

*X-Rays,
Crystals,
Molecules,
and*

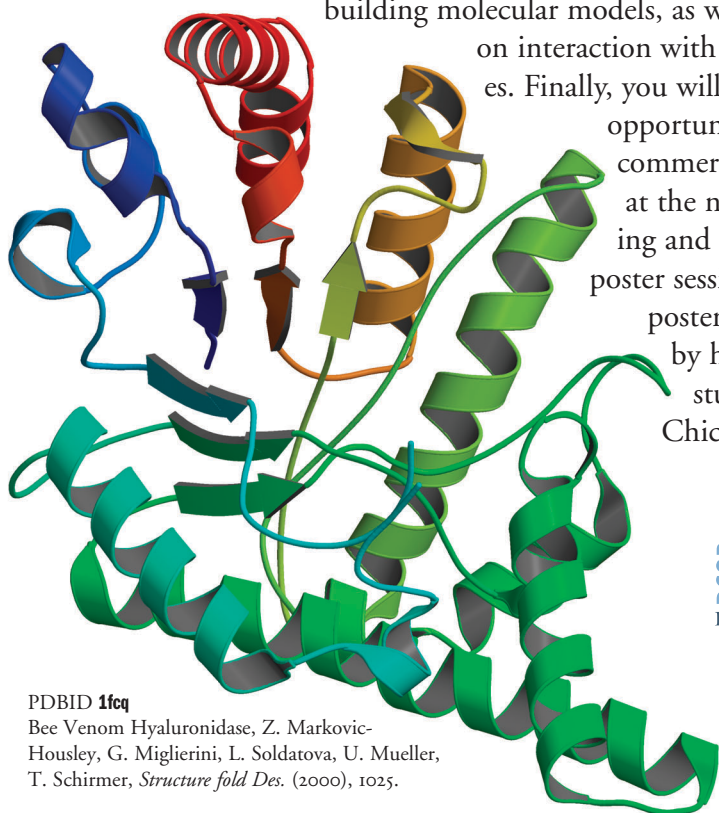
YOU

July 18th, 2004, Hyatt Regency, Chicago

Single molecules are the building blocks of life. Crystallography, the science that studies the structures of these molecules, is both fascinating and provocative, because it allows us to “see” these molecules and understand how they work. Once we know how molecules function, we can modify them to make them work better or we can try to fix them when they break. Crystallography has shown us that molecules are shaped in very special ways to get the job done. Understanding the shape of these molecules and how they interact with one another may hold the key to developing new medicines and materials.

Please invite several of your most promising students to accompany you and join us to share a day with scientists and their molecules. The day will include presentations on the general basics of crystallography, on the wealth of information derived from crystallography contained in the databases that store 3-dimensional structural results and examples of how you can use this information in your classroom. You will hear about existing programs involving high school teachers and students for the rapid prototyping of molecular models. There will be mini-workshops on growing protein crystals and

building molecular models, as well as hands-on interaction with the databases. Finally, you will have the opportunity to visit commercial exhibits at the national meeting and a scientific poster session including posters prepared by high school students in the Chicago area.



PDBID 1fcq
Bee Venom Hyaluronidase, Z. Markovic-Housley, G. Miglierini, L. Soldatova, U. Mueller, T. Schirmer, *Structure fold Des.* (2000), 1025.

The workshop, which includes lunch, will be free, but attendance is limited and pre-registration is required.

MORNING SESSION

Katherine Kantardjieff
California State University, Fullerton
“Crystallography: the Nuts and Bolts”

Karen Lipscomb
Cambridge Crystallographic Data Centre
“Small Molecule Building Blocks”

David Goodsell
The Scripps Research Institute
“The PDB and You”

Tim Herman
Milwaukee School of Engineering

Tommie Hata
The Pingry School
“SMART Teams: Students Modeling a Research Topic”

LUNCH

AFTERNOON SESSION

Alex McPherson
University of California at Irvine
“Lysozyme crystal growing workshop”

Tim Herman / David Goodsell / Karen Lipscomb
“Hands-on Model Building and Database Interaction”

COMMERCIAL EXHIBITS / POSTER SESSION

RCSB **PDB**
PROTEIN DATA BANK

ACA
American Crystallographic Association



www.ccdc.cam.ac.uk
Cambridge Crystallographic Data Centre

*X-Rays,
Crystals,
Molecules,
and*

YOU

REGISTRATION FORM

Send completed form to

Judith L. Flippen-Anderson
Protein Data Bank
Center for Advanced Research in Biotechnology
9600 Gudelsky Drive
Rockville, MD 20850

Fax: 301-738-6255

www.rcsb.org/pdb
flippen@rcsb.rutgers.edu

Local Contact:

Bernie Santarsiero
University of Illinois at Chicago
bds@uic.edu

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More information about the American Crystallographic Association Meeting (and a pdf copy of this registration form) can be found at www.uic.edu/orgs/aca2004/

TEACHER

NAME _____

SCHOOL _____

ADDRESS _____ STATE _____ ZIP _____

PHONE (INCLUDING AREA CODE) _____ E-MAIL _____

SUMMER CONTACT INFORMATION (ADDRESS, PHONE, OR E-MAIL) _____

COURSE(S) TAUGHT & GRADE LEVEL _____

STUDENTS

1. NAME _____

SUMMER CONTACT INFORMATION (ADDRESS, PHONE, OR E-MAIL) _____

COURSE TAKEN _____ GRADE LEVEL _____

2. NAME _____

SUMMER CONTACT INFORMATION (ADDRESS, PHONE, OR E-MAIL) _____

COURSE TAKEN _____ GRADE LEVEL _____

3. NAME _____

SUMMER CONTACT INFORMATION (ADDRESS, PHONE, OR E-MAIL) _____

COURSE TAKEN _____ GRADE LEVEL _____

4. NAME _____

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COURSE TAKEN _____ GRADE LEVEL _____

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