



University of California
San Francisco

MISSION BAY

Postdoctoral Position - Ligand Discovery for Chromatin Reader Domains

A postdoctoral position is available in the groups of Danica Fujimori and Mark Kelly in the Departments of Cellular and Molecular Pharmacology and Pharmaceutical Chemistry at UCSF (Mission Bay Campus) to investigate reader domains in the KDM5 family of histone demethylases. Through a collaboration between Danica Fujimori's and Mark Kelly's groups these studies will bridge chromatin biology, experimental biophysics and chemical biology to develop ligands for PHD reader domains, as an approach to targeting demethylases beyond their catalytic domain.

Representative publications include:

- Recognition of Histone H3 Methylation States by the PHD1 Domain of Histone Demethylase KDM5A. Longbotham JE, Kelly MJS, Fujimori DG (2021). ACS Chem Biol. (<https://pubs.acs.org/doi/abs/10.1021/acscchembio.0c00976>)
- Histone H3 binding to the PHD1 domain of histone demethylase KDM5A enables active site remodeling. Longbotham JE, Chio CM, Dharmarajan V, Trnka MJ, Torres IO, Goswami D, Ruiz K, Burlingame AL, Griffin PR, Fujimori DG (2019) Nat Commun. (doi: 10.1038/s41467-018-07829-z)
- Histone demethylase KDM5A is regulated by its reader domain through a positive-feedback mechanism. Torres IO, Kuchenbecker KM, Nnadi CI, Fletterick RJ, Kelly MJ, Fujimori DG (2015). Nat Commun. (doi: 10.1038/ncomms7204)

The position is ideal for applicants who have a strong background in biophysics, chemistry or a related field and preferably experience of either NMR or structural biophysics methods, and who wish to broaden their expertise. One objective is to identify inhibitors of this family of demethylases via an NMR based fragment screen, giving the opportunity to gain experience of drug discovery methods. The UCSF Mission Bay campus offers an excellent scientific environment for chromatin research and drug discovery with a focus on structural and chemical biology, and access to 500, 600 and 800 MHz spectrometers with cryogenic probes, and access to a 900 MHz instrument at UCB.

Qualifications:

- A Ph.D. in biophysics, biochemistry, chemistry, or chemical biology, with a strong record of accomplishments and publications
- The position requires the ability to think critically and creatively, as well as to effectively communicate and collaborate

Applications should include:

- Cover letter
- CV with contact information for three references
- Brief description of research experience

Enquires and applications should be addressed to:

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