

Two solution NMR postdoctoral positions at University of California San Diego

Two post-doctoral positions (start date – June/July 2018) are available in the group of **Dr. Lalit Deshmukh** at the Department of Chemistry and Biochemistry at University of California San Diego (UCSD). Both positions will be available for 2 years with the possibility of extension. The lab is interested in understanding the interplay between retroviral group-specific antigen (Gag) polyproteins and host cellular factors and primarily utilizes solution NMR spectroscopy to answer challenging questions. We seek two new members to join the group to expand our current work on retroviral Gag polyproteins and their interactions with endosomal sorting complexes required for transport (ESCRT) machinery as well as their association with artificial lipid membranes such as lipid nanodiscs. We will explore the role of Gag ubiquitination in Gag-ESCRT interactions and analyze the impact of myristoylation on Gag-membrane association.

Recent publications include –

- 1) Deshmukh, L., Tugarinov, V., Appella D. H., and Clore, G. M. (2018) Targeting a dark excited state of HIV-1 nucleocapsid by anti-retroviral thioesters revealed by NMR. *Angew Chem Int Ed Engl* (epub ahead of print)
- 2) Deshmukh, L., Tugarinov, V., Louis, J. M., and Clore, G. M. (2017) Binding Kinetics and Substrate Selectivity in HIV-1 Protease-Gag Interactions Probed at Atomic Resolution by Chemical-Exchange NMR. *Proc Natl Acad Sci U S A* 114, E9855-E9862
- 3) Deshmukh, L., Louis, J. M., Ghirlando, R., and Clore, G. M. (2016) Transient HIV-1 Gag-Protease Interactions Revealed by Paramagnetic NMR Suggest Origins of Compensatory Drug Resistance Mutations. *Proc Natl Acad Sci U S A* 113, 12456-12461

The lab is located in the Natural Sciences Building at UCSD and has dedicated access to state-of-the-art solution NMR equipment (for more details, please visit – <http://nmr.ucsd.edu/biomolecular.html>). In addition, the Department provides an excellent cross-disciplinary environment with training opportunities and modern research facilities to carry out collaborative research.

Requirements: Interested candidates must have received (or be expecting) a Ph.D. and/or M.D. within the past two years in biochemistry / biophysics / molecular or structural biology. Strong background in solution NMR, computational methods, protein expression and purification, lipid chemistry, and structural biology is highly desirable. Candidates should be highly motivated, open to new approaches and techniques, and be able to tackle demanding challenges.

To apply: Please email (as one single pdf document) a preferred start date, CV, a brief summary of research interests and accomplishments, career goals, and names and contact information of at least three references to: Dr. Lalit Deshmukh, Email: ldeshmukh@ucsd.edu.

UC San Diego is an Equal Opportunity/Affirmative Action Employer with a strong institutional commitment to excellence through diversity. All qualified applicants will receive consideration for employment without regard to gender, race, color, religion, sex, sexual orientation, national origin, disability, age or protected veteran status.

Salary: Commensurate with qualification and based on UCSD Postdoc salary scale.

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