BIOMOD 1: New drug R&D (commercial project)

Novadiscovery is a pioneer in the emerging field of in silico medicine based in Lyon (France). Working with an innovative company in its scale-up phase is an entirely different experience than working for a large established company. You will be assigned a great number of responsibilities and work in a dynamic environment with strongly motivated people who will help you fast-climb a steep learning curve. For more information visit www.novadiscovery.com.

Keywords: Commercial Project, Systems Biology, Biomodelling, Drug R&D

Background:
Novadiscovery is a pioneer in the field of in silico clinical trials, which are poised to become an industry standard as regulators now see Modeling and Simulations (M&S) as a strategic priority. Each commercial project is aimed to unlock the potential of M&S and allow our biotech and pharma partners to accelerate and de-risk the R&D of new therapies by establishing their clinical benefits upstream of human trials. To predict drug efficacy, Novadiscovery applies a proprietary methodology (the Effect Model) with jinko platform, an internal platform which brings together the modeling and simulation expertise of the company.

Objective:
- Contribute to the creation of pathophysiological models and the exploitation of their results.
- Develop a submodel which will be integrated into a complete model. The actual model to be implemented will depend on the partner’s needs of the moment (the intern will be part of the R&D process within that project).

Work Process:
- Participate in weekly and monthly project meetings and reporting (scientific and project management meetings)
- Conduct literature reviews on the biological system to model
- Create a computational model in the simulation platform
- Integrate the new submodel in the complete model
- Participate and contribute to the redaction of an in silico experimental protocol and run simulations to answer the client’s questions
Deliverables:
Knowledge Model and Computational Model

References:
To be provided based on the drug candidate chosen

You are
➔ A team player, a good listener, and an effective communicator: Join a growing multidisciplinary team of enthusiastic innovators
➔ Curious and proactive with a solid grounding in biology: Particularly in cell biology, molecular biology, and omics, to address real-life clinical issues.
➔ Autonomous and self-motivated with strong analytical and problem-solving skills: Find innovative solutions to science and engineering problems
➔ Eager to learn and use mathematical methods for the modeling of biological systems: Simulate virtual diseases and treatments with ODE, PDE, Monte-Carlo Simulations
➔ Willing to explore and exploit large datasets and virtual populations: Apply machine learning, statistical analysis, and outliers detection
➔ Responsive and capable of facing time-sensitive challenges: Project management with client-facing opportunities are awaiting you

You will
➔ Contribute actively to the creation of in silico pathophysiological models
➔ Impact the development of the company’s simulation platform
➔ Analyze and exploit large simulation results
➔ Participate in weekly and monthly project meetings and reporting

Details
➔ Apply directly on our careers page
➔ Contact: recruitment@novadiscovery.com
➔ Type: Internship
➔ Salary: Competitive
➔ Start date: Flexible

Technologies and languages
We are looking for people who know some of the following or are eager to learn and work with them:
➔ Unix environment
➔ Programming languages (Haskell, NodeJS, TypeScript, Nix)
➔ Statistical/scientific computing (R, RStudio)
➔ Big data (NoSQL, Spark, Parquet)
➔ Markup languages (Markdown, LaTeX)
➔ Miscellaneous (Git, bash, zsh, RDF, SPARQL, Elasticsearch)