

the cell

JANUARY-FEBRUARY 2005

VOLUME 24 NUMBER 1

NORTHWESTERN UNIVERSITY

BMBCB

1851

UPCOMING EVENTS

BMBCB Departmental Seminar Series: Faculty Search

Thursdays at 12:30 PM
Pancoe Auditorium
2205 Campus Drive
For updates visit: [http://
biochem.northwestern.edu/news.html](http://biochem.northwestern.edu/news.html)

Thursday, February 3
*Visualizing Ribosome Movement Using
FRET*
Dr. Robyn Hickerson
University of California, Santa Cruz

Monday, February 7
(Searle 1-421)
*Chromatin relocalization as a mechanism
of transcriptional regulation*
Dr. Jason Birkner
University of California, San Francisco

Thursday, February 17
*Polarity Circuits in Migrating and Dividing
Cells*
Dr. Chris Janetopoulos
Johns Hopkins

Thursday, February 24
*RecBCD enzyme: a molecular machine
whose activities are controlled by the
recombination hot spot Chi*
Dr. Maria Spies
University of California, Davis

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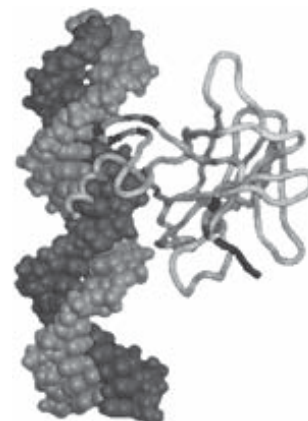
SEARLE FUNDS GRANT TO ADVANCE PROTEOMICS RESEARCH IN REGION

Nick Woell

Editor

Advancing Chicago-area universities in the pioneering field of proteomics, the Searle Funds at The Chicago Community Trust have awarded a \$1.5 million grant to the Chicago Biomedical Consortium (CBC) for the Proteomics/Bioinformatics Demonstration Project. Researchers from Northwestern University, the University of Chicago and the University of Illinois at Chicago (UIC) are combining state of the art technology and analytical techniques to explore one of the most innovative areas of science.

"Proteomics is the new frontier for molecular biology and medicine," John Evans Professor of Biology and NU's CBC liaison Richard I. Morimoto tells the NU NewsCenter. "It is



...continued on page 2

NSF GRANT TO INCREASE MINORITY GRADUATE ENROLLMENT IN SCIENCES

In an effort to promote minority graduate enrollment in science, technology, engineering and math (STEM), the National Science Foundation has awarded a \$7.6 million grant to Purdue University in partnership with Northwestern University and Indiana University.

In addition to increasing the number of minority STEM students entering graduate study, the project Midwest Crossroads AGEP (Alliances for Graduate Education and the Professoriate) aims to increase retention and graduation rates, as well as promote PhD alumni to enter academia. The partnership of universities hopes to triple the number of minority STEM PhD recipients and place more than 70 percent in academia over the next five years.

The two principle focuses of the program are to increase recruiting efforts at undergraduate universities and to designate AGEP professors and scholars as mentors committed to guiding minority STEM PhD students.

Northwestern will hold a workshop in 2005 to prepare advanced minority PhD students for job searching in academia.

Grant for Proteomics Research

...continued from page 1

a shift to wellness. If we can understand proteins and their interactions, we can use proteins to tell us how a person's health is at the molecular level — long before symptoms appear. By listening to these important messages we can take action before disease progresses and tailor drugs to meet individual needs."

Part of the Searle Funds grant will provide area scientists with equipment specially designed to create and analyze the vast amounts of data used in proteomics research. Housed at UIC will be a Fourier Transform Mass Spectrometer (FTMS)—the most powerful tool for studying the structures of proteins and other biomolecules—in addition to computing equipment geared for high magnitude data analysis. This equipment will make the facility among few in the country with these capabilities. The FTMS is slated to available by this summer.

"Studying proteins in more advanced life forms is very complicated," UIC's CBC liaison and professor of physiology and biophysics Brenda Russell informs the NU NewsCenter. "In a human, one gene might make 50 different protein forms, and those proteins can be chemically changed and modified in various ways. In a disease such as heart failure, there are subtle changes that alter protein structure and function, resulting in an inability of the heart to pump blood efficiently. The FTMS will enable us to identify these subtle changes and provide information important in the diagnosis and treatment of major killers such as heart disease."

