We are looking for a talented and motivated scientist (PhD student) to advance an exciting research project:

Early Stage Researcher (ESR 3)
Empowering predictivity and speed of hiPSC CM assays by machine learning approach.

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 PhD project

Scientific Objectives:

- Develop machine learning based SW solutions for semi-automated analyses of large hiPSC CM datasets.

- Apply latest development from data sciences to overcome bottlenecks related to handling of large datasets.
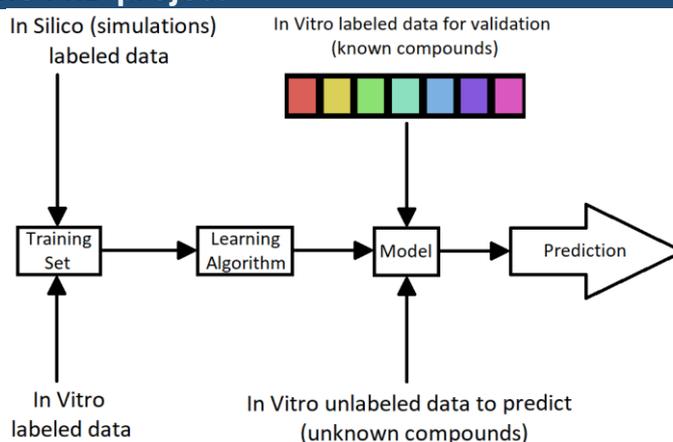
Tasks and Responsibilities:

- 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 prepare a doctoral thesis on Machine Learning and large datasets management applied to safety pharmacology data.
- 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. Academic secondment of six months to INRIA, France, for combining mathematical modelling, numerical simulations and machine learning

approaches. 2. Non-academic secondment of three months to UCB BIOPHARMA SRL, Belgium, for validation of the platform and machine learning algorithms in a SP/big pharma setting.

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 MSc or equivalent in Mathematics, Computer Science, Physics or Engineering.
✓ Applicants must have a solid knowledge of numerical methods for data analysis.
✓ 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.
✓ Applicants must be eligible to enrol on a PhD programme at the host institution (or at a designated university, in case the host institution is a non-academic organisation).
✓ Applicants must have the necessary academic skills and background to make the success of a doctoral degree.
✓ *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 by the host organisation for 36 months.
✓ 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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