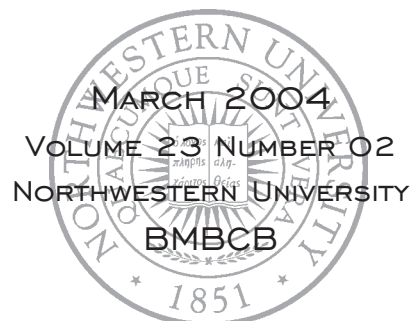


the cell



UPCOMING EVENTS

The Department of Biochemistry, Molecular Biology and Cell Biology Departmental Series

Thursdays at 12:30 PM
Pancoe Auditorium
2205 Campus Drive
For updates visit: <http://www.biochem.northwestern.edu/bmbcb-calendar.html>

Thursday, March 4
The Budding Yeast Centrosome: Novel Components and Conserved Regulators
Sue Jasperson
University of Colorado

Thursday, March 11
TBA (see website)

Thursday, March 18
TBA (see website)

Thursday, March 25
TBA (see website)

Pathway to the Professoriate

Monday, March 22
11:30 AM
Postdoc Peer Advice
Charlie Russell, Sandy Westerheide & Tom Tompson

CONTENTS

Feature Story	1
Upcoming Events	1
Honors & Awards	2
Announcements	2
Submissions	2
Employment Opportunities	3
Desired Positions	5

BMBCB FEATURES STRUCTURAL BIOLOGY NMR FACILITY

Ben Ramirez
NMR Facility Manager

The Structural Biology Nuclear Magnetic Resonance (NMR) Facility is a university-wide shared resource available to anyone in the life sciences community that wishes to pursue biomolecular NMR studies. The facility features a 600 MHz Varian INOVA NMR spectrometer capable of conducting modern biomolecular NMR experiments. We also have work stations for doing data analysis and visualization.



As manager of the facility, one of my most important duties is to make this technique accessible to all. Do not feel hesitant if you have no prior knowledge of or training in NMR spectroscopy. My job is to train individuals how to operate the instrument properly. Also, I regularly assist users in data collection as well as data processing and analysis. The Varian software is user-friendly in general. Varian also maintains a library of modern biomolecular NMR pulse programs (or experiments) such as those used to determine the structure of a protein. This includes many standard experiments for studying nucleic acids.

The type of research work that is supported ranges from simple 1D spectra of biomolecules to the complete three-dimensional structure determination of macromolecules or macromolecular complexes. Such studies generally require material that is highly purified and soluble in the millimolar range. High-resolution structural studies generally require that the material be isotopically-enriched. For proteins, this can be achieved easily by expressing the protein in bacteria. Techniques have also been developed for the isotopic labeling of nucleic acids.

With a relatively small investment of time and money, one can address a variety of research questions. A simple spectrum will often indicate whether a protein is folded or unfolded. One can also examine if a macromolecule interacts with or binds to small molecules, metal ions, or other macromolecules. Aggregation or oligomerization can also be assessed. One of the advantages of NMR spectroscopy is that these studies are done in solution, at or near

...continued on page 2


FEATURE

...continued from page 2

physiological temperatures, in a wide variety of buffer conditions. Pursuing NMR studies may require a fair amount of effort, but I think that most people who have taken the time to prepare their sample and “stick-it” in the spectrometer have come away learning something new about their molecule.

I invite anyone interested in utilizing NMR spectroscopy to please visit the facility located on the ground floor of NU's Technical Institute, call (847) 467-1222 or send an email to b-ramirez@northwestern.edu. If you come by the facility, you can see the instrument and the fresh paint on the walls and floor. In addition to our facility, researchers at Northwestern will also have access to a new Chicago-area Structural Biology NMR Facility that is near completion at the University of Illinois-Chicago. A brand new 800 MHz NMR spectrometer will be installed there later this year. In addition, funds have been secured for the purchase of a state-of-the-art 900 MHz NMR spectrometer that will also be sited at this new facility. With these new instruments, we will be in a much better position to tackle larger and more complex problems. So, as you can see, here in Chicago we will be embarking on sort of the golden-age of biomolecular NMR. I hope that you can find a way to avail your research work of these wonderful resources because really everyone in the community reaps the benefits.

SUBMISSIONS

 **The Cell** is published monthly by the Department of Biochemistry, Molecular Biology and Cell Biology at Northwestern University.