In addition to the CBC's research goals, the project is geared to provide opportunities for the region's scientists and public in several ways. According to the NU NewsCenter, "First, the planning process has brought together scientists and institutional leaders from the three universities in a common effort that will breed excellence in future centers and programs. Second, by establishing proteomics and informatics as the initial target, the consortium has emphasized the value of making high-resolution scientific instrumentation and interactive tools and resources accessible to a wide range of users. Third, the activities of the CBC will create collective resources and intellectual excitement that will attract faculty and students to the region and help retain them."

Each of the three universities will contribute an additional \$150,000 to the Proteomics/Informatics Demonstration Project for a total budget of nearly \$2 million.

UPCOMING EVENTS

...continued from page 1

Pathway to the Professoriate

University Service and Committee Participation

Greg Beitel & Robert Lamb

Monday, February 14

12:00-1:00PM

Pancoe 1401

Biophysics Seminar

NMR-Based Screening in Lead Discover and Optimization

Phil Hajduk

Abbott Laboratories

Monday, February 7

4:00 PM

Pancoe Auditorium

Molecular Biology Club

Using Salivary Glands to Study the Cell Biology of Hedgehog Signaling

Barbara Sisson, Holmgren Lab

Wednesday, Feb 2nd, 5:00PM

Cook 3118

A Note From Corporate Express



University Services and Corporate Express have re-negotiated their relationship. The Office Stores Program will continue to partner with Corporate Express and effective February 1, 2005, Corporate Express will be providing Northwestern University with lower pricing.

In addition, please note that effective February 1, 2005 the 4 digit NU item numbers will no longer be accepted in E-way. A NEW Purple Pages Shopping List will be available on E-way and you can either select your items from that list or perform a search to find the item you want to order.

E-way has a new feature that allows you to view the delivery status, back ordered items, in transit, and returned items by using the submitted tab of the My Orders feature. By clicking on the Order Number link, E-way will retrieve the most current representation of the order and display it real-time.

The Order Status window includes all of the standard order information as well as order status time stamp, item number ordered, item number shipped, description, quantity ordered, quantity in transit, quantity backordered, quantity cancelled, quantity returned, and unit price.

Please feel free to contact us if you have any questions. Thank you for your continued support of the Office Stores Program.

Ellen Barnes, Manager, 1-3274

Debbie Miller, CE Account Manager. 630-783-7096

Meet the 1st Year IBiS Students

Shou-Yen (Jack) Lin

Taiwan



Jack is contributing to a project in the Jardetzky Lab this quarter investigating structure/function relationships of activin and its receptor. He received his undergraduate degree in Immunology from the University of Toronto, where he also conducted research in reproductive biology. This interest led Jack to enroll in the Neurobiology & Physiology Masters Program at Northwestern, during which he decided to join the IBiS Program. Jack aims to remain in academia after receiving his Ph.D. "Being able to educate and make a difference in people's lives is something very satisfying to do."

Molly Nease

Cincinnati, OH



Molly is studying embryology and biochemistry in the Horvath Lab this quarter. She received her undergraduate degree in molecular genetics from Ohio State University. There she conducted research in a microarray lab where she also worked as a research technician. Molly says she is still weighing the pros and cons of academic and industrial research before she decides what to pursue beyond Northwestern. She has been interested in science all of her life, contemplating both fundamental questions and those that more readily apply to humans such as those concerning disease.

Shad Thaxton

Las Animas, CO



Shad is studying nano-bio diagnostics in the Mirkin Lab. After receiving his undergraduate degree in biology from the University of Colorado, Boulder, he earned his MD from Northwestern. Shad's main interest is biomedical research. After finishing his residency and his Ph.D. Shad hopes to practice medicine as well as to run a productive lab.

Meet the 1st Year IBiS Students

Karen Kantor

Chicago, IL



Karen is a rotation student in the Horvath Lab studying chromatin remodeling. She worked as a research technician in the Lamb Lab for two and a half years after receiving her undergraduate degree in microbiology from Indiana University, Bloomington. Although Karen has not made up her mind about what path to pursue after getting her Ph.D. from Northwestern, she is fascinated with the knowledge science has to offer and wants to contribute it.


