of times I had an opportunity to participate in assessment of DNA damage with comet assay as well. Measured data from the pilot study will be used in publication which is already in process. Simultaneously we prepare a protocol of new study on exposed firemen, when our aim will be to use not only blood and lymphocytes, but even some non-invasive matrixes as well (same in further projects like CELSPAC TNG, HBM4EU, etc.). In the this project I will be responsible for testing samples with comet assay and interpretation of obtained data.

Motivation letter

Dear Sir/Madam,

I am thrilled to be applying for the hComet training school in non-invasive cell sampling in Riga. After reading the requirements, it is clear you are looking for younger applicants who are keen on learning new approaches and progress in evaluation of DNA damage with comet assay.

Given your requirements, I believe I am a suitable candidate for the course. I am a first-year student of the Master's degree programme Analytical Biochemistry at Masaryk University in Brno, Czech Republic. At present I am a member of Human Exposure Assessment and Risks group that is situated in Research Centre for Toxic Compounds in the Environment (RECETOX) at Masaryk University Brno, Czech Republic.

Within my bachelor thesis (https://www.researchgate.net/publication/329337688_Evaluation_of_DNA_damage_in_human_cells_by_micronucleus_assay) I have been dealing with optimisation of cytokinesis-block micronucleus assay in order to assess the exposure of firemen to polycyclic aromatic hydrocarbons. Our current research is rather focused on evaluation of biomarkers of oxidative stress and assessment of DNA damage with comet assay in fire-fighters exposed to toxic compounds during occupational intervention.

I believe this course would be a great benefit not only for me, but for the whole team as well, because of our many curious questions about utilisation of comet assay. It would also bring us a new insight into current problematics of comet assay regarding choice of matrix, considering pros and cons of each type of biological material. This project appeals to me, because it hosts not only theoretical, but even practical training, and the skills gained during training would be definitely harvested later in our future human biomonitoring studies.

After reviewing my CV, I hope you will agree that I am the type candidate who meets your expectations. I am honoured to elaborate on my experiences in attached CV.

Thank you for your consideration and I look forward to hearing from you soon.

Yours faithfully,

Anna Kaluzova

BRIEF CV

Bc. Anna Kaluzova

E-mail address	kaluzova.anicka@gmail.com
Home address	Tvarozna 209, 664 05, Brno–Country District, South Moravian Region, Czech Republic
Cell phone number	+420 732 681 230

Personal profile

As a first year Master student in Analytical biochemistry I am connected to Faculty of Science of the Masaryk University in Brno. At present I am a member of Human Exposure Assessment and Risks group situated in the Research Centre for Toxic Compounds in the Environment (RECETOX) at Masaryk University. In terms of my bachelor thesis, I optimised and performed the CBMN protocol with automatic scanning device Metafer5 within our laboratories. My research interests are mainly focused on evaluation of DNA damage and oxidative stress related to human

exposure. I experienced an internship in clinical laboratory at Veterinary and Pharmaceutical University, where I was able to apply my knowledge about different biochemical techniques and enzymology. Since January 2019 I will participate in project of Mendel University Brno focused on assessment of quality of soils. During my academic life, I have experienced a semester course of good laboratory practise, where I have learnt principles and utilisation of GLP. During my academic life I have developed communication skills due to team meetings with eight group members from Faculty of Science and Faculty of Sport Studies. I have proven team cooperation within the project where my task was to prepare the protocol of the study and study design, sample processing, aliquoting and storing.

Education

Masaryk University Brno

2018 – present: Faculty of Science, Master's programme: Analytical Biochemistry

Thesis: DNA damage and oxidative stress as a human exposure biomarkers

Research group: Human Exposure Assessment and Risks

Institution: Research Centre for Toxic Compounds in the Environment

2015 – 2018: Faculty of Science, Bachelor programme: Biochemistry – Bachelor's degree

Thesis: Evaluation of DNA damage in human cells by micronucleus assay

Research group: Human Exposure Assessment and Risks

Institution: Research Centre for Toxic Compounds in the Environment

Grammar School

2011 – 2015: Multicultural English Gymnasium, focus: Native languages

Work experience

2019: Mendel University Brno – Faculty of Geology and Pedology

Function: preparing of soil samples for testing, decomposition and assessment of biochemical/chemical oxygen demand and fertility of soils

2016, 2018: Veterinary and Pharmaceutical University Brno – internships in clinical laboratory

Skills

MS Word, MS Excel, MS PowerPoint

Statistica (statistical programme)

Metafer (Metasystems, computerised automated microscopic imaging software)

Further skills

English language – advanced, active

German language – slightly advanced, passive

Russian language – beginner, passive

Latin language – passive

Driving licence, category B – active driver

Playing the piano and flute

Dancing

Recommendation letter:

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I believe this course would be a great benefit not only for me, but for the whole team as well, because of our many curious questions about the utilisation of the comet assay. It would also bring us a new insight into current problematic problems of with the comet assay regarding the choice of matrix, considering the pros and cons of each type of biological material. This project appeals to me, because it hosts not only theoretical, but even also practical training, and the skills gained during training would be definitely harvested later in our future human biomonitoring studies.

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