Editor: Nick Woell

Assistant Editor: Chris Rathjen

Please send all comments, questions and submissions to:

The Cell
Northwestern University
Hogan Hall 2-100
2205 Tech Drive
Evanston, IL 60208-3500
847.491.5068
bmbcb@northwestern.edu

ANNOUNCEMENTS



The Laboratory Adventures in the Biological Sciences (L.A.B.S.) program will be held this year on April 24, May 1, May 8 and May 15. L.A.B.S. is a fun, hands-on program at NU designed for grade-school children (grades 1 through 7) to challenge and excite interests in laboratory-based biology. The participants work in small groups with advanced undergraduate student-teachers to perform experiments that illustrate the excitement and wonder of science. This year, L.A.B.S. offers new laboratory exercises on biotechnology, molecular biology, genetics and cell biology. L.A.B.S. is held in the Tech Institute Building over four consecutive Saturdays, two sessions per day. Sessions will be held from 10am-noon and 1:30pm-3:30pm. For further information or for an application, please visit: <http://www.biochem.northwestern.edu/LABS/home.html> or contact Kate Veraldi, k-veraldi@northwestern.edu.

Professor Ted Jardetzky and his wife Annelise Barron are happy to announce the birth of their new baby girl, Katrin Elizabeth Marjorie Jardetzky.

Sumit Bhattacharyya and his wife Mitra are happy to announce the birth of their new baby girl, Pratiksha. Sumit is a post-doctoral fellow in the Linzer Lab.

Tim Cloutier and his wife Jodi are happy to announce the birth of their new baby boy, Tyler. Tim is a post-doctoral fellow in the Widom Lab.

HONORS AND AWARDS



Professor Robert King was honored by former student Pamela Mulligan through an article in Genetics magazine entitled, “Robert C. King: An Appreciation of His Work.” To read the tribute, celebrating King's 75th birthday, please visit: <http://www.genetics.org/cgi/content/full/165/3/939>.

Professor Carole LaBonne has been honored with a General Motors Research Scholar Award. This prestigious accolade recognizes five outstanding investigators who are committed to careers in cancer research.

EMPLOYMENT OPPORTUNITIES



A list of available and desired jobs relevant to the Department of Biochemistry, Molecular Biology and Cell Biology.

Assistant Chairperson

Northwestern University – Department of Biochemistry, Molecular Biology and Cell Biology

The Department of Biochemistry, Molecular Biology and Cell Biology, Northwestern University, invites applications for the position of Assistant Chairperson. The successful candidate for this highly visible position will have responsibility for: preparation and submission of grant proposals for shared instrumentation, facilities, and training programs; developing and overseeing the department's annual budget; strategic planning analysis; overseeing renovations and the design and construction of the Department's new research building; assisting in set-up of new faculty; identifying development opportunities with industry; coordinating facilities and building management; overseeing research and building safety; supervision of office staff; departmental space allocation and usage; and management of the day-to-day operations of the Department. Candidates must have a Ph.D. in life sciences, excellent verbal and written communication skills, some administrative experience, and must enjoy working with people. The Department has a collegial atmosphere and is internationally recognized for its innovative research and training programs. This is a non tenure-track, 11 month position at the rank of lecturer. It offers an outstanding opportunity to have major and lasting impact on life sciences research, and for personal advancement. Deadline for receipt of completed applications is March 19, 2004. Candidates should send a curriculum vitae and arrange for three letters of recommendation to be sent to:

Chair
Department of Biochemistry, Molecular Biology, and Cell Biology
Northwestern University
Evanston, IL 60208-3500

Post-doctoral Fellowship for Summer 2004

Loyola University Chicago – Maywood, IL

The Department of Cell Biology, Neurobiology and Anatomy at Loyola University is offering a Post-doctoral fellowship in the laboratory of Mary Druse Manteuffel, Ph.D. The research topic is Neuroprotection of Ethanol-Exposed Fetal Serotonin Neurons. Candidates must have a Ph.D. or M.D. in a related field and must be a U.S. citizen. Please send a curriculum vitae and three references along with a short letter describing research interests and career goals to:

Mary Druse Manteuffel, Ph.D.
Department of Cell Biology, Neurobiology, and Anatomy
Loyola University Chicago

