TRON

Scientist – Computational Immuno-genomics (m/f/d)

Full time - Mainz

We are looking for a passionate **Computational Scientist (m/f/d) with expertise in computational immunogenomics** to join our **Systems Immunology & Medicine** unit. We are an interdisciplinary team of scientists, PhD students, and software engineers passionate about developing bioinformatics tools and predictive models for therapeutic targets against cancer and other diseases. Working closely with other teams at TRON and with external partners, we leverage computational approaches and models to continually enhance the efficacy of immunotherapies, with a particular focus on cancer immunotherapies.

The successful candidate will help advance antigen discovery and personalized immunotherapy by analyzing and interpreting the immunogenomic landscape in disease. This work will involve applying advanced computational methods and contributing to the design of validation strategies through molecular and immunological assays.

Your tasks and responsibilities:

- Drive the analysis of clinical and preclinical datasets to uncover predictive and prognostic immunogenomic features that shape disease progression and therapeutic response, advancing next-generation antigen discovery.
- Design, build, and continuously optimize robust, scalable computational pipelines to decode disease-specific immunogenomic landscapes.
- Train, validate, and benchmark predictive AI models to enhance antigen discovery and predict immunotherapy efficacy.
- Support validation efforts to confirm candidate targets through molecular and immunological testing.
- Share your findings and ideas through internal discussions, international conferences, R&D reports, and high-impact scientific publications.

What you bring:

- Ph.D. in Computational Biology, or a related data-driven field with at least 2 years of postdoctoral research experience in academia or industry.
- Demonstrated scientific expertise in immunogenomics, antigen discovery, and machine learning/AI applications in biomedical research.
- Strong proficiency in the analysis of next-generation sequencing (NGS) data, particularly WES/WGS and RNA-seq datasets.
- Experience with copy number analysis and/or tumor evolution modeling is a plus.
- Advanced programming skills for reproducible data analysis in Python or R.
- Hands-on experience with version control systems (e.g. git), workflow managers (e.g. Nextflow or Snakemake), and high-performance computing environments.

- Excellent communication skills and a collaborative approach, with the ability to contribute effectively to multiple projects simultaneously.
- Enthusiasm and curiosity for the diverse activities of our research institute completes your profile.

We offer:

- A dynamic, innovative, and creative research environment with strong expertise in immunotherapies
- An open, collegial, and supportive working atmosphere in a respectful organizational culture
- A highly diverse and inclusive workforce
- Access to our GPU-accelerated HPC cluster and laboratories with cutting-edge sequencing technologies and molecular assays
- Performance-based remuneration and other benefits
- The opportunity for personalized professional development
- Job ticket (Deutschlandticket) incl. employer allowance
- Bike leasing (Businessbike)
- The opportunity for hybrid working

TRON is an internationally recognised institute for application-oriented research. We combine the strengths of academic research with the requirements of quality-controlled industrial developments. At TRON, we share a common mission to develop innovative solutions for the immunotherapeutic treatment of cancer, infectious diseases and other serious diseases with high medicinal need for development.

TRON was founded in Mainz in 2010 and works in close cooperation with universities and hospitals as well as with regional, national and international research institutions and pharmaceutical companies.

As part of our team, you will have the opportunity to work at the cutting edge of translational science.

If all this appeals to you, we look forward to getting to know you.

Please send us your complete and informative application documents (cover letter, CV, references) in a single document of max. 5 MB by e-mail to Human Resources at **jobs (at) tron-mainz.de**, Job-ID: **43103-26-01-WAPRO**.

For more information, visit our homepage at www.tron-mainz.de