



2017-IPR-F-000-8647

Trainee on virtual cell-based assay model

<p>Position for:</p> <p>Trainee</p>	<p>As the science and knowledge service of the Commission, the mission of DG Joint Research Centre is to support EU policies with independent evidence throughout the whole policy cycle.</p> <p>The JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at: http://www.jrc.ec.europa.eu</p> <p><u>Short description of activity:</u></p> <p>The Chemical Safety and Alternative Methods (F.3) including The European Union Reference Laboratory for alternatives to animal testing (EURL ECVAM), is part of the Directorate F for Health, Consumers and Reference Materials.</p> <p>We develop, evaluate, harmonise and promote innovative methods for the regulatory safety assessment of chemicals. We provide support to a broad range of policy areas including industrial and household chemicals, cosmetics, food, plant protection products, endocrine disrupters and chemical mixtures.</p> <p>The traineeship position will give support to ongoing activities in the unit and ECVAM in relation to the use and development of computer-based methods as an alternative to animal testing. The project will focus on the virtual cell-based assay (VCBA) model, which simulates the kinetics and fate within in vitro test systems.</p> <p>Currently, this model takes into account passive diffusion of chemicals thorough the cell membrane. In this project we aim to understand the role of active transport of chemicals within the cells.</p> <p>The trainee's main task will be to support and collaborate to the development of an extension of the VCBA to include active transport processes. The initial task will include a literature search to gather information and understand the current state of science of active transporter systems.</p> <p>The trainee will then assist in the translation of the knowledge into mathematical equations (as part of the already existing R code of the VCBA), and find relevant</p>
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	<p>datasets to calibrate the model, run simulations and understand the possible implications of the new model for application in toxicology and risk assessment. The project will be carried out in collaboration with colleagues in the US FDA who are experts in active transporter systems; interactions with US-based colleagues will be by means of emails and teleconferences.</p> <p><u>Qualifications:</u></p> <p><u>Essential:</u></p> <ul style="list-style-type: none"> • Bachelor or Master’s degree in computational toxicology, computational chemistry, pharmacology toxicology, chemistry, biology, related fields. Programming skills in R. • Good level of English (level B2). <p><u>Advantage:</u></p> <ul style="list-style-type: none"> • Modelling experience • Knowledge of KNIME • Understanding of biology <p><u>For general eligibility requirements, please read the rules governing the traineeship scheme of the JRC:</u></p> <p>https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/jrc-trainees</p>
Institute/Directorate Unit	<p>Directorate F – F.3 – Chemical Safety and Alternative Methods Unit</p> <p>Further information: https://eurl-ecvam.jrc.ec.europa.eu/</p>
Indicative duration	5 months
Preferred starting date	As soon as possible
JRC Site	Ispra
Country	Italy
<u>JRC contact details</u>	<p>For any technical problems with your application, please contact: JRC-ESRA@ec.europa.eu</p>