The University Hospital Bonn is a maximum care facility with a regular capacity of 1,300 beds. Our current staff of more than 8,000 performs assigned duties in research, teaching and medical treatment, including the use of advanced medical technologies, and public health care services at the highest possible level. Interested applicants will be offered a wide range of employment opportunities in a variety of fields.

The Cluster of Excellence ImmunoSensation\textsuperscript{2} is inviting applications for

**Postdoc positions (100%)**

The positions are initially limited to two years with the possibility of extension.

ImmunoSensation\textsuperscript{2} is a Cluster of Excellence funded by Germany’s Excellence Strategy at the University of Bonn. Participating scientists are dedicated to investigating innate immunity beyond the boundaries of classical immunology. In a joint effort, immunologists, neuro-biologists, systems biologists and mathematicians of the University of Bonn and the German Center for Neurodegenerative Diseases (DZNE) of the Helmholtz Association aim to connect the status of the immune system, the metabolism and the nervous system to disease states. ImmunoSensation\textsuperscript{2} is embedded into the outstanding research environment of the University of Bonn, the University Hospital and the DZNE. Furthermore, ImmunoSensation\textsuperscript{2} is internationally connected and maintains research partnerships with Australia (Melbourne University), Japan (Osaka University, Waseda University, Kyoto University) and the Netherlands (Radboud University, Nijmegen).

Postdocs will benefit from the *Bonn School of Advanced Studies in Immunology* which is a unique educational and communication platform for early career researchers. Participants have the opportunity to gain experience with state-of-the-art technologies in our laboratories and those of our partner institutions. They will also be part of a vibrant scientific network and an internationally competitive scientific training program.

The ideal candidate will be highly motivated and team-oriented with a strong interest in immunology, a first-class academic PhD degree in a life science-related discipline, a strong background in molecular biomedicine, molecular biology, biochemistry or cell biology and enthusiasm for working in the highly-competitive field of innate immunity research. Candidates for postdoctoral positions are expected to have a solid scientific track record including publications in peer-reviewed journals and strong communicative skills (fluent spoken and written English at C1 level or higher), which is essential to productive participation in an international research landscape.

The salary will be according to the German salary scale TV-L (EG 13) with supplementary benefits, such as a pension plan according to VBL. A “Jobticket” (subsidized public transport) is also available. The University of Bonn is an equal opportunity employer.
Applicants should send their application in a single pdf file (max. 5 MB), including motivation letter, CV, scanned academic degrees, list of publications and the contact details of two references. In your application, please indicate your preferred scientific project. More information on the scientific projects and project leaders can be found at the end of the document and further details will also be provided during the recruitment process. Applications will be accepted on rolling basis and can begin on June 1, 2021 or later.

Please send your application by email until 30.03.2021 using the reference number 047_2021 to the Cluster Coordination Office to

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Open Postdoc Positions

Jonathan Schmid-Burgh
Institute of Clinical Chemistry & Clinical Pharmacology

tba

Dirk Baumjohann
Medical Clinic III for Oncology, Hematology, Immuno-Oncology and Rheumatology

Our research focuses on T helper cells, which coordinate cellular and antibody-mediated immune responses to a variety of pathogens. While several distinct T helper cell subsets have been described in the past, new research indicates that T helper cell differentiation is characterized by a considerable degree of flexibility and plasticity. We have a long-standing interest in T follicular helper (Tfh) cells, which represent the prototypic CD4+ T cell subset that provides help to B cells for efficient antibody responses. They may also contribute to cellular adaptive immunity, but the pathways remain largely unexplored. In this project, we will combine cellular and molecular immunology techniques with in vivo disease models, patient-derived samples, and single-cell approaches such as scRNA-seq and spatial profiling to dissect the role of Tfh and Tfh-like cells in cancer and cancer immunotherapy and their function at the crossroads of immunity and autoimmunity. Highly motivated candidates with a proven track record of excellent scientific accomplishments are encouraged to apply. Applicants should hold a PhD or MD/PhD degree in Immunology, Molecular Medicine or similar. Previous hands-on experience in immunological techniques such as multidimensional flow cytometry and in vivo models is required. Experience in human immunology and in conducting and analyzing scRNA-seq experiments is a plus. Good communication skills and fluency in English are essential. For more information, please visit: https://www.immunosensation.de/about_us/members/detail/baumjohann.htm

Christoph Wilhelm
Institute of Clinical Chemistry & Clinical Pharmacology

We are seeking a highly motivated postdoctoral fellow to conduct research on the fundamental aspects of nutritional regulation of the immune system. The Project aims to understand how different diets are able to shape the function of the immune system. In particular the work aims to identify how dietary-derived metabolites shape the biology of tissue resident immune cells such as innate lymphoid cells (ILC) in health and disease. The candidate will have opportunities to obtain additional external funding and develop an independent research program during postdoctoral training.