2160 South First Ave.
Maywood, IL 60153
Phone: (708)-216-3370
Fax: (708)-216-8523
Email: mmanteu@lumc.edu

Postdoctoral Position- Stem Cell Biology and the Lung

Duke University Medical Center – Durham, NC

A postdoctoral position is available for a qualified individual interested in studying the biology and pathophysiology of a hematopoietic stem cell function, and their associated conditioning regimens, in the lung. Emphasis will be placed on examining the immuno-toxicological effects of the chemotherapy regimens used for myeloablation as well as the role stem cells play in this process. This research is being directed by Rodney J. Folz, M.D., Ph.D., Associate Professor of Medicine and Assistant Research Professor of Cell and Molecular Biology, Duke University Medical Center. This position is funded by NIH. To be considered for this position, please send a CV, a cover letter listing research interests and long term objectives, and the names and contact information for three references to:

Dr. Folz
Box 2620, Duke University Medical Center
Durham, NC 27710
Or by e-mail to rodney.folz@duke.edu
Office Phone: (919) 684-3539

Microbiologist/Bioinformatics Specialist

Integrated Genomics – Chicago, IL

Integrated Genomics is seeking a microbiologist and/or bioinformatics specialist to participate in genome and systems analysis projects in a fast-paced, team-orientated, informal high-tech company. Ideal candidates should be enthusiastic and detail-oriented with an appreciation of microbial metabolism and physiology, with a solid background in biology and/or bioinformatics, preferably in an industrial setting. Successful candidates must actively participate and embrace the opportunity to create and develop commercial biological software tools and services for a small Chicago-based company. Responsibilities include working within an informal R&D setting related to annotation and data-mining of large phylogenetic and genomic, functional data sets; providing support for various ongoing client genome projects; providing support for internal informatics projects including development of internal company database and computational modeling approaches; providing timely and effective feedback to the management team. Requirements include a degree in life sciences and a significant publication record. Experience in industry (pharmaceutical, biotechnology, or metabolic engineering), experience with developing and managing HT biological datasets, and knowledge of Unix and scripting languages (Perl/Python), and understanding of computational biology tools and biological methods for similarity searches, gene expression analysis and ORF identification are desirable. Integrated Genomics offers a competitive salary and comprehensive benefits package. Please apply at:

<http://www.integratedgenomics.com/>

Scientist I/II, Analytical Biochemistry (Protein Aggregation)

RS&A – Sedona, AZ

RS&A is actively seeking qualified Scientists [PhD/MS] for the position of Scientist I/II in the Characterization Group within the Analytical Biochemistry Department of our Biopharmaceutical client company. The successful candidate will be responsible for analytical method development and structure characterization of biopharmaceutical products, such as humanized monoclonal antibodies, recombinant proteins, and vaccines. The candidate needs to have expert knowledge of biophysical and biochemical techniques in protein analysis. The candidate will also be expected to be familiar with SOP, GLP and GMP requirements during biopharmaceutical product development. He/she will work on complex problems where data analysis requires an evaluation of multiple variables. The candidate needs to have demonstrated success in an industrial setting, technical proficiency, scientific creativity, and an independent line of thought. The candidate will advise management on new research and development directions and present scientific data to both internal audiences within the company and external scientific colleagues. Finally, he/she must be able to work in a team structure and interface with different research and development departments. This position requires at least a Ph.D. or equivalent in Chemistry, Biochemistry or a related field with 0 to 5 years of relevant experience, preferably working in a bioanalytical environment in an industrial setting. A thorough understanding of analytical ultracentrifugation and light scattering techniques used for protein aggregation characterization is required. Familiarity with: circular dichroism spectroscopy, differential scanning calorimetry, mass spectrometry, liquid chromatography, Edman sequencing, peptide mapping, carbohydrate analysis, method development, and validation is a plus. Supervisory and project management experience is a plus. Strong interpersonal skills, outstanding verbal and written communication skills are essential. If you have an interest in this or other opportunities, please email your resume as an attached file or mail/FAX your CV/resume to:

Basirah Nur Abdu Al'Basit
RS&A Scientific Search
P.O. Box 2337
Sedona, AZ 86339-2337
USA

