

## PRESS RELEASE

### Bayer Pharmaceuticals PhD Award 2023

Inga Hochheiser from University Hospital Bonn receives award for her dissertation project

**Bonn, March 31, 2023 - Last Thursday, Dr. Inga Hochheiser from the Institute of Structural Biology at the University Hospital Bonn (UKB) received the Bayer Pharmaceuticals PhD Award 2023 for the best molecular biology PhD of the past year. The Bayer Pharmaceuticals Doctoral Award is presented by the Society for Biochemistry and Molecular Biology (GBM).**

The GBM has honored the young scientist Dr. Inga Hochheiser with this year's "Bayer Pharmaceuticals Doctoral Award". The biochemist from the Institute of Structural Biology at the UKB receives the award for her research on the structure and function of an inflammatory factor involved in many chronic diseases. "In her doctoral thesis, Dr. Hochheiser has succeeded for the first time in breaking down the three-dimensional structure of the protein NLRP3 and in depicting in atomic detail the binding to an active agent that keeps the protein in an inactive state," says Prof. Matthias Geyer, director of the Institute of Structural Biology at UKB. Inga Hochheiser has thus solved a 20-year-old pharmacological puzzle and shown that the drug CRID3 binds directly to the inflammatory factor NLRP3.

This opens the way to further development of pharmaceuticals that could help against inflammatory diseases such as gout, type 2 diabetes or even Alzheimer's disease. A decisive factor in this success was that Dr. Hochheiser was able to make the protein visible in elaborate experiments using cryo-electron microscopy. The award comes with prize money of 1,500 euros. The prize was awarded on the occasion of the 74th Annual Meeting of the GBM in Mosbach with the scientific topic "Immune Engineering - from Molecules to Therapeutic Approaches".

Further information can be found in the renowned journals Nature and Science:

- "Structure of the NLRP3 decamer bound to the cytokine release inhibitor CRID3" (<https://www.nature.com/articles/s41586-022-04467-w>) and
- "Directionality of PYD filament growth determined by the transition of NLRP3 nucleation seeds to ASC elongation" (<https://www.science.org/doi/10.1126/sciadv.abn7583>).

**Visuals:**

### Ärztlicher Direktor und Vorstandsvorsitzender

Prof. Dr. med. Dr. h.c. mult.  
Wolfgang Holzgreve, MBA

Tel: +49 228 287-10900  
Fax: +49 228 287-9010900  
[wolfgang.holzgreve@ukbonn.de](mailto:wolfgang.holzgreve@ukbonn.de)

### Kommunikation und Medien

Viola Röser  
Leitung

Tel: +49 228 287-10469  
[viola.roeser@ukbonn.de](mailto:viola.roeser@ukbonn.de)

Universitätsklinikum Bonn  
Kommunikation und Medien  
Venusberg-Campus 1  
Geb. 02  
53127 Bonn

Ihr Weg zu uns  
auf dem UKB-Gelände:



CDJ2JW



**Caption:** Dr. Inga Hochheiser at the award ceremony in Mosbach in March 2023.

**Photo credit:** GBM

**Press contact:**

Viola Röser

Press Officer at the University Hospital Bonn (UKB)

Communications and Media Office at Bonn University Hospital

Phone: +49 228 287- 10469

E-mail: [viola.roeser@ukbonn.de](mailto:viola.roeser@ukbonn.de)

**About the University Hospital Bonn:** The UKB treats about 500,000 patients per year, employs 8,800 people and has a balance sheet total of 1.5 billion euros. In addition to the more than 3,300 medical and dental students, a further 580 people are trained each year in numerous healthcare professions. The UKB is ranked first among university hospitals in NRW in the science ranking and in the Focus clinic list and has the third highest case mix index in Germany.