1. Message from Interim Dept. Head

Biofuels grants and MAES awards come to PBio faculty

The University of Minnesota's Institute on the Environment and IREE will soon be announcing the award of Discovery Grants for biofuels research. Four faculty members in Plant Biology are investigators on three Discovery Grants evaluating the genetic basis of biomass traits and oil production. Sue Gibson is Principal Investigator on a project entitled, "Exploiting genetic variation in soybean to increase oil." She is joined by co-PIs Jane Glazebrook and Fumi Katagiri in Plant Biology, and also Jim Orf in Agronomy & Plant Genetics. The primary goal is to use expression quantitative trait loci (eQTL) analysis to identify genes regulating oil content and other seed properties. Nathan Springer is a co-PI on another biodiesel-related project, entitled "Dual renewable biofuels from a single source," which will evaluate high oil content corn for its ability to serve as feedstock for both ethanol and biodiesel production. This project is lead by PI Ron Phillips in Agronomy & Plant Genetics, and also involves co-PIs Roger Ruan (Bioproducts & Biosystems Engineering) and Doug Tiffany (Applied Economics). Dr. Springer is PI on a third project, entitled "Survey of genetic variation for response to density stress," which is a collaborative project with co-PIs Jim Anderson, Rex Bernardo, Gary Muehlbauer, and Kevin Smith, all in Agronomy & Plant Genetics. The long term objective of the work is to identify genetic loci that can increase production of grass stover for biomass production. The three projects will receive a total of $340,000 in FY08, with an expectation of similar funding in the following year.

University funds for the Discovery Grant competition came through the compact process, and were specifically allocated to increase the U's capacity and competitiveness in research on the environment and renewable energy. Awards emphasized projects that brought together new teams for research deemed to have high potential for future extramural support. Ten awards were made, totaling $1.37 million for the first year of funding. More information will be forthcoming on the IREE web page (http://www1.umn.edu/iree/).

The Department of Plant Biology is also pleased to announce that three Minnesota Agricultural Experiment Station (MAES) awards have been approved for research based in the department. Continuing on the theme of biofuels, George Weiblen has received seed funding for a project entitled, "Hemp Biomass and Quantitative Trait Loci Mapping." This work continues Dr. Weiblen's interest in developing genetic tools for hemp, which is of interest as a fiber and biomass crop. For the current project, he is joined by co-PI Ulrike Tschirner in Bioproducts and Biosystems Engineering, who brings expertise in evaluation of...
cell wall characteristics. David McLaughlin is PI on the other two MAES awards this year, including continuation of funding for the Mycological Culture Collection, an asset for fungal research in several departments. Dr. McLaughlin also received funds for a research project entitled, "Assembling the Fungal Tree of Life: Subcellular Characterization of Two Species of Fungi."

2. Phytograd & Plant Biological Sciences Graduate Program

!!!!!!!!!!!PBS Program Kudos!!!!!!!!!!!!!

CONGRATULATIONS to the following students for receiving their degree!!!

Dan Griffin – Ph.D.
Advisor: Sue Wick

Ali Sivitz – Ph.D.
Advisor: John Ward

Rachel Morphew – M.S.
Advisor: Kate VandenBosch

We wish you well in your future endeavors as you leave the program to continue your career.

CONGRATULATIONS to the following students for receiving a PBS Summer Fellowship
Wendy Clement, Nick Deacon, Bryn Dentinger, BJ Haun, Katy Heath, Yadong Huang, Keunsub Lee, Xing Liu, Ryoko Oono, Maj Padamsee, Brian Piasecki, Kerrie Sendall, Xiaodong Sun, Peter Voth, Tim Whitfeld, Heather Whittington, Lynette Wong, Lin Wang, Qiuxia Wu, Songqing Ye, and Yun Zhou

Brian Piasecki was awarded the Microbial and Plant Genomics Institute Fellowship and will receive a stipend, tuition, health benefits and $2,000 for journal subscriptions, scientific society membership dues, lab supplies, or research-related travel. Brian is a student in Carolyn Silflow’s lab.

The CFANS Fellowship was awarded to Wenjing Zhang who is a student in Bill Gray’s lab. She will receive a stipend, tuition and health benefits.

