



department of molecular
mechanisms of disease



BAUBEC LAB
SYSTEMS BIOLOGY OF
GENE REGULATION

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Systems Biology of Gene Regulation

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Department of Molecular
Mechanisms of Disease

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MSc / BSc positions in Systems Biology of Gene Regulation

What defines the identity of a cell? How is the same genetic code used to build more than 200 different cell types with distinct physiological and morphological properties? These fundamental questions drive our enthusiasm for understanding how information processing is regulated at the level of chromatin modifications and DNA sequence.

Cell fate decisions are largely governed by transcription factors (TFs). TFs interpret the regulatory DNA code within the genome by selecting their target sites through multiple mechanisms at various levels. We study the targeting mechanisms of transcription factors to the genome by measuring their association to DNA and/or identifying their interaction partners.

The project will aim to **develop a genomic foot-printing approach that allows to simultaneously map the protein-DNA and protein-protein interactions** of a given TF *in vivo*. This work will result in a system optimised for mapping protein-protein interactions on chromatin in a genome-wide manner. Our goal is to further develop this method from a *one-protein-at-a-time* to a *multiple-proteins-at-a-time* setup in order to facilitate high-throughput interaction analysis of larger libraries of transcriptional regulators.

We are looking for talented and motivated students to join our group. We offer excellent support and supervision in a young and dynamic team, access to state-of-the-art facilities and an interactive and comprehensive education that includes experimental and computational methods.

Please forward your application including a short motivation letter and CV to tuncay.baubec@uzh.ch or rodrigo.villasenor@dmmd.uzh.ch. The starting date can be negotiated.

