THE GSA REPORTER

mar | apr 2010

GSA Welcomes New Education Programs Manager

Please join the GSA in welcoming Elizabeth (Beth) A. Ruedi as its Education Programs Manager. Beth looks forward to spreading her passion for quality education throughout the genetics community. She received her Ph.D. from the Program in Ecology and Evolutionary Biology at the University of Illinois at Urbana-Champaign, where

continued on page two

GSA Honors Five Members

The Genetics Society of America congratulates its five 2010 award recipients for their distinguished service to the field of genetics. The awardees are **Alexander Tzagoloff, Ph.D.** (Columbia Univ); **Thomas Cline, Ph.D.** (Univ of California-Berkeley); **Barbara J. Meyer, Ph.D.** (Univ of California-Berkeley); **William M. Gelbart, Ph.D.** (Harvard Univ); and **Utpal Banerjee, Ph.D.** (UCLA). These awards recipients were nominated and selected by their peers for their sustained activity and contributions to the genetics community.

"These awards reflect the creativity and passion for clarity that epitomizes good science.

continued on page thirteen

2010 MOHB Meeting, June 12-15, in Boston Connects Model Organisms to Human Diseases

What do worm nausea and its detoxification pathway have to do with human migraines? It may sound a bit far-fetched, but to find out about this worm-human connection, GSA invites you and your colleagues to attend the **GENETICS 2010: Model Organisms to Human Biology Meeting in Boston, Massachusetts, June 12-15.** Not only will you learn the answer to this question from 2008 Lasker Award recipient Gary Ruvkun's (Harvard Med Sch/HHMI) keynote address on Sunday, June 13th, but you'll also learn the answers to other questions related to model organisms, human genetics, and genetics education.

Other keynoters include Nobel Laureate (2009) Carol Greider (Johns Hopkins Med Sch) on Saturday, June 12th and National Institute of General Medical Sciences' Director Jeremy Berg (National Institutes of Health) on Monday, June 14th.

Educational Questions

Do you wonder how to better integrate hands-on labs and scientific writing into your biology courses? Do you struggle to help undergraduates learn to read primary literature? Are you thinking of using instructional technology or text messaging in your classroom? Or, perhaps you wish to start an interdisciplinary program at your institution?

If so, GSA Board Member Beth De Stasio (Lawrence Univ, WI) and Pat Pukkila (Univ of North Carolina, Chapel Hill) recommend you attend the educational workshop they have planned that will offer solutions to these pedagogical questions. Scheduled for Saturday afternoon, June 12th, *before* the opening plenary session, this workshop can put into perspective questions on how to get undergraduates interested and involved in genetics education.

Four terrific speakers: **Alice Rushforth** of MIT, **Sally Hoskins** of the City College of New York, **A. Malcolm Campbell** of Davidson College, and **Patricia Pukkila** of UNC-Chapel Hill, will cover the topics mentioned above. Round table discussions on topics of participant interest can include investigative labs in genetics, outreach programs, tips for organizing a genetics course at your institution.

After the early registration deadline, meeting registrants will receive e-mail invitations to attend the pre-meeting Education and Outreach Workshop and another on "High-Throughput RNAi Screening in Model Systems used to Study Human Biology at Genome Scale," co-chaired by Stephanie Mohr and Liz Perkins, both at Harvard University. Don't miss the opportunity to sign up!

Support from NIH and Others

Meeting co-organizers, GSA Past President Fred Winston (Harvard Medical School) and President Scott Hawley (Stowers Institute for Medical

continued on page two

Genetics Society of America
Published three times a year
and distributed by
The Genetics Society of America

Volume 7, Number 2

officers

R. Scott Hawley, President
Paul W. Sternberg, Vice President
Fred Winston, Past President
Trudy F. Mackay, Treasurer
Mariana F. Wolfner, Secretary
Mark Johnston, *GENETICS*, Editor-in-Chief

board of directors

Utpal Banerjee
Sally A. Camper
Elizabeth A. De Stasio
Jay C. Dunlap
Sue Jinks-Robertson
Douglas E. Koshland
Charles H. Langley
Susan T. Lovett
Thomas J. Silhavy
Susan R. Wessler

executive director

Sherry A. Marts

managing editor

Phyllis R. Edelman

The publication of an advertisement in this newsletter does not constitute on the part of The Genetics Society of America a guarantee or endorsement of the quality or value of the advertised products or services described in the advertisement, or of any of the representations or claims made by the advertisers with respect to such products or services.

