IN THIS ISSUE:

A pioneer in electron microscopy; the Darwin-Wallace Medal; alumni art

Dear Alumni and Friends:

Welcome to the MCDB Newsletter for alumni and friends of the Department of Molecular, Cell, and Developmental Biology at UCLA. The Department’s research focuses on the basic mechanisms that regulate cell differentiation and function. The central objective of the Department is to advance our disciplines by combining efforts in research and teaching.

Our research goal is to address the most conceptually important issues related to gene regulation and morphogenesis, bring the most innovative approaches to these investigations, and translate the discoveries to address the most pressing of human problems: disease and hunger. Our strategy to achieve this goal is to (a) build a department with broad expertise in gene discovery through mutational screens, chemical genetics, bioinformatics, and in-depth phenotypic analysis in multicellular organisms encompassing Arabidopsis, simple invertebrates, Drosophila, zebrafish, mouse and human stem cells; (b) develop the infrastructure to conduct cross-disciplinary and technologically advanced research; and (c) take a leadership role in the organization of cross-disciplinary research initiatives at UCLA.

The teaching mission of our department is to provide a comprehensive and intensively hands-on experiment-based education to our undergraduates, graduates and postdoctoral fellows, among whom are tomorrow’s leaders in research and medicine. We also place a strong emphasis on educating undergraduate non-science majors so that they will make informed decisions regarding the implementation of scientific discoveries and future funding for scientific research. Our strategy to achieve our teaching goal is to develop didactic courses that emphasize the experimental basis supporting basic concepts, and to involve undergraduates in two types of research experience: large-scale discovery-based programs and in-depth individual research projects.

Our distinguished faculty members are recipients of many honors and awards for internationally recognized research accomplishments. As teachers, we are proud that three members of our faculty have received UCLA’s Distinguished Teaching Award, and two have received the Gold Shield Faculty Prize.

We hope this newsletter will bring you news of the exciting new faculty, new research and new developments. We have a special section on alumni news, so please send us news about yourself and other UCLA MCDB friends or alumni (chair@mcdb.ucla.edu). Updating your contact information is very easy at http://www.ucalumni.net/MCDBUpdate.

Thank you for reading this newsletter. We hope to hear from you!

Utpal Banerjee
Irving & Jean Stone Professor and Chair, Molecular, Cell, and Developmental Biology
Professor, Biological Chemistry
Co-Director, Broad Stem Cell Center
HHMI Professor
UPCOMING ALUMNI EVENTS

The next UCLA Alumni Day will be in May 2012! Come back to UCLA, bring family and friends, and join other alumni to celebrate being a Bruin. Keep an eye on http://www.alumniday.ucla.edu for news, and to see photos and video of the 2011 UCLA Day! We look forward to seeing you at the Info Fair!

Dinner for 12 Strangers is a global phenomenon and you can be a part of it! For more than 40 years this UCLA tradition has brought alumni, faculty and students from all generations together to enjoy good food and great conversation. For more information, see http://alumni.ucla.edu/events/dinners/2012/default.aspx.

FACULTY NEWS AND RESEARCH

Professor and Chair Utpal Banerjee and scientists affiliated with UCLA's Jonsson Comprehensive Cancer Center and the Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research at UCLA have received prestigious awards from the National Institutes of Health (NIH) recognizing their leading-edge, innovative research. Researchers Utpal Banerjee, the Irving and Jean Stone Professor and chairman of the Molecular, Cell and Developmental Biology Department, and Heather Christofk [MCDB '01], an assistant professor of molecular and medical pharmacology, received the NIH Pioneer Award and New Innovator Award, respectively. Banerjee was one of 13 researchers nationwide, and one of five in California, to receive the Pioneer Award, designed to support “individual scientists of exceptional creativity who propose pioneering – and possibly transforming approaches – to major challenges in biomedical and behavioral research,” NIH officials said. Christofk was among 49 scientists nationwide, and one of 18 in California, to receive the New Innovator Award, designed to stimulate highly innovative research and support promising new investigators. The award “supports exceptionally creative new investigators who propose highly innovative projects that have the potential for unusually high impact,” NIH officials said. The awards to the UCLA scientists were part of $143.8 million in awards distributed Sept. 21 to challenge the status quo with innovative ideas that have the potential to propel fields forward and speed the translation of research into improved health for the American public.

