

***Keywords:*** *Single Cell, Next Gen Sequencing, Immunology, Computational Biology, Cytometry*

**Department Description**

**Company Description**

‘Caring for the world, one person at a time’... inspires and unites the people of **Johnson & Johnson**. We embrace research and science - bringing innovative ideas, products and services to advance the health and well-being of people.   
Employees of the Johnson & Johnson Family of Companies work with partners in health care to touch the lives of over a billion people every day, throughout the world.

**Janssen Pharmaceutica** joined the [Johnson & Johnson](http://www.jnj.com) group in 1961. Today, Janssen Pharmaceutica is one of the most innovative pharmaceutical companies in the world.

Worldwide, Janssen R&D focuses on five domains: neuroscience, cardiovascular diseases and metabolism, infectious diseases, immunology and oncology. Within these areas, the focus is on the research and development of vaccines and small and large molecules. Our campus in Beerse, Belgium is the largest R&D centre for small molecules within the entire Janssen group. It is the engine behind the continuous innovation at Janssen. In this campus, we invest over 1 billion euros each year in R&D!

Researchers and laboratory workers with different nationalities work together on a daily basis to improve and innovate. The know-how on our campus - one of the leading R&D centers in the Janssen group and beyond - is also continually growing.

**COMPUTATIONAL BIOLOGIST**

Within Janssen R&D, Janssen Discovery Sciences is supporting transformational research harnessing state-of-the-art multi-parametric platforms and systems analysis of the immune response in preclinical models and clinical studies to identify and evaluate innovative interventions in oncology, pathogenic infections and auto-immune diseases and guide prophylactic and therapeutic vaccine development.

This commitment aims to bridge the gap between the single molecule/single regimen pharmacology and the orchestration of host response in animal models and in the clinic, taking into consideration the cooperative and cross-talking, non-linear processes of immune cells transitioning in a continuum of states and leading to emergent deleterious or disease resolving behaviors.

Internal investments in mass cytometry, high-content imaging, single cell sequencing and access to new emerging platforms that allow the systematic evaluation of single cell behaviors with a buildup of a network of key strategic academic partners in the evolving scientific field are key components of our systems immunology strategy.

**SCOPE**

A major scope is the integration of high dimensional data from preclinical and clinical compound profiling studies and disease models, often from different biological levels single cell, tissue and patient level. Contribution to the design and the selection of new experiments and studies is an integral part of the role. The transition to tractable molecular determinants and experimental model systems will demand close coordination with the experimental scientists to identify relevant and testable hypotheses as well as assayable readout combinations. Collaborations with game-changing academic and industrial scientific teams in the field should provide a choice of optimal analysis and modeling approaches, also driven by incentives to publish the non-proprietary new science.

**Qualifications**

* PhD in Computational Biology or a related multidisciplinary field with at least three years of post-doctoral experience in an academic or industrial setting in the field of host response or related fields, focusing on the analysis and modeling of control mechanisms of heterogeneous multicellular processes.
* Demonstrated experience with high-dimensional data integration and biological interpretation that led to hypothesis driven simulation and experimental testing.
* Demonstrated experience in handling high-dimensional single cell data, e.g. mass cytometry, high-content imaging derived features or single cell transcriptomics, and their integration at the population level. Strong programming and scripting skills that enable the development of functional prototypes. Experience in the analysis of genomics, proteomics, image analysis and/or flow cytometry data using R/Bioconductor or similar software. Experience with graph based probabilistic modeling, ODE/PDE based modeling or related predictive approaches would be an asset
* Excellent communication, reporting and team working skills, yet able to work independently

**Contact**

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