Postdoctoral Training Position

Loyola University Medical Center – Maywood, IL

A postdoctoral training position is available immediately in the Chicago region. The research is on mechanisms underlying alcohol-induced neurodegeneration using rat brain slice cultures and human cell lines. Familiarity with biochemical & neuroscience techniques, including molecular biological experience, is considered important. The position is funded by an NIH training grant awarded to the Loyola Medical Center Alcohol Research Program (www.luhs.org/depts/bsti/arp.html), and the salary is consistent with NIH guidelines. US citizenship or permanent residency is required, and underrepresented minority applications are encouraged. Forward CV, cover letter describing

experience and goals, and names/addresses/telephone numbers of three references to:

Dr. Michael A. Collins
Department of CBNA, Biochemistry Division
Loyola University Medical Center
2160 South First Avenue
Maywood, IL 60153 USA
E-mail: mcollin@lumc.edu
tel: (708)216-4560
fax: (708)216-8523

Postdoctoral Position

Sidney Kimmel Cancer Center – San Diego, CA

Professor Michael McClelland, Ph.D., is looking for a postdoctoral fellow to use global methods, including microarrays, to study gene regulation in Salmonella in the gut and in the environment outside the host. The position is available immediately but he can wait up to six months for a suitable candidate. He also has a position available for a person to run the small Genomics Core at SKCC. If interested, please contact:

Michael McClelland, Ph.D.
Professor, Director of Cell and Molecular Biology, Sidney Kimmel
Cancer Center
10835 Altman Row
San Diego, CA 92121
Phone: 858 450 5990
FAX: 858 550 3998

Research and Teaching Laboratory Coordinator, Biomedical Engineering

Illinois Institute of Technology

The basic functions of this position are: 1.) to manage a biomedical engineering research laboratory including teaching and supervising new students as well as performing independent experiments; 2.) to maintain, organize and manage the undergraduate teaching laboratories in biomedical engineering. Duties and responsibilities include: assisting in development of experimental modules; performing independent research experiments; assisting other lab personnel participating in data collection, analysis and data representation; instructing new students (undergraduate, graduate or high school) in basic laboratory procedures including safety and equipment use; coordinating the maintenance of equipment and the stocking of supplies for the research lab; performing experiments in neural engineering (vision): specifically, retinal function in normal and diseased states (vascular occlusion and diabetic retinopathy); coordinating the maintenance of equipment and the stocking of supplies for the UG teaching lab; and organizing and supervising UG and Graduate research and teaching assistants with the oversight of a faculty instructor. Qualifications are a B.S. in biomedical engineering and 3 years experience in a research lab or M.S. in biomedical engineering and one year additional research experience; experience in maintaining basic equipment including centrifuges, spectrophotometers, pH meters, or basic electronics (amplifiers,

computers); excellent analytical and problem solving abilities; and the candidate must be highly organized. Experience in whole animal experiments is preferred. To apply, please send a Curriculum Vita and the names and contact information for two references to:

jobs@iit.edu

Make sure to include the job position title in the email.

Medical Writer

NeoPharm, Inc. – Lake Forest, IL

NeoPharm, Inc. is a publicly traded biopharmaceutical company dedicated to the development and commercialization of new and innovative drugs for the treatment of cancer. With a broad portfolio of compounds in various stages of development, NeoPharm continues to grow. They offer a highly competitive compensation and benefits package and a great working environment. For additional information, see their website at www.neopharm.com. As a Medical Writer the successful candidate will provide broad medical writing support for drug development programs in oncology. Working as part of a multidisciplinary team, he/she will prepare abstracts, posters and presentations for scientific meetings; develop and review clinical documents, such as clinical trial protocols, investigator brochures and sections of IND, NDA and BLA applications; and assist in the preparation of manuscripts for publication in peer-reviewed journals. Responsibilities include, but are not limited to, preparing well written, clear and accurate documents; interpreting and reviewing data; interacting with team members such as project physicians, statisticians and clinical research personnel; facilitating the document review process with both internal and external reviewers; keeping abreast of relevant scientific studies and literature. The ideal candidate for this full-time position will have an advanced degree in a biomedical field with 2-3 years experience in biomedical/clinical writing in the pharmaceutical or biotechnology industry or an academic research setting. A strong candidate will have a bachelor's degree in life sciences and 4-5 years medical writing experience preparing abstracts, posters, presentations and publications. They must be able to work both independently and as part of a team; must be detail oriented and capable of managing multiple projects simultaneously; and must be proficient with Microsoft Word and PowerPoint. For immediate consideration, please mail, fax or e-mail your resume and cover letter in strict confidence to:

