We are looking for a talented and motivated developer/scientist to advance an exciting research project:

Early Stage Researcher (ESR 5)
Extending NOTOCORD-Sense™ with behavioural analysers to enable neuro-cardiovascular assessment in a cloud-based architecture.

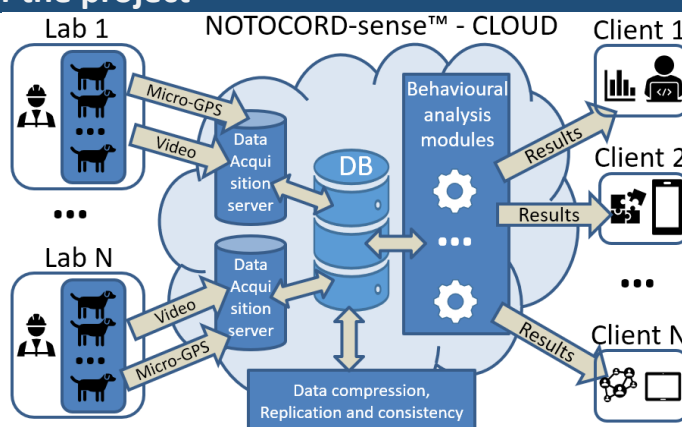## About INSPIRE – A European Training Network in Safety Pharmacology

The vision of INSPIRE is to advance and "inspire" Safety Pharmacology by exploring new technological capabilities to addressing emerging cardiovascular safety concerns. Hereto, INSPIRE unites expertise from academic teams, technology-providers, pharmaceutical companies, regulators and hospitals to create a European training platform for 15 Early Stage Researchers (ESRs). Key innovative aspects of INSPIRE include: i) *in vitro* humanized cardiomyocytes assays, ii) unparalleled *in vivo* hardware/software solutions, iii) *in silico* predictions of haemodynamics, iv) mass spectroscopy imaging of drug exposure, v) exploration of mechanisms of late-onset CV toxicity, as observed in cardio-oncology, and vi) early integration of feedback from industry and regulators.

Overall, INSPIRE constitutes a multidisciplinary and intersectoral training programme with a balanced combination of hands-on research training, intersectoral secondments, local courses and network-wide events on scientific and transferable skills, enabling future R&I collaborations. Hence, INSPIRE will equip the future generation of SP scientists with a wide range of scientific knowledge and the ability to adapt to a dynamic industry.

Description of the project

Scientific Objectives:
- Investigate video signals recording on the Cloud.
- Investigate video signals replay on the Cloud.
- Implement these concepts on NOTOCORD-Sense™, a Cloud platform for Safety Pharmacology studies.
- Integrate a video behavioural analysis algorithm provided by another team to study group dynamics of socially housed animals.
- Build prototypes including physiological and video signals acquisition and replay for post processing with the behavioural analyser.

Tasks and Responsibilities:
- You perform independently scientific research within a collaborative international research consortium (training network).
- You deliver written reports of your research on a regular basis.
- You publish scientific articles related to the research project of the assignment.
- You support the valorization of research results into tangible deliverables integrated in NOTOCORD-sense™.
- You (may) contribute (limited) to teaching activities.
- You participate to scientific meetings and conferences to present your research to the scientific community.
- You actively participate in outreach activities aimed to promote your scientific research to a wider audience.
- The selected candidate will get in contact with the other members of this international consortium and will benefit from the tailored training programme.
- The selected candidate will take part in the following planned secondments: 1. Non-academic secondment to Boehringer Ingelheim Pharma GMBH &CO KG (1 months, Germany) for hands-on training and collecting user-specs for cardio-behavioural data analysis in SP setting. 2. Academic secondment to Weizmann Institute of Science (1 month, Israel) for user specs behavioural analysis. 3. Academic secondment to INRIA (3 months, France) for research on distributed systems.

About NOTOCORD®

NOTOCORD® designed software for data acquisition and analysis in preclinical studies for the past 30 years. NOTOCORD is recognized as a leading software publisher with over 2,000 licenses installed worldwide in top pharmaceutical companies and research centres and deliver trusted solutions across academic, safety pharmacology, toxicology and drug discovery research. Since September 2016, NOTOCORD® is a part of the Instem group, a publicly traded provider of IT solutions to the global life sciences market, with the objective to help the pharmaceutical industry to bring life enhancing products to market faster. Our mission is to create and develop user-friendly software, providing reliable and high-quality results. We develop global advanced data acquisition solutions making technology easier and faster to use. NOTOCORD® office is located in the Western suburb of Paris, France.

Profile & requirements

- ✓ Applicants must hold a Master degree or equivalent in Computer Science, Physics or Software Engineering.
- ✓ Applicants must have a good understanding in the following areas: data structures, data modeling, distributed processing, real-time analysis, stateful services.
- ✓ Applicants must have the ability to write robust code with one or more general object-oriented programming languages (C# and Python preferred).
- ✓ Applicants must have the desire to learn and evaluate new technologies
- ✓ A previous experience or knowledge in the following areas is highly appreciated but not mandatory:
  - o Ingestion & processing of large volumes of data (including videos)
  - o Integration of computer vision/deep learning algorithms in end-to-end processes
- ✓ Applicants can be of any nationality but must comply with the "Mobility Rule" (see below).
- ✓ Applicants must have an ability to understand and express themselves in both written and spoken English to a level that is sufficiently high for them to derive the full benefit from the network training.
- ✓ *H2020 MSCA Mobility Rule*: researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of the host organisation for more than 12 months in the 3 years immediately before the recruitment date. Compulsory national service, short stays such as holidays, and time spent as part of a procedure for obtaining refugee status are not taken into account.
- ✓ *H2020 MSCA eligibility criteria*: Early Stage Researchers (ESRs) must be, at the date of recruitment by the host organisation, in the first four years (full-time equivalent research experience) of their research careers and have not been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when the researcher obtained the degree entitling him/her to embark on a doctorate (either in the country in which the degree was obtained or in the country in which the researcher is recruited, even if a doctorate was never started or envisaged).

Benefits

- ✓ The selected candidate will be employed at NOTOCORD for 34 months.
- ✓ The selected candidate will benefit from a competitive salary plus allowances. Moreover, funding is available for technical and personal skills training and participation in international research events.
- ✓ The selected candidate will benefit from the designed training programme offered by the host organisation and the INSPIRE consortium.
- ✓ The selected candidate will participate in international secondments to other organisations within the INSPIRE network and in outreach activities targeted at a wide audience.

Please, find additional information in the *Information note for Marie Skłodowska-Curie ITN fellows*

Application

Interested candidates are invited to apply for this position by filing in the application form on our website (www.inspire-safety-pharmacology.eu), via this link: https://www.uantwerpen.be/en/projects/inspire-safety-pharmacology/job-openings/submit-your-applicat/ .

For additional information

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