

The University Hospital Bonn (UKB) is a maximum care hospital with more than 1,300 beds. Our more than 9,000 employees take on tasks in research, teaching and patient care as well as in public health at the highest level. In the science ranking (LOMV) and in the economic result, the UKB is number 1 of the university hospitals in NRW and in 2021 had the third highest case mix index of the university hospitals in Germany.

We are currently inviting applications for a

Ph.D. position Biomathematics – Systems Biology of Allergic Reactions (m/w/d)

at the **Bonn Center for Mathematical Life Sciences** and the **Clinic for Dermatology and Allergy**. The part-time position (65%) will start in March 2025 or as early as possible thereafter, for a period of three years due the promotion with the possibility of extension.

The mammalian immune response depends on the interaction and collaboration of many highly individual cells. The group of Prof. Dr. Kevin Thurley uses mathematical modeling and data analysis tools to quantify and rationalize immune cell dynamics in the context of clinical manifestations such as inflammation and cancer. Prof. Dr. Natalija Novak is the director of the Department of Dermatology, and her primary research interest is the pathophysiology of atopic dermatitis. The groups are integrated into both the ImmunoSensation and the Hausdorff Mathematics Clusters of Excellence, an exceptional environment for our interdisciplinary research program.

In the available Ph.D. project, we will design and analyze data-driven models of cell-cell communication networks in the context of atopic dermatitis and allergic drug reactions, based on an established experimental system and patient-derived data sets. The project may comprise deterministic, stochastic and spatial modelling techniques as well as analysis of single-cell sequencing and high-content imaging data, thus offering ample opportunity for expert training in state-of-the-art systems immunology.

We are looking for highly motivated, independent and committed scientists eager to make significant contributions to both fundamental and clinic-oriented research. Candidates should have a Master degree in (bio-)physics, systems biology, mathematics, computer science, or a related discipline. Good computer programming skills are required, training in immunology or cell biology is an advantage. The position requires good communication and interpersonal skills, and fluent English. For more information, visit <https://www.thurleylab.org> and <https://www.immunosensation.de/members/prof-dr-med-natalija-novak>.

We offer:

- A stimulating, multidisciplinary research environment at the interface of immunology and biomathematics
- **Responsible and versatile:** a job with a lot of creative freedom in a collegial team
- **Secure in the future:** fee according to TV-L EG13
- **Flexible for families:** flexible working time models, the option of a place in the company day-care center and offers for those returning from parental leave
- **Provision for later:** company pension scheme
- **Clever to work:** Possibility of an interest-free loan to buy an e-bike
- **Tailor-made education:** Subsidized further education and training
- **Systematic start:** Structured induction
- **Healthy at work:** Numerous health promotion offers, free membership in UKBfit
- **Employer benefits:** preferential offers for employees (corporate benefits)

The University of Bonn is committed to diversity and equal opportunity. It is certified as a family-friendly university. It aims to increase the proportion of women in areas where women are under-represented and to promote their careers in particular. It therefore urges women with relevant qualifications to apply. Applications will be handled in accordance with the *Landesgleichstellungsgesetz* (State Equality Act). Applications from suitable individuals with a certified serious disability and those of equal status are particularly welcome.

Contact information

Applications should include a brief statement on research interests, a CV, and contact information of two referees, compiled into a single pdf file until 26.02.2025. Please send in applications by email, quoting the reference number ST-17026.

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