HR Department
NeoPharm, Inc.
150 Field Drive, Suite 195
Lake Forest, IL 60045
Fax: (847)295-8854
E-Mail: HR@neopharm.com

Xianwu Zheng is seeking a postdoctoral position. His doctoral work was in the field of rice genomics, physical mapping and gene cloning. His international research team successfully finished the whole rice genome sequence (Science, 2002, 296: 79-92). During his graduate years, he gained experience and expertise in integration of physical mapping with genetic mapping, cDNA-AFLP, QTL mapping, real-time RT PCR, yeast two hybrid system and other common molecular techniques. His current postdoctoral research at the University of California (Irvine) involves cloning and functional analysis of genes implicated in the signaling pathway of serotonin biosynthesis by using *C. elegans* as a model organism. As much as he would like to continue his current line of research, he would also like to explore other opportunities that can more closely match his research interest and his career development. He is highly motivated and a quick learner. His strong background in mapping and sequencing, functional genomics and protein-protein interaction makes him an excellent candidate. For more information, please contact:

Xianwu Zheng
3901 Parkview Lane, #13D
Irvine, CA 92612
Phone: 949-679-5721
E-mail: xwzheng1967@hotmail.com

Judy Panickaveetil is seeking a position as a Research Technologist/Senior Research Technologist. She is currently in her second year of work as a Research Associate for New Horizons Diagnostic Corporation, Columbia, MD. She wishes to relocate to the Evanston area because she was recently married and her husband is currently a postdoc at Northwestern. She received her BS Degree with a major in zoology and a minor in chemistry and botany in May 2002 and her MS Degree in Biotechnology in July 2002. She has knowledge, skill, and experience in microbiology, immunology, biochemistry/enzymology, molecular biology, molecular genetics, plant biotechnology, and many more areas. For more information, please contact:

Judy Elizabeth Panickaveetil
725 Noyes Street
Evanston, IL 60201
Phone: 410-992-9357
E-Mail: sajimc@chem.northwestern.edu

NOW ACCEPTING: EVENT ANNOUNCEMENTS, ARTICLE IDEAS, EMPLOYMENT OPPORTUNITIES, POSITIONS WANTED AND ANNOUNCEMENTS.

The Cell is published monthly by the Department of Biochemistry, Molecular Biology and Cell Biology, at Northwestern University.

If you think you would enjoy receiving the Cell or would like to be removed from the mailing list, please refer to the following:

The Cell

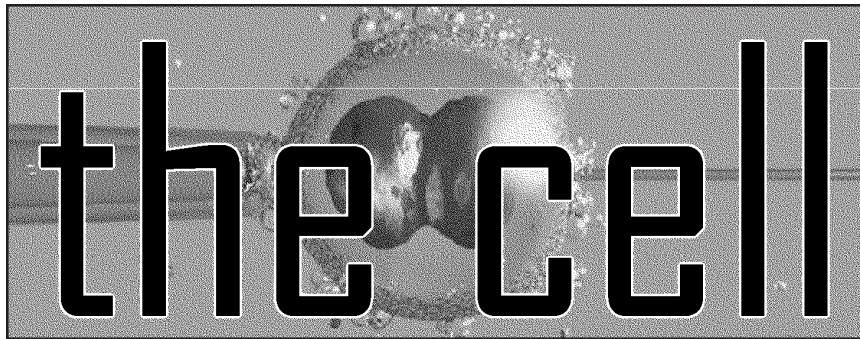
Northwestern University
Department of Biochemistry, Molecular Biology and Cell Biology (BMBCB)
2205 Tech Drive, Hogan Hall 2-100
Evanston, IL 60208-3500

Voice: 847.491.5061

Fax: 847.467.1380

Email: bmbcb@northwestern.edu

Website: www.biochem.northwestern.edu



NORTHWESTERN UNIVERSITY
DEPARTMENT OF BIOCHEMISTRY, MOLECULAR BIOLOGY & CELL BIOLOGY
2205 Tech Drive
Hogan Hall, Room 2-100
Evanston, IL 60208-3500

Voice: 847.491.5061

Fax: 847.467.1380

E-mail: bmbcb@northwestern.edu

World Wide Web: <http://www.biochem.northwestern.edu>