

MAX PLANCK INSTITUTE OF IMMUNOBIOLOGY AND EPIGENETICS FREIBURG

Fundamental research in two key areas
of modern biology

MAX PLANCK INSTITUTE
OF IMMUNOBIOLOGY
AND EPIGENETICS



Internship or Bachelor/Master thesis project at the **EPIMETABOLSIM (Guhathakurta) Lab !!**

The Max Planck Institute of Immunobiology and Epigenetics (MPI-IE) is research institution that conducts basic research in key areas of modern biology. Central questions address the molecular basis of cell type identities, as they are regulated during cellular differentiation, metabolic response and epigenetic chromatin adaptation.

OUR RESEARCH:

Our interdisciplinary team focuses on:

1. Development of novel molecular tools for studying proteins that localize to multiple cellular organelles in order to maintain cellular homeostasis
2. Functional crosstalk between epigenetics and metabolism in human neurodevelopment

OUR METHODS:

To address our research questions, we employ a diverse set of tools:

1. CRISPR-Cas9 genome editing in mouse and human stem cells
2. Biochemical characterisation: *In vitro* assays, immunoblotting, immunoprecipitation
3. Cellular and molecular biology methods: Confocal and super-resolution imaging, Flow cytometry, Seahorse metabolic assays
4. High throughput omics: Genomics (RNA-Seq, ChIP-Seq), proteomics, metabolomics
5. Bioinformatics data analysis and integration

SIGNIFICANCE OF OUR RESEARCH:

Individuals who harbor genetic mutations in epigenetic factors exhibit rare developmental disorders. By understanding the mechanisms underlying the pathological manifestations of such mutations, we would be steps closer to mitigating or circumvent the atrocities of the disorders.

WE ARE LOOKING FOR CANDIDATES WHO:

1. Are passionate about scientific research and motivated to contribute to the field
2. Have proven academic proficiency

OUR WEBSITE:

<https://www.ie-freiburg.mpg.de/akhtar>

<https://www.ie-freiburg.mpg.de/sukanya-guhathakurta>

Please apply by sending CV and motivation letter to:
guhathakurta@ie-freiburg.mpg.de