Sammuel Seaver

London, England



Sam is studying computational biology in the Hatzimanikatis Lab this quarter. After receiving his undergraduate degree in biochemistry from the University of Durham, he earned his Masters in Bioinformatics from the University of London. Then he came to Northwestern to work as a bioinformatician in the Takahashi Lab, after which he worked in the Radhakrishnan Lab creating software that calculates interfaces between proteins. Beyond Northwestern he would like to enjoy the freedom of academic research and intends to continue investigating complex systems. "It applies to a lot of science...studying how many things interact to form a complex system."

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

GENERAL ANNOUNCEMENTS

 Congratulations to Dr. Alec Wang and his wife Hong Su who gave birth to a daughter, Sophia, on December 16.

Congratulations to Dr. Aparna Bhatnagar and her husband Sid Kumar. Aparna gave birth to a daughter, Sasha, on December 8.

ISO ANNOUNCEMENTS



Student Seminar
When: FRIDAY Feb 11, 11:30 am
Where: Cook 3118

Come hear talks by Angie Pannier of the Shea lab and Suzi Ziegenhorn of the Holmgren lab while enjoying lunch with your fellow students.


Donations will be collected for the tsunami disaster relief.

Bagel Break
When: Friday Feb 18, 3:30pm
Where: Cook 3118

Enjoy snacks and drinks- bring the whole lab! Students, faculty, post-docs, and staff are invited.

CBB Masters Program

CBB : Computational Biology & Bioinformatics Program

 The new Masters Program in Computational Biology and Bioinformatics is being administered through the Computer Science department. Dawn Graunke has come on board as the Assistant Director of program. Should BMBCB Faculty receive any applications to the Hogan address, please forward these to Dawn's attention:

Dawn M Graunke, PhD - Assistant Director
Computational Biology and Bioinformatics (CBB)
1890 Maple Avenue, Suite 300
Evanston, IL 60201-3159
(847) 467-1972
d-graunke@cs.northwestern.edu

NEW PEOPLE



Please extend a warm welcome to these individuals who have recently joined our department:

Anne-Katrine Bonde is a new Research Technician in the Sontheimer Lab.

Ingrid Jordens is a new Post-Doctoral Fellow in the Hicke Lab.


Thomas Kraus is a new Post-Doctoral Fellow in the Horvath Lab.

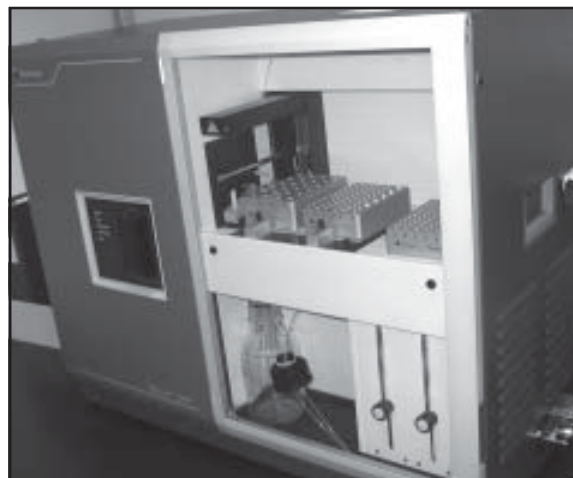
Sujatha Kuduvayur is a new Post-Doctoral Fellow in the Carthew Lab.

Aisha Kung is a new Research Technician in the Goldberg Lab.

Judy Panickaveetil is a new Research Technician in the Lamb Lab.

Keck Biophysics Facility

 The Keck Biophysics Facility is happy to announce the addition of a Biacore 2000:



This instrument is on loan from the Chicago campus and will be located in the Keck Facility for approximately one year. Please contact us with any questions or to schedule a training session <http://www.biochem.northwestern.edu/Keck/keckmain.html>

Grant Opportunity

Pilot Project Grant Proposal Opportunity
Alzheimer's disease Core Center of the Cognitive Neurology and
Alzheimer's disease Center