Professor Luisa Iruela-Arispe has been appointed Chair of the Molecular Biology Interdepartmental PhD Program and the Interim Director of the Molecular Biology Institute. From Dean Victoria Sork’s announcement: “The focus of her research program in vascular biology is to understand the molecular mechanisms that regulate angiogenesis during development and in pathological conditions. She has an excellent record of research productivity and funding. She has been Vice-Chair of MCDB since 2004. She is also the Director of the Cancer and Stem Cell Biology Program Area, Jonsson Comprehensive Cancer Center. Luisa received her PhD from a joint program between Universidade de São Paulo, Brazil, and University of Washington Seattle. Before coming to UCLA, she was an assistant professor in the Department of Pathology at Harvard Medical School and Beth Israel-Deaconess Medical Center, Boston, MA. Luisa has received numerous research and teaching awards, including American Heart Association Established Investigator, Wiederhielm Award for 2002 (given annually by the Microcirculatory Society for the most cited paper in that field), the UCLA Distinguished Teaching Award, and the 2009 Judah Folkman Award (given annually by NAVBO for excellence in research and service to the vascular biology
Professor Iruela-Arispe brings a broad perspective on graduate education and research in the biosciences with experience in both the medical school and college settings. Her interdisciplinary approach to research and graduate education makes her an ideal person to lead the MB IDP. Her commitment to fostering cross-campus intellectual exchange makes her an ideal person to direct the MBI."

Professor Steve Jacobsen, at left, has been elected to the National Academy of Sciences. Membership in the Academy is one of the highest honors given to a scientist in the United States. Dr. Jacobsen is a Howard Hughes Medical Institute investigator, and a member of the Board Stem Cell Research Center. His research focuses on the genetic and molecular studies of DNA and histone methylation and their role in the control of gene expression. Dr. Jacobsen discusses his research in a video at http://newsroom.ucla.edu/portal/ucla/terasaki-life-sciences-building-175118.aspx.

Professor James Lake, at right, was honored on June 24, 2011, with the Darwin-Wallace Medal for fundamental discoveries in the evolution of life, awarded by the Linnean Society of London. The Darwin-Wallace Medal has been awarded only 42 times since 1908, and is given for major advances in evolutionary biology. Dr. Lake's fundamental evolutionary discoveries, such as the New-Animal-Phylogeny for which he received the Darwin-Wallace Medal, combine a deep understanding of biology with transformative genomic analyses. He is breaking new ground rooting the tree of life, reconstructing the eukaryotic rings of life, and providing genomic evidence for ancient prokaryotic endosymbioses.

Six scientists with the Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research were awarded more than $8 million in grants from California’s state stem cell agency in May to investigate basic mechanisms underlying stem cell biology and differentiation. Two of these scientists are Professors Shuo Lin and William Lowry. For the full article, please visit: http://www.today.ucla.edu/portal/ut/scientists-awarded--8-million-plus-for-stem-cell-research.aspx

**UNDERGRADUATE NEWS**

On June 11, 2011, MCDB faculty and students met for the Departmental Graduation Celebration in Ackerman Grand Ballroom. The speaker was Dr. Heather R. Christofk, Assistant Professor of Molecular and Medical Pharmacology at UCLA, and an MCDB undergraduate alumna ('01). Dean’s Prizes at the 2011 Undergraduate Science Poster Day in May were awarded to the following MCDB students: Wendy C. Hsiao, Tien-Phat Huynh, Jaehyun Kim, Grace E. Lee, Shivani K. Thakir, Catherine Y. Yao, and Mary Y. Youssef.
**GRADUATE STUDENT NEWS**

In Spring 2011, doctorates in Molecular, Cell, and Developmental Biology were awarded to **Zahra Tehrani** (Shuo Lin) and **Benjamin Van Handel** (Hanna Mikkola).

Congratulations to doctoral student **Michaela Patterson**, at right, who has been awarded a 2011 Distinguished Teaching Award from the UCLA Academic Senate for her exceptional work as a teaching assistant. Michaela, who is a member of Dr. William Lowry’s lab, is one of only five teaching assistants campuswide to be honored this year.

**ALUMNI NEWS**

Sometimes our alumni find us, and sometimes we find them. We’ll ask you for permission if we find news on the web that we’d like to include. If you'd like to let us (and others) know what you are doing, please email us at chair@mcdb.ucla.edu.

**2010s**

**Jeannette P. Chau** ’10 is a Staff Research Associate in the Department of Biological Chemistry at UCLA.

**Jasmine Jenkins** ’10 is a dental student at Tufts University.

**2000s**

**Julia Chee Jia Chin** ’09 will enter the UCLA ACCESS Program in Fall 2011 with the 2011-2012 International Fulbright Science and Technology Award (http://scienceandtech.fulbrightonline.org/index.php). This is a three-year fellowship awarded by the Bureau of Educational and Cultural Affairs of the U.S. Department of State.