9650 Rockville Pike
Bethesda, MD 20814-3998
Tel: (301) 634-7300
Fax: (301) 634-7079
Email: society@genetics-gsa.org
www.genetics-gsa.org

Copyright ©2010 by the Genetics Society of America.
All rights reserved.

continued]

2010 MOHB Meeting June 12-15, in Boston Connects Model Organisms to Human Diseases

Research) are pleased by the support this meeting has received from the National Institutes of Health. Both the National Institute of Neurological Disorders and Stroke (NINDS) and the National Human Genome Research Institute (NHGRI) have provided support for this meeting. GSA Executive Director Sherry Marts said, "This shows how important it is to NIH that basic and clinical researchers exchange research and ideas with each other."

Additional support is provided by private companies or foundations including: Helicos BioSciences Corporation; Life Technologies; Illumina; Roche; Burroughs Welcome Fund; and Sunrise Science Products.

Invited Sessions and Abstracts

There are four speakers for each of the nine invited sessions. The sessions are on: personal genomics; sex and gene expression; models of disease; cancer as a genetic disease; neurogenetics: from synapses to senescence; modern approaches to pathogenesis and infection disease; stem cell: the genetics of commitment; organismal architecture and developmental disabilities; and analyzing genomes. To see the line-up of speakers on each of these panels, visit the MOHB website at www.mohb.org/2010/pages/schedule.shtml. In addition, at press time, reviewers were reading the nearly 275 abstracts submitted to invite two additional participants from the abstracts submitted for each of these sessions.

Still Time to Register

Although the early registration deadline was May 10th, participants can still register at the website www.mohb.org/2010/pages/registration.shtml and on-site once the meeting begins. Registration also includes five meals – three breakfasts and two roundtable luncheon discussions. These activities provide participants with the opportunity to personally meet and talk with top-notch genetics researchers in the model organism and human genetics fields. This is an opportunity not to be missed!

See you in Boston!

continued]

GSA Welcomes New Education Programs Manager

she researched natural genetic variation in male *Drosophila melanogaster* with Dr. Kimberly Hughes. On entering U of I, Beth's aim was to earn a degree while gaining teaching experience, with the objective of becoming a faculty member at a small liberal arts university. She taught a wide variety of courses as a TA while at U of I, and was the recipient of several awards for teaching excellence.

After accepting a postdoctoral position with Dr. Trudy Mackay at North Carolina State University, Beth started as a part-time lecturer for NCSU, working with colleagues to re-vamp a 300-level genetics laboratory and its manual. She was also able to fulfill her goal of promoting independent thinking and student self-confidence while teaching a 400-level genetics course, "Genome Science".

Beth joins GSA as it turns its attention to its educational mission. She will be developing the GSA's education website to provide excellent genetics education resources, and she will serve as a guide for the Education Special Interest Group. She is thrilled to be part of the GSA team and we are thrilled to have her!

What GSA Is Doing and Can Do for You

As I edit this column in mid-April, the spring meeting of the GSA Board has just concluded. In addition to our usual business of carefully reviewing budgets and membership, we made several major decisions that will impact the future of the Society. These decisions included a five-fold expansion of the DeLill Nasser Awards program that funds post-doctoral and graduate student travel to meetings and the creation of a new journal (described below). We were also updated on the activities of Beth Reudi, GSA's new education program manager (see related article on page 1) whose focus is on education and on supporting the Board's education committee.

While these items may seem unconnected, they are part of concerted attempts to answer one question: "How do we make the Genetics Society of America a bigger part of the lives of our members and potential members?" Embedded in this answer is a growing concern about the "graying" of the society's membership. Thus, the second question: "How do we make membership in the GSA more relevant to graduate students, post-docs, and young faculty members?"

When I joined the Society in the late 1970s, I was motivated both by a desire to identify with other geneticists and to receive the *GENETICS* journal each month. It was an honor to have my Ph.D. supervisor sign the form recommending me for membership,

"…the new journal will go a long way toward creating a venue for our membership to publish the critical, foundational studies that make further genetic analysis possible…"

and thus to join a "club" whose members included the scientists whose work I most admired. I truly delighted in receiving my copy of *GENETICS* each month and read as much of it as I could.

