

Workshop Notice

Solution Studies of Macromolecules: Global and Local Structure, May 20, 2009, Brookhaven National Laboratory, Upton, NY

As a part of the NSLS-CFN Joint User Meeting May, 18-20, 2009 at Brookhaven National Laboratory, Upton, NY, the Center for Synchrotron Biosciences of Case Western Reserve University will host the workshop entitled "Solution Studies of Macromolecules : Global and Local Structure Factors" on May 20, 2009.

Background & Objective: Small angle x-ray solution scattering (SAXS) has, for many years, been a valuable technique for examining macromolecular structure and dynamics. Recently, local structural information in solution for large macromolecules and complexes has been made available by advances in synchrotron x-ray mediated hydroxyl radical footprinting (XF). This technique has been used to probe the structure and dynamics of proteins and nucleic acids in solution at amino-acid and single nucleoside resolution, respectively. Lately, several groups have combined XF results with SAXS to improve 3D models through refinements. This workshop will focus on experimental and data analysis methodologies of XF and SAXS/WAXS (wide-angle x-ray scattering) with examples of their application to investigate RNA folding, protein-protein and protein-nucleic acid interactions, as well as approaches to examine the structure of large complexes, membrane proteins and biomolecular interactions inside living cells. The workshop will also provide a venue for XF and SAXS users as well as the structural biology community to share ideas, as well as discuss future directions for their research. This workshop will focus on the synergy between XF and SAXS technologies and contribute to the development of world leading Life Science sector beamlines for Macromolecular Structure and Function at the NSLS II.

Proposed Agenda:

This will be a full-day workshop of talks and discussions.

X-ray Footprinting presenters include: **Mark R. Chance**, CWRU; **Sarah Woodson**, JHU; **Rick Russell**, UT-Austin; **Janna Kiselar**, CWRU; **Sayan Gupta**, CSB-NSLS.

SAXS presenters include: **Thomas Irving**, APS; **B. Tracy Nixon**, Penn State; **Joanna Kruger**, UNC; **Lin Yang**, NSLS.

The workshop will also include a poster session and a tour of the XF and SAXS experimental facilities at the NSLS. The workshop is open to all. Registration is required; more information will be posted on the NSLS webpage at a later date. We expect attendance from XF, SAXS and crystallography user groups as well as students and post-docs from various universities who are interested in using these techniques for their research.

Information and Registration:

<http://www.nsls.bnl.gov/users/meeting/>

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