**Jarrett Egertson** ’08, at right, is a graduate student in Genome Sciences at the University of Washington, and is working in the MacCoss lab for biological mass spectrometry.

**Matthew Emanuel** ’05 received an MD from Vanderbilt University School of Medicine in 2009. He is currently in an ophthalmology residency at Emory University.

**Michael Ferry** ’02 completed his PhD from UCSD in Bioengineering at UCSD in Fall 2010. He is now a postdoctoral fellow in the Biocircuits institute at UCSD in the lab of Dr. Jeff Hasty.
Ravi Jain ’02 PhD (Lake), at left, is President and Director of cBio, Inc. (www.cbiocorp.com). Ravi has a background in microbial bioinformatics from UCLA. Prior to cBio, Ravi was responsible for technical marketing at Cognia. Before that, he developed predictive studies for point-of-care diagnostics development at Alere. Ravi started his career designing drugs at Isis Pharmaceuticals. He currently leads the corporate and business development functions at cBio.

William Sang Kim ’07, at right, is a doctoral student in the UCLA Department of Pathology and Laboratory Medicine in the lab of Dr. Gay Crooks, where he is currently identifying the signaling mechanism associated with F36V-Mpl induced hematopoietic progenitor expansion. He writes, “the project I worked on during my undergrad and subsequent year as an SRA in the Banerjee lab was recently published in Science with me included as the second author (http://www.sciencemag.org/content/332/6034/1210.abstract?sid=eaea2f85-a686-4760-b07f-fb803f8d3ba0).”

Joshua Morris ’05 PhD (Hartenstein) is an Associate Professor in the Department of Biology and Chemistry at Azusa Pacific University.

Maria Nunez ’05 MPH, at left, is currently attending Boston College Law School. Her interests are in the fields of health law, poverty law, public policy, and criminal law. In 2008, she completed an MPH in health policy and management at The Johns Hopkins University. She writes, “I am currently an 2011-2012 Albert Schweitzer Fellow for my efforts in establishing an on-site legal clinic for an urban health center in Boston, which serves a high-risk patient population. The fellowship follows the importance of the medical home model and medical-legal partnerships. The website is here: http://www.schweitzerfellowship.org/features/us/bos/bos_fellows.aspx.”

Dharma Raj Thapa ’02, at right, completed a PhD at UCLA in Microbiology, Immunology, and Molecular Genetics in Spring 2011. He writes, “I am currently working as a postdoctoral fellow in Dr. Otoniel Martinez-Maza’s lab (MIMG) studying the role for microRNAs in the pathogenesis of AIDS related lymphomas.”
Christopher Thipphavong ’05 has been a Pharmaceutical Sales Representative at Eli Lilly and Company. He writes, “I left my job as a pharm rep in April. I’m back in school at UC Berkeley Extension doing a post-bac. After completion of my post-bac program I’m planning to attend medical school.”

1990s

Gelareh Abedi ’98, MS ’00 Phy Sci, at right, received her MD from the University of Vermont in 2004. She finished her residency at Yale Department of Ophthalmology in 2008 and continued her fellowship in vitreoretinal diseases and surgery at Boston University where she graduated in 2010. She is now an Assistant Professor in the Department of Ophthalmology at the University of Texas Health Science Center in San Antonio. Her main areas of interest are diseases and surgery of retina including macular degeneration, diabetic retinopathy, complex retinal detachments, and macular pucker. She writes, “I do a lot of research and I really hope to re-connect with my UCLA alumni network and do collaborative work.”

Allison Alcivar Hahn ’98 received a PhD in 2005 in Molecular Biology from the University of Pennsylvania School of Medicine, and is an Applications Scientist at Illumina in the San Diego area.

Tod Bedilion ’96 PhD (Salser), at left, is the Senior Director, Diagnostic Biomarkers, for Roche Diagnostics in Pleasanton, California, where he supports the strategy, assessment and sourcing of novel biomarker content for Roche’s diagnostic businesses. Dr. Bedilion joined Roche in 2005 in Roche’s Chief Technology Office. Previously, he was the founding head of business development at Genomic Health Inc. supporting the development of the OncotypeDx breast cancer assay; Director of Corporate Development at Incyte Genomics; and the first employee and a founding head of research at Synteni Inc., which developed the first successful gene expression microarray products and services.