We are looking for an enthusiastic scientist with a desire to work on a challenging and rewarding project as part of a friendly and supportive team. Applicants with Ph.D. degree and graduate students expecting to receive the degree within six months will be considered. The ideal candidate will have a background in immunology, tissue biology or cellular metabolism. Candidates with an additional background in bioinformatics are particular encouraged to apply. Experience in working with animal models, cell isolations from tissue, multi-parameter flow cytometry, molecular biology and fluorescence imaging will be preferred.
We are currently seeking a highly motivated and talented Postdoctoral Scientist to assist with research focusing on identifying novel immune therapeutic targets for Hepatocellular Carcinoma (HCC) at Institute of Experimental Immunology (Prof. Z. Abdullah lab) in collaboration with Prof. Michael Hoelzel at the Institute of Experimental Oncology, University of Bonn. The Postdoc will be an integral member of our research team and will perform scientific research aiming at identification of inflammation-associated factors in the development and progression of HCC.

Responsibilities:
The candidate will be expected to independently carry out essential research functions in the laboratory that include but are not limited to analysis of immune cell functions in vivo and invitro, cell biology and immune staining techniques to be analyzed in multi-color flow cytometry by BD LSR Fortessa and in FACSymphony. Specifically, candidate should be well-versed in

- Primary cell culture.
- Flow cytometry assays and analysis (DIVA, FLOWJO).
- Various types of cytotoxicity and proliferation assays.
- RNA/DNA extractions, PCR and RT-PCR.
- Small animal studies as needed.
- General lab organization as well as lab safety issues.

The successful candidate expected to work flexible hours in order to accommodate experimental needs.

Qualifications:
Research Experience required in Immunology, Molecular Biology, Oncology, Hepatology or Myeloid Cell Biology. Candidate should be well-versed in lab experiences including tissue culture, cell-based assays, phenotypes analyses of various immune cell subsets and anti-tumor activities (cytotoxicity, proliferation, cytokines production), flow cytometry analyses and cell sorting. Not essential but helpful qualifications/experience include next-generation sequencing (RNA-seq, ATAC-seq and ChIP-seq), immune fluorescence imaging, immunohistochemistry, immunoblotting, and/or Bioinformatics tools.

Additional Responsibilities:

- Conduct standardized biological, immunological and biochemical tests and preclinical in vivo experiments.
- Collect organs and tissues for functional and molecular analysis.
- Isolate and prepare different immune cell populations.
- Analyze experimental data and interpret results to write reports and summaries of findings, including preparation of presentations.
- Participate in grant application process and manuscript preparation as required.
- Expected to provide intellectual and interactive commitment to position by keeping up with appropriate literature and research publications.
Participate in the development, modification and improvement of standard operating procedures.

Uses computers, computer-interfaced equipment, or high-technology applications to perform work duties.

Zeinab Abdullah  
Institute of Experimental Immunology and Ophthalmology Clinic-University of Bonn

We are currently seeking a highly motivated and talented Postdoctoral Scientist to assist with research focusing on identifying novel therapeutic targets for Age-associated Macular Degeneration (AMD) at Institute of Experimental Immunology (Prof. Z. Abdullah lab) and Ophthalmology Clinic (Prof. R. Finger team) in the Medical Faculty, University of Bonn. The Postdoc will be an integral member of our research team and will perform scientific research and develop next generation of immunotherapies. Ongoing studies include discovery of promising new therapeutic targets, especially metabolomic and microbiome-based molecular therapies and evaluate their mechanism of actions. The successful candidate expected to work flexible hours in order to accommodate experimental needs.

Responsibilities:
The candidate will be expected to independently carry out essential research functions in the laboratory that include but are not limited to experience in metabolomic, microbiota and immune phenotyping techniques to be analyzed in multi-color flow cytometry. Specifically, candidate should be well-versed in

- Maintaining human cell tissue culture,
- Flow cytometry assays and analysis (DIVA, FLOWJO),
- RNA/DNA extractions, PCR and RT-PCR,
- General lab organization as well as lab safety issues.

Qualifications:
Research Experience required in Immunology, Molecular Biology, Metabolomics, Bioinformatics or Complement system.
Candidate should be well-versed in lab experiences including tissue culture, cell-based assays, flow cytometry analyses and cell sorting. It could be also very helpful if candidate is familiar with techniques on molecular biology, cell biology and immunology including real-time PCR, RNA/DNA isolation, cDNA synthesis, next-generation sequencing, PCR, ELISA, and/or Bioinformatics tools.

Additional Responsibilities:
- Conduct standardized biological and biochemical tests and laboratory analyses, including the collection of information and samples from patients, such as blood and stool.
- Isolate, identify and prepare specimens for examination.
- Analyze experimental data and interpret results to write reports and summaries of findings, including grant preparation and presentations.
- Participate in grant application process and manuscript preparation as required.
• Maintains detailed notebook of all work-related activities.
• Monitors laboratory work to ensure compliance with Environmental Health and Safety information as well as the standard operation procedures specific to each laboratory.
• Expected to provide intellectual and interactive commitment to position by keeping up with appropriate literature and research publications.
• May be responsible for the development, modification and improvement of standard operating procedures.
• Uses computers, computer-interfaced equipment, or high-technology applications to perform work duties.
• May be responsible for designing and executing advanced experiments and setting strategy.

In addition, the candidate will be expected to make presentations at lab meetings as well as write up methods and materials, results, figure legends and constructing figures for grant proposals, progress reports, and manuscripts.