

## Sandra Schick Joins IMB as a Group Leader

**Mainz, 07 October 2020** – *The Institute of Molecular Biology (IMB) is delighted to welcome Dr Sandra Schick as a new group leader. Sandra joins us from the CeMM Research Center for Molecular Medicine of the Austrian Academy of Sciences in Vienna, Austria, where she worked as a postdoctoral fellow. Her work looks at how a family of chromatin remodellers—called BAF complexes—regulate gene expression, and how they are dysregulated in disease.*

In eukaryotes, DNA is tightly wound around histone proteins to form nucleosomes, which are then further packaged into chromatin. In addition to helping the DNA fit into the nucleus, this packing and folding is important for regulating DNA accessibility: the more tightly packed the DNA is, the less accessible it becomes for transcription factors and DNA repair enzymes. As a result, genes which are tightly packaged are more likely to be transcriptionally silent and inactive.

Sandra's interest lies in discovering how cells are able to control DNA accessibility using a family of chromatin remodelling enzymes called BRG1-/BRM-associated factor (BAF) complexes. BAF complexes modify DNA accessibility by ejecting or sliding nucleosomes along the DNA, such that it becomes more or less tightly packed.

There are many different subtypes of BAF complexes, each comprised of different protein subunits and with different interaction partners. This can be important for regulating cell type-specific gene expression – for example, changes in the subunit composition of BAF complexes are essential for gene expression changes during neurogenesis. Mutations in BAF complexes have been linked to (neuro)developmental disorders and are extremely common in many cancers, indicating that BAF complexes are essential for proper cell function. However, the precise function and regulation of many BAF complexes is still unknown.

The goal of Sandra's lab is to understand the molecular function of BAF complexes both in normal development and in disease. By doing this, Sandra's work will pave the way towards identifying molecular targets that could be used in therapies against disease.

### **Further details**

Sandra is a group leader at IMB. Further information about research in Schick lab can be found at [www.imb.de/schick](http://www.imb.de/schick)

### **About the Institute of Molecular Biology gGmbH**

The Institute of Molecular Biology gGmbH (IMB) is a centre of excellence in the life sciences that was established in 2011 on the campus of Johannes Gutenberg University Mainz (JGU). Research at IMB focuses on three cutting-edge areas: epigenetics, developmental biology, and genome stability. The institute is a prime example of successful collaboration between a private foundation and government: The Boehringer Ingelheim Foundation has committed 154 million euros to be disbursed from 2009 until 2027 to cover the operating costs of research at IMB. The State of Rhineland-Palatinate has provided approximately 50 million euros for the construction of a state-of-the-art building and is giving a further 52 million in core funding from 2020 until 2027. For more information about IMB, please visit: [www.imb.de](http://www.imb.de).

### **Boehringer Ingelheim Foundation**

The Boehringer Ingelheim Foundation is an independent, non-profit organization committed to the promotion of the medical, biological, chemical, and pharmaceutical sciences. It was established in 1977 by Hubertus Liebrecht (1931–1991), a member of the shareholder family of the company Boehringer Ingelheim. With the Perspectives Programme "Plus 3" and the Exploration Grants, the foundation supports independent junior group leaders. It also endows the internationally renowned

Heinrich Wieland Prize as well as awards for up-and-coming scientists. In addition, the Foundation is donating a total of 154 million euros from 2009 to 2027 to the University of Mainz for the Institute of Molecular Biology (IMB). Since 2013, the Foundation has been providing a further 50 million euros for the development of the life sciences at the University of Mainz. [www.bistiftung.de](http://www.bistiftung.de)

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