Michael Bransby ’98, at right, is Western Regional Sales Manager for Spectrum Laboratories. He writes, “-After graduating, studied calcium channels in Lutz Birnbaumer’s lab for a year. - Managed the Life Sciences tutoring center at Pasadena City College. -Technical Service Representative at Spectrum. I learned the protein dialysis and tangential flow filtration products and applications with daily interaction with researchers and engineers. Within one year I was promoted to product manager. Developed new filtration products and systems. -Past four years have been working as W. Reg. Sales Mgr. working in Biotech/Medical Device/Pharma/ Vaccines/Diagnostics designing filters and filter systems for purifying cells, proteins, viruses.”
etc. Have been able to travel around the world including China (attached photo) one month ago for work. - Have recently visited UCLA quite frequently helping Donald Kohn concentrate and purify lentivirus for Gene Therapy.”

Lilia Corona ’99 currently works in the Assay Development department at Roche Molecular Systems in Pleasanton, CA.

Devra Horelick Darley ’95 is a veterinarian at VCA Crown Hill Animal Hospital in Seattle. She writes, “I graduated from UCLA in 1995. I then held a job at a biotech company in San Diego called Biosite Diagnostics for 2 years in their Antibody Development lab. I graduated from UC Davis with my DVM degree in 2001, and I’ve been working in Seattle ever since.”

Pei-San Ng ’99 is an architectural designer / multimedia artist. Born in Taiwan and raised in Los Angeles, she holds a BS in Molecular, Cell and Developmental Biology from UCLA, an AA in Interior Design from Harrington College and a Masters of Architecture from the University of Illinois at Chicago. She is also a member of the Chicago Art Department. From her website at http://peisanng.com/: “Pei San Ng's artworks blend the regularity of the mass produced unit with the elegance of the hand drawn line. Her works are clean and precise. 'I like to design with modules. In the past I have created installations using dozens of identical Ikea lamps or Mason jars. These modules end up resembling pixels that form icons or symbols.' The urban landscape has always been an inspiration for Miss Ng, both professionally and creatively. Theme and variation of modular skyscrapers and office buildings roll through the desert hills and smog of Los Angeles blending the natural with the man made. Miss Ng’s most recent work uses the red tipped match as the module. 'In Chinese culture red is a very lucky color, matches evoke danger. I think that by mixing those two messages the audience is forced to take a second or third look. I want to tempt the viewer to destroy my artwork. When you look at these pieces you realize that – if you light the matches then you change the work if not burn it completely, there is a tension there, you get a moment of satisfaction and then you have nothing – I like that tease.' The artworks exist in an interesting place between object and experience or imagined experience. If the best art makes the viewer ask new questions, then Miss Ng is breaking new ground. When was the last time that you asked 'Can I light your art on fire?'” The artwork at left above is titled “Matches: Mookie’s Sneakers.” Thanks to Pei-San Ng for permission to include this image.

1980s

Homero Dewes ’87 PhD (Simpson), at right, is a Professor at the Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil, where he is Director of the Center for Interdisciplinary Studies in Agribusiness. His current research interest is focused on the relationships between technological innovations in agriculture and land use.
Ronald G. Gill ’85 (Clark), at left, is Professor of Surgery and Scientific Director of the Colorado Center for Transplantation Care, Research and Education at the University of Colorado Anschutz Medical Center.

Daniel L. Kaufman ’88 (A. Tobin) is a Professor in the UCLA Department of Molecular and Medical Pharmacology.

Hanne Ostergaard ’88 (Clark), at right, is a Professor of Medical Microbiology and Immunology at the University of Alberta in Edmonton. She writes, “The primary research focus of my laboratory is to understand how cytotoxic T lymphocytes (CTL) become activated to kill virally infected cells and transformed cells. One goal of our research is to elucidate the signal transduction pathways that are operative during CTL activation. To achieve this, we identify molecules involved in activation and follow their movement using live cell imaging to dissect their contribution to CTL adhesion and degranulation. You might also be interested to know that Kevin Kane PhD ’86 (Clark) is a Professor in the same department (and also happens to be my husband). We have both been professors here for 20 years after completing PDFs in San Diego.”

Teresa Strecker ’87 (Merriam/Lengyel), at left, is an Adjunct Associate Professor of Biological Sciences at Southern Methodist University in Dallas, TX. While teaching undergraduates Molecular Genetics, Developmental Biology and Biology for non-majors, Dr. Strecker teaches an interdisciplinary course called "Genetic Determinism and Free Will," which addresses the philosophical and ethical issues raised by healthcare and genetic testing in the 21st century.