ITASCA ORIENTATION – August 15 – 20

We have seven students attending Itasca Orientation this year. We also have many faculty participating in this event and would like to thank them for their contribution. Nathan Springer, Georgiana May, Bill Gray, Sue Wick, George Weiblen, Rebecca Montgomery, Dave Biesboer, Fumi Katagiri, Jane Glazebrook, and Jerry Cohen. Keunsub Lee and He Huang will be assisting in the lab modules.

ROTATIONS first-year students – the incoming students will be contacting faculty in the next few weeks to set up their first lab rotation.

Student Bios of the Incoming Students

Jessica Biever received her B.S. in May 2007 in Plant Sciences and Environmental Sciences from Minnesota State University in Mankato. Jessica’s research experience includes effects
of soil salinity on osmoregulation and photosynthetic performance of *Glycine max*. In addition, Jessica received a scholarship from the Federated Gardens Club of Minnesota based on her scholastic achievement.

**John Compton** attended St. John’s University where he received a BA in Biology in May. John has done work on prairie restoration research through the University of Minnesota and has worked at Prairie Restorations, Inc. as a Land Management Specialist. He is currently studying the impact of support tissues on plant wilting rates.

**Kai-Ting Fan** received an MS in Biochemistry and a BS in Agricultural Chemistry from National Taiwan University. She has worked as a Research Assistant for the Institute of Molecular Biology at Academia Sinica, and the Institute of Microbiology and Biochemistry at National Taiwan University. Kai-Ting has been awarded the Presidential Award three times.

**Jennifer Irving** received an MS in Environmental Sciences from the University of Virginia and a BA in Biology, Geology and Public Policy from Washington and Lee Universities. She has worked for a year and a half as a research technician in the Biology department at the University of Virginia, studying the demography of aging in a natural population of *Plantago lanceolata*.

**Moana McClellan** graduated in 2003 with a BA in Natural Sciences from New College of Florida. She has studied abroad in Costa Rica. Her undergraduate coursework culminated with an honors thesis titled “The epiphytic diversity and abundance of Quercus laurifolia and *Q. virginiana*.” She would like to continue studying GIS techniques as they further develop.

**Christopher Pinahs** received his BA in Biology and Environmental Studies in May from Gustavus Adolphus College. He is interested in the relationship between exotic and native species, habitat fragmentation, and improving management practices that mitigate the deleterious effects of former land use. He would also like to focus on the relationship between global processes, especially climate change, and plant physiological responses, which in turn affect both population diversity and community structure.

**Ye Sun** will receive her BS in Biological Sciences in July 2007 from Peking University. For two and a half years Ye has done research on gene cloning and function analysis under Professor Cui Keming at the Lab for Woody Plant Development.

**PBS PROGRAM RECEPTION**

Mark your calendars for September 4th, 3:30-4:30 for the program reception that will be held in the atrium of the Cargill building.

### 3. Funding / Job opportunities / Seekers

**In search of Post doc Position**

Ben Millett is a Ph. D. student in the Department of Plant Pathology. He is interested in a Post Doc position after graduation (expected December 2007). His thesis research investigated a late blight resistance gene in transgenic cultivated potato. He used both phenotypic (whole tuber inoculations) and genotypic assays (RT-PCR, Real Time qRT-PCR) to determine the importance of the resistance gene in the tuber. In addition, he generated a BAC subclone library which he used for an *in planta* protein-interaction assay. He would like to continue to develop his knowledge of molecular techniques using plant systems.
While his doctoral studies deepened his interest of the underlying processes of plant defense mechanisms, he recognizes that similar processes are utilized by plants when not under pathogen attack. The techniques and experience gained during his post doctoral studies will aid him in future plant defense research.

4. Seminars & Symposia

The 2007 Stanton Ford Memorial Lecture
12:15 PM Tuesday, October 16
Ted Mann Concert Hall
West Bank Campus
“From Neurons to Neighborhoods: Making the link between Science & Service”

Dr. Thomas Insel
Director – National Institute of Mental Health

Thomas Insel, M.D., is Director of the National Institute of Mental Health (NIMH), which leads the nation’s effort to understand, treat, and prevent mental disorders. Appointed as Director in 2002, Dr. Insel’s association with NIMH actually spans over two decades, as he began his research career at the Institute in 1979, leaving it in 1994 to become Professor of Psychiatry at Emory University in Atlanta, Georgia. While at Emory he founded and led the Center for Behavioral Neuroscience, and continued his groundbreaking line of research, begun at NIMH, on the molecular basis of social behaviors. A prolific author, Dr. Insel has published over 200 scientific articles and four books, including the Neurobiology of Parental Care (with Michael Numan) in 2003. He is a member of the Institute of Medicine, a Fellow of the American College of Neuropsychopharmacology, and the recipient of numerous awards.

