



Post-translational modifications provide a complex layer of regulation during transcription, cell fate determination, and homeostasis in development and disease. While widely involved in recruiting regulatory factors to the genome, the reader proteins recognizing modifications such as acetylation are genetically demanding to study. Selective chemical probes interfering with binding pockets of such reader proteins provide a powerful approach to modulate and perturb the function of complex reader proteins *in vivo* to study chromatin biology and gene regulation. The challenge today is the smart design, synthesis, and *in vivo* validation of such probes for their potential applications in basic research, cancer therapy, or modulation of inflammation.

Our interdisciplinary SNSF Sinergia Consortium at University of Zurich now aims to tackle this challenge by bridging functional genomics in stem cell and zebrafish models with medicinal chemistry and biophysics. Our labs combine key expertise in medicinal chemistry (Nevado Lab, Department of Chemistry), structure-guided compound design (Caflich Lab, Department of Biochemistry), stem cell-based genomics (Baubec Lab, Department of Molecular Mechanisms of Disease), and developmental and disease models in zebrafish (Mosimann Lab, Institute of Molecular Life Sciences).

We are looking for motivated, ambitious, and team-oriented science talent to join our collaborative teams.

Specifically, we are seeking to fill the following posts:

1 PhD student in Medicinal Chemistry (Nevado Lab, Department of Chemistry): Primary responsibilities will involve the rational design and synthesis of novel, complex molecular scaffolds and the evaluation of their biological activity in diverse *in vitro/in vivo* models. Candidates must hold Bachelor/Master in Organic Chemistry at the time of submission of applications. The ideal candidate for this position should have a solid knowledge and practical experience in organic chemistry and be familiar with techniques such as NMR, UV-Vis, IR, MS, etc... Previous experience in the area of chemical biology (cellular and biophysical assays, protein production and crystallography, etc...) will be a plus.

1 PhD student and 1 Postdoc position in Epigenetics and Gene Regulation (Baubec Lab, Department of Molecular Mechanisms of Disease): This position is aimed at dissecting the consequences of bromodomain-inhibition on chromatin and transcription in stem cells and during their neuronal differentiation using genome-wide readouts and bioinformatics analysis. Experience in epigenetics, gene regulation and/or bioinformatics will be particularly valued.

1 PhD student or Postdoc in Protein Engineering and Crystallography (Caflich Lab, Department of Biochemistry): This position is aimed at the engineering of bromodomains to modulate ligand-selectivity. Solving the crystal structures of the wild type and engineered proteins (unbound and ligand-complexed) will guide medicinal chemistry activities. Experience in protein biochemistry is required; experience in protein crystallography is not requested.

Conditions

Starting dates: 2nd half 2018 or as soon as possible

Duration of the contracts: PhD, 3 (+1) years; Postdoc, 1 (+1) years.

Applications

Applications of strongly motivated candidates containing a cover letter, research summary of past accomplishments, CV (resumé), and 1 letter of support (or the names and contact details of 2 referees) should be sent per email to: sinergia.brd@chem.uzh.ch

Please, mention specifically the position you are applying to and the main PI to whom your application is addressed.

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