IN MEMORIAM

In Memoriam: Professor Fritiof S. Sjostrand, a pioneer in electron microscopy
by Cynthia Lee (from UCLA Today)

"Fritiof S. Sjostrand, professor emeritus of molecular, cell and developmental biology, died April 6 at his home in Los Angeles at the age of 98. His work in the field of biological electron microscopy led to several pioneering developments and discoveries, the founding of a leading journal on the subject and the development of strong research groups both in Stockholm and Los Angeles."
A visiting professor at UCLA in 1959, Professor Sjostrand joined the Zoology Department faculty as a full professor in 1960. He was an internationally recognized star in the area of electron microscopy and ultrastructural research. From his lab at the Karolinska Institute in Stockholm, where he earned his M.D. in 1941 and his Ph.D. in 1945, he — along with Keith Porter and George Palade at the Rockefeller — constituted the ‘big three’ in the 1950’s for their pioneering use of the electron microscope to describe details of cellular structure that anchored the current field of cell biology.

Sjostrand contributed the first high-resolution pictures of mitochondria and dramatically improved techniques for ultrathin sectioning with minimal distortion. Much of his effort went into distinguishing real observations from distortion artifacts.

At UCLA, he became a force in modernizing the Zoology Department and was a founding member of the Molecular Biology Institute along with his colleagues in the departments of Chemistry and Botany. His department affiliations changed from zoology to biology to Division 1, the precursor to the current Department of Molecular Cell and Developmental Biology. He also interacted extensively with other life sciences departments as well as the UCLA Medical School in the areas of anatomy, histology and physiology. In addition to his study of the mitochondrial membranes, he was intrigued by the neural connectivity patterns of retinal cells. He assembled a large model that showed the outer plexiform layer of the retina and its synaptic connections between the photoreceptors and various cells.

Among his many awards and recognitions over the years were the Anders Retzius Gold Medal in 1967, the Paul Ehrlich and Ludwig Darmstaedter Prize in 1971, and the Distinguished Scientist Award from the Electron Microscopy Society of America, which presented it to him on its 50th anniversary in 1992. A profile of Professor Sjostrand was published in the Journal of Structural Biology, which he founded in Sweden in 1957 as the Journal of Ultrastructure Research. He remained its editor until 1990, years after he retired from UCLA in 1983.

Professor Sjostrand had an athletic bent and was frequently seen doing sprints at the Drake Stadium track. He won both the 200 meter and 400 meter Master’s events in the over-60 age category.

He is survived by his wife, Birgitta, who was his helpmate in the laboratory as well as at home.

WE WANT YOUR PICTURES!

Do you have photographs of your time at UCLA as a graduate or undergraduate student? Please forward them to us at chair@mcdb.ucla.edu, and let us know who appears in the picture. We’d like to publish them in the next newsletter to stir some alumni memories.

At left: Dr. Pei-Yun Lee, MCDB BS ’99, in a swirl of happy graduates at the 2009 MCDB Graduation Celebration.
LIFETIME EMAIL FORWARDING

Whether you are emailing friends, colleagues or future employers, you can show your Bruin pride by establishing and using your @ucla.edu email forwarding address. You'll never need to send out another I've changed my email address message again. Register for Lifetime Email Forwarding today at https://www.uclalumni.net/NewsLinks/lifetime.cfm.

BRUINWORKS

BruinWorks is the online, interactive network exclusively for UCLA alumni. This dynamic site allows alumni to connect professionally and personally. BruinWorks is a UCLA graduate's most valuable resource. BruinWorks enables you to:

- Search for jobs, résumés and alumni businesses
- Network socially and professionally in one place
- Access the only comprehensive alumni directory available
- Explore an all-inclusive listing of UCLA events worldwide
- Connect your Bruin experience to other online networks
- Find reliable content from university resources

Please visit www.bruinworks.com and click on "LOG IN" in the top right corner. If you don't have an account, you can click on "SIGN UP". If you do have an account, you can log-in with your e-mail address and password.

GIVING TO THE DEPARTMENT

If you are interested in giving to the UCLA Department of Molecular, Cell, and Developmental Biology, please visit our web site at www.mcdb.ucla.edu/giving.php. Your donation, regardless of amount, has a powerful impact and is greatly appreciated. Alumni interested in making a gift to the Department by endowing a scholarship, supporting faculty research, or making a planned gift or other gift, should contact Dounia Sadeghi, Assistant Director of Development, Life Sciences, at 310-825-3277 or dsadeghi@support.ucla.edu.

Alumni and friends who are, or wish to become, Chancellor’s Associates may now direct their annual gifts to the UCLA Department of Molecular, Cell, and Developmental Biology and retain all the benefits that have traditionally been given to Chancellor's Associates. For information, visit http://www.uclafund.ucla.edu/gtg/donorrecognition.aspx.

Membership in the UCLA Alumni Association has many benefits (discounts, networking, career services, news and information, and just plain fun). Find out more!

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