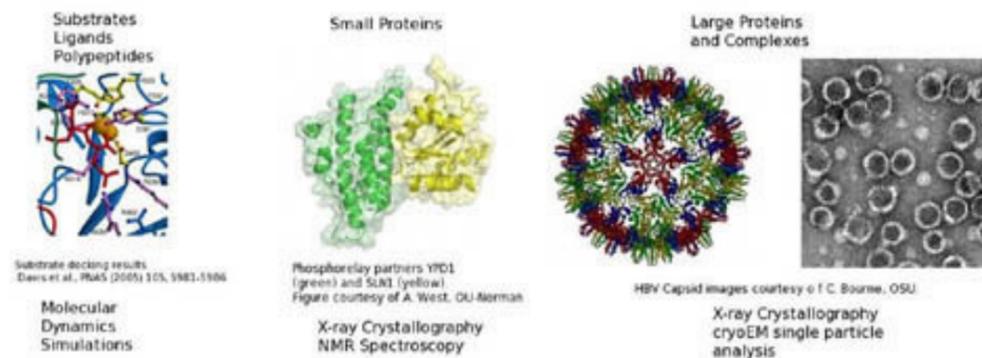


# Oklahoma Structural Biology Nexus



## Member Institutions



## OSBN Mission Statement

*The mission of the Oklahoma Structural Biology Nexus (OSBN) is to improve the environment for structural biology research in Oklahoma to better educate and serve the citizens of Oklahoma, the nation and the world via the advances in biomolecular science that can be facilitated by structural biology.*

The distinctive term "nexus" means "that which unites or binds, a connected group, at the center of something, at the intersection of several fields" (<http://en.wiktionary.org>).

## OSBN Objectives

- 1) To promote interactions between structural biologists in Oklahoma.
- 2) To facilitate collective actions to obtain support for structural biology infrastructure and research activities.
- 3) To provide a network that accelerates the incorporation of the structural biology into the research of non-structural biology labs in both large and small academic institutions and in industry in order to realize the potential of structural biology to move science and drug-development forward.
- 4) To bring international leaders in structural biology to Oklahoma to speak at symposia for the purpose of bringing international attention to structural biology in Oklahoma.
- 5) To help attract and recruit outstanding and promising structural biologists to Oklahoma at the post-doc and faculty member level.
- 6) To enrich the education in structural biology of students and post-docs via workshops on advanced topics.
- 7) To promote interest in structural biology at the high school level and the undergraduate level since many of our most talented students are native to Oklahoma.
- 8) To serve as an interface between the structural biology community and other scientific organizations (i.e., the Oklahoma Academy of Sciences).
- 9) To educate the general public about structural biology.

## Macromolecular Crystallization Core Facility



- Funded by NSF MRI grant in August 2009.
- Moving to the Stephenson Life Sciences Research Center in July 2010.
- Can setup 96 crystallization trials with 15  $\mu$ L of protein or nucleic acid sample.
- Full automated monitoring of crystallization experiments.
- Ability to produce both broad and fine crystallization screens.
- For more information see <http://barlywine.chem.ou.edu> or contact Len Thomas ([lmthomas@ou.edu](mailto:lmthomas@ou.edu)).

## Time Line

- First meeting August, 2008. Encouraged and supported by by the Paul Risser (OU Research Cabinet) and Joe Warner (VPR, OUHSC).
  - Meeting participants were from OU-Norman, OUHSC and OMRF.
  - Mutual needs and initial direction of the group were discussed.
  - Drs. Ann West (OU-Norman) and Blaine Mooers (OUHSC) were chosen as co-coordinators.
- Recruited additional members and submitted NSF MRI proposal for crystallization robotics.
- Second meeting September 23, 2009.
  - Meeting participants were from OU-Norman, OUHSC OMRF, OSU, Noble Foundation and CoMentis.
- Overall scope of group was expanded to include research groups who use other techniques besides X-ray crystallography. These include NMR, fluorescence spectroscopy, mass spectrometry and molecular modeling.
- NSF-MRI Grant funded for crystallization core facility at OU-Norman (Aug 2009).
- Crystallization facility up and running March 2010.

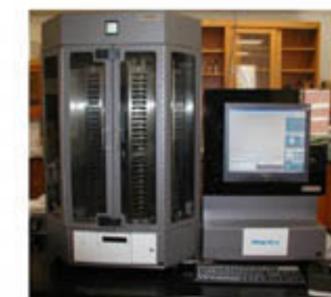
## Future Directions for OSBN

- Biennial Structural Biology Symposium.
  - The first is tentatively scheduled for the Fall 2010.
- Secure funding for a seed grant program to promote the initiation of protein crystallization projects in non-crystallography labs.
- Collaborate on the development of Core facilities at member institutions for the use of research groups involved in structural biology around of the state of Oklahoma.

## OU Macromolecular Crystallization Lab



TTP Labtech Mosquito nanoliter liquid handler.



Rigaku Desktop Minstrel imager and Gallery 160 plate holder.



Rigaku Alchemist II liquid handler.

For additional information and if you are interested in becoming a member:

- <http://chem.ou.edu/osbn>
- Contacts: Ann West ([awest@ou.edu](mailto:awest@ou.edu)), Blaine Mooers ([blaine-mooers@ouhsc.edu](mailto:blaine-mooers@ouhsc.edu)) or Len Thomas ([lmthomas@ou.edu](mailto:lmthomas@ou.edu))