But current young scientists seem to view themselves less as practitioners of a given discipline, (e.g. geneticists or biochemists) than as researchers working on a given problem. Few of us now have the time each month to read the majority of articles in any journal, a luxury that is replaced by the need to read those papers that pop-up each morning on our pre-set PubMed Alerts. How, then, can we make GSA membership not only relevant, but greatly desirable to graduate students, post-docs, and young faculty members?

A number of efforts to address this question have been ongoing for years. The Society's sponsorship of the meetings for most of the widely-studied model organisms (for example the fly, yeast, and worm meetings) have greatly raised our visibility, as has the yearly process of presenting the GSA awards. In addition, although the Society's last annual meeting was in 1992, the development of the Model Organisms to Human Biology Meeting, now in its third iteration, has revived a sense of community within the Society. Even if you're unable to attend this year's MOHB meeting, I *urge* you to look at the schedule of talks at http://www.mohb.org/2010/pages/schedule.shtml, The list of speakers embraces the diversity of interests within our Society, and reflects the enormous reach of genetic analysis in modern biology.

Finally, Mark Johnston and Tracey DePellegrin Connelly have done an incredible job in re-shaping *GENETICS (www.genetics.org)*. The import of the articles continues to improve, with no loss of the rigorous peer-only review process that has long been the hallmark of the Journal. The average length of time from submission to first decision is now only 37 days, which is less than or comparable to that of other major journals. If you haven't sent a paper to *GENETICS* recently, *now* is the time to do so. (On a personal note, throughout my career I have made a conscious effort to publish approximately one paper a year in *GENETICS*. The few years that I failed to do so are balanced by the years I was able to publish more than one. The pride and pleasure I find in doing so consistently increases!)

But we need to do more to keep the Society vibrant and relevant. Expanding the post-doctoral travel awards to at least 25 a year (last year we had more than 150 excellent candidates for only five awards) will greatly increase our visibility among that vital part of the community. As Beth Ruedi and the Education Committee determine ways to serve that young faculty, who are just beginning the process of teaching genetics, that, too, will help to connect younger scientists within the Society.

In addition, the new journal will go a long way toward creating a venue for our membership to publish the critical foundational studies that make further genetic analysis possible in both well-characterized model organisms

continued on page seventeen

TAIRing at Research

by Kyle M. Brown *Reprinted with permission from the American Society for Biochemistry and Molecular Biology*

Molecular biologists around the world have come to rely on actively curated genome databases of model organisms. But the National Science Foundation has decided to end its support for The *Arabidopsis* Information Resource, known as TAIR, and *Arabidopsis* and plant biochemists risk losing a vital resource. If the NSF's decision sets a precedent, Wormbase, Flybase and other databases may be similarly at risk.

Plantbase

"TAIR is where you go for plant genome science," said Rebekah Rogers, a Harvard doctoral candidate and former plant molecular biologist.

Like many similar databases, TAIR provides a host of information related to the genetics of the model plant *Arabidopsis thaliana*. At www.arabidopsis.org, TAIR users can find Arabidopsis genome information ranging from the very basic to the very applied, said Eva Huala, director and principal investigator of TAIR.

Like a Web-based library, TAIR's unique and integrated set of resources requires an active curatorial effort. The database and its 20 staff members have relied upon funding provided by the NSF for more than 10 years.

The genomic resources of TAIR have helped unlock the research potential of Arabidopsis for an entire community of researchers. TAIR has about 40,000 unique users each month from the Americas, Europe and Asia, and the average number of users each month has grown steadily since TAIR's founding.

But those who utilize the database often are interested in more than just Arabidopsis. "It's what everyone in plant biology uses, even in crop science," Rogers said.

A Community Shrinks

Having awarded TAIR two, five-year grants, the NSF in May 2009 declined to fully renew TAIR's funding. Instead, the NSF has granted TAIR an additional four years of steeply decreasing funding and encouraged the database to seek funding from other sources. By 2011, TAIR's NSF funding will cease.

The potential collapse of TAIR's funding