The Alzheimer's disease Core Center (ADCC) of the Cognitive Neurology and Alzheimer's disease Center (CNADC) at Northwestern University is supported by funding from the National Institute of Aging (NIA). The Center funds an Alzheimer's disease Pilot Grant Program as part of its activities. Funding solicitations are made in January. The proposed research project must be in some area relevant to understanding Alzheimer's disease. The Principal Investigator must hold a faculty or research appointment at Northwestern University. Students, fellows, and residents will not be eligible for these awards. Pilot grants will typically be limited to one year of support, beginning July 1 and ending June 30 of the following year. Projects with meritorious progress can apply for a second year of funding. The maximum level of support will be \$30,000 annually. Any one investigator will be eligible only once for pilot project support unless a convincing case can be made that the proposed pilot project constitutes a significant departure from the previous pilot project funded through the ADCC. No indirect costs will be provided as part of the awards. Proposals selected by the internal review committee will be forwarded to the NIA. Funding is dependent on NIA approval. It is anticipated that two \$30,000 Pilot Research Projects will be funded annually. Applications will be due February 15, 2005. Electronic versions of the form pages can be downloaded at <http://www.northwestern.edu/orsp/forms.html>. Please submit completed applications in electronic form to Margaret Zonca at cnadc-temp@northwestern.edu. For more information contact:

Dr. John Disterhoft
(312) 503-7982
jdisterhoft@northwestern.edu

EMPLOYMENT OPPORTUNITIES



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

Tenure-track Assistant Professor Faculty Positions in Entomology and Plant Genetics
University of Wisconsin - Stevens Point

The University of Wisconsin-Stevens Point Biology Department, recipient of the UW Regents Teaching Excellence Award, offers two tenure-track, nine-month faculty positions in Entomology and Plant Genetics beginning August 2005. Responsibilities include teaching introductory biology and specialty courses, research involving undergraduates, student advising, and department service. A

commitment to undergraduate education is required and demonstrable teaching and research experience preferred. Ph.D. in relevant area and breadth of training commensurate with teaching in a quality undergraduate program are required. Postdoctoral research, publications, grant history, and educational creativity are viewed favorably. The department is committed to the enhancement of faculty, student, and curricular diversity. For the position of entomologist, teaching assignment will include introductory animal biology (biology 160) and general entomology (biology 367/567). Research and other teaching specialty areas open and all considered. For the position of plant geneticist, teaching assignment will include introductory courses in plant biology (biology 130) and non-majors biology (biology 101), and genetics (biology 210). Appointment at assistant professor and salary will be based on qualifications. Application must include: (1) curriculum vitae, (2) statement of teaching philosophy, (3) statement of research interests, (4) three letters of recommendation and (5) copies of undergraduate and graduate transcripts. Review of applications begins January 24th until filled. For more information contact:

Dr. Robert Bell, Chair
Biology Department, University of Wisconsin-Stevens Point
Stevens Point, WI 54481-3897
Phone (715) 346-2074
Fax (715) 346-3624
rbell@uwsp.edu

Research Scientist - Biological Screening
Abbott Laboratories - Abbott Park, Illinois

Abbott Laboratories is searching for a Research Scientist. Working as part of a larger team of scientists in a fast-paced, multi-disciplinary environment the successful candidate will be responsible for developing and implementing a myriad of cell-based assays to identify and characterize lead compounds for drug discovery. The primary research focus will be on high content screening and functional cell-based assays. This challenging position involves intensive collaboration and communication with scientists working on all aspects of drug discovery research in multiple therapeutic areas around the world. Requirements are M.S. with 3-5 years experience or Ph.D. with 1-3 years of postdoctoral experience in cell biology, biochemistry, pharmacology, or related field. A track record of success in one or more of the following is highly desirable: cellular pathway and/or high content screening; GPCR and ion channel assay development and screening; GPCR translocation technologies; cell-based image analysis; siRNA methodology; invention or development of novel screening methods. Expertise in mammalian cell culture is a necessity. The successful candidate must also be able to multitask and adapt to changing priorities. Excellent communication and presentation skills and a strong publication record reflecting scientific creativity are desirable.

David J. Burns, PhD
Sr. Project Leader
Dept. R4PN, Bldg. AP10-1
Abbott Laboratories
100 Abbott Park Road

Abbott Park, IL 60064-6099
Fax: (847) 935-4200
Phone: (847) 937-5203
david.j.burns@abbott.com