Free and Open to the public

Fall 2007 PBS Colloquium Seminar Series (Tentative)
Tuesdays at 3:30 in 335 Borlaug Hall

September 11 Dr. Lena Hileman, University of Kansas, Department of Ecology & Evolutionary Biology
“Evolution of stamen and petal developmental patterning: from poppy to snapdragon”
Host: Dr. George Weiblen

September 18 Dr. Zhen-Ming Pei, Duke University, Department of Biology
“TBA”
Host: Dr. John Ward

September 25 Dr. Michael Sadowsky, University of Minnesota, Department of Soil, Water & Climate
“A New Paradigm for the Nodulation of Legumes by Bradyrhizobium”
Host: Dr. Kate VandenBosch

October 2 Dr. Peter Tiffin, University of Minnesota, Department of Plant Biology
“TBA”
October 9  Dr. Yrjö Helariutta, University of Helsinki, Department of Biological and Environmental Sciences
“TITLE”
Host: Dr. Min Ni

October 11  Dr. Oded Yarden, The Hebrew University of Jerusalem, Department of Plant Pathology and Microbiology, Faculty of Agricultural, Food and Environmental Quality Sciences
“TBD”
Host: Dr. Bob Brambl

October 16  TBD

October 23  Dr. Kenneth Shackel, University of California – Davis, Department of Plant Sciences
“Cell water relations, turgor and fruit firmness in developing wine grape berries”
Host: Dr. Cindy Tong

October 30  TBD

November 6  TBD

November 13  Dr. Taylor Feild, University of Tennessee, Department of Ecology & Evolutionary Biology
“TBD”
Host: Dr. Jeannine Cavender-Bares

November 20  Dr. Herve Cochard, French National Institute for Agricultural Research
“New insights into the hydraulics of trees”
Host: Dr. Jeannine Cavender-Bares

November 27  TBD

December 4  Dr. Teresa Pawlowska, Cornell University, Department of Plant Pathology
“TBD”
Host: Dr. Iris Charvat

December 11  TBD

5. Miscellaneous

2007 Benefits Events Calendar

July

Benefits Workshop
Thursday, July 26
9-10:30 AM
215 Donhowe

August
6. Want Ads

University of California – Riverside
Specialist Position
Institute for Integrative Genome Biology

The Institute for Integrative Genome Biology at the University of California, Riverside invites applications for an open level Specialist position within its Genomics Core Instrumentation Facility. The Institute serves a vital role for the UC Riverside research community through its core facilities in the areas of Genomics, Microscopy, Proteomics, and Bioinformatics. Inherent in this role are analytical services, training of students and staff, and a strong philosophy of promoting collaborative, interdisciplinary research.

The position will provide technical expertise in advanced genomics instrumentation and methodology including DNA sequencing, real-time quantitative PCR, and gene expression arrays. Under the overall leadership of the Director, the candidate will provide analytical services and participate in the training of researchers in support of Genomics Core activities. As part of an interactive team, the candidate will oversee the sequencing of DNA from more than 100 laboratories on the UCR campus as well as EST projects form off-campus customers, and trouble-shooting. In addition the candidate will be expected to be familiar with gene expression analysis using GeneChip technologies. Additional responsibilities will include liquid handling robots, real-time quantitative PCR, and familiarity with computer software in support of Genomics Core services. This position requires a high degree of technical skill and an ability to adapt to changing research needs via new instrumentation and methodologies. The successful candidate will interact with a wide array of faculty, staff and students and will thus have strong oral and written communication skills.

Review of applicants will begin August 21, 2007 and wil continue until the position is filled. It is preferred that applicants have a PhD degree with some postdoctoral, industry or other significant experience pertinent to the position.

To Apply:
Interested individuals should: (1) submit a curriculum vitae, (2) statement of interests, and (3) have letters from three references sent to:

Guille Baca  
Institute for Integrative Genome Biology  
2019 Keen Hall  
University of California  
Riverside, CA 92521

Or email application documents to instsearch@ucr.edu

Editors: Patrice Myers

This publication is available in hard copy or email by request. Please contact Patrice Myers via email (pmyers@umn.edu) or call 625-1234 if you would like to receive a copy.

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