Engineering

Exponent has position opportunities that include biomechanics, vehicles, materials science, mechanical, electrical, thermal, and civil engineering. Exponent is a leading independent consulting firm providing solutions to complex engineering and scientific problems. Exponent, with its full-time staff of 675 located in 17 offices throughout the nation, in 70 scientific and engineering disciplines, combines unparalleled technical expertise with the ability, when necessary, to focus this knowledge in extremely short time frames. Our multidisciplinary team of scientists, physicians, engineers, and business consultants will perform either in-depth scientific research or analysis, or very rapid-response evaluations, to provide our clients with the critical information that both day-to-day and strategic decisions can require. All of these positions require an advanced degree such as an M.S., (Ph.D. preferred.) in related fields such as Bioengineering, Mechanical Engineering, Civil Engineering, and Electrical Engineering with exemplary academic achievement in undergraduate and graduate coursework. Outstanding verbal and written communication skills are also required as are demonstrated capabilities in the areas of analytical, computational and experimental mechanics, along with research experience. Candidates must be able to travel with little notice. Please apply on line at:

www.exponent.com

Microbiologist Folsom Lake College – Folsom, CA

Folsom Lake College is seeking an outstanding individual who is interested in developing new microbiology curriculum and related programs in conjunction with setting up microbiology laboratory teaching facilities in a new science building that will open fall 2005. If you or someone that you know is interested in this opportunity please visit the website: www.losrios.edu. Click on Job Openings and follow the links to the job description and application for Folsom Lake College Biology position #0002923, closing date February 8.

Sherry Rogers
Professor of Biology
RogersS@flc.losrios.edu

Post-doctoral Position University of Texas – San Antonio, Texas

Infectious Diseases laboratory at the University of Texas Health Sciences Center at San Antonio seeks post-doctoral fellow to study Candida fungal pathogenesis using molecular biology, cell biology, genomic,

and proteomic approaches as part of an active mycology research group. Our laboratory is studying the secretion of virulence-associated proteins in *C. albicans*, identification of novel secretory proteins involved in pathogenesis, and novel markers of invasive fungal infections. Ph.D in biological sciences and a strong research background, preferably with yeast cell biology and/or functional genomics, is required. The San Antonio Center for Medical Mycology is a collaborative group of more than 11 investigators with a diverse and broad expertise in mycology and more than \$16 million in active support. UTHSCA and the Audie Murphy VA Medical Center is an equal opportunity employer. For more information contact:

Samuel Lee
Samuel.Lee@yale.edu

Sara Falcon, a senior undergraduate student at Northwestern is searching for a research assistantship. She is applying to medical school this year and will be taking a year off between undergraduate and medical schools. She is looking for employment that will assist her with the medical school admissions process. For any available positions and information on the qualifications and application process for these positions please email:

s-falcon@northwestern.edu

Amit Vira, a current 11th grader at Flossmoor, IL is interested in a research position for the summer. He is a top student at his high school enrolled in several Advanced Placement courses, many extracurricular activities, and is considered one of the top students at his high school. Amit is interested in attending Northwestern as a pre-medical student in the future. He is not looking to work for pay and is very interested in gaining experience from a summer working in a lab. If anyone has any space open for him to volunteer during the summer of 2005 or even now, please contact Amit:

(708) 799-8472
amitvira@gmail.com



NORTHWESTERN UNIVERSITY

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

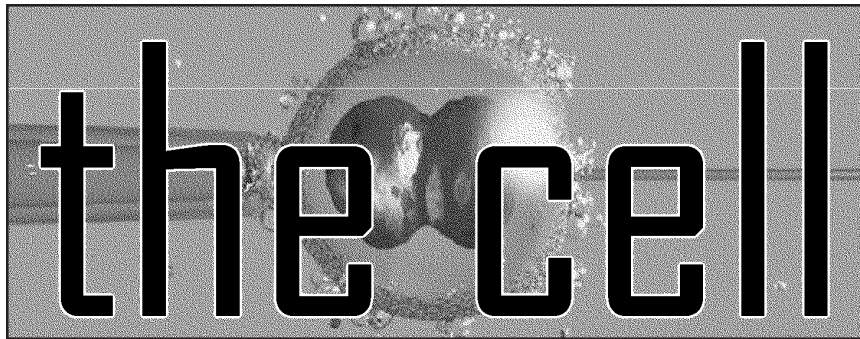
Northwestern University
Department of Biochemistry, Molecular Biology and Cell Biology (BMBCB)
2205 Tech Drive, Hogan Hall 2-100
Evanston, IL 60208-3500

Voice: 847.491.5061

Fax: 847.467.1380

Email: bmbcb@northwestern.edu

Website: www.biochem.northwestern.edu



N O R T H W E S T E R N U N I V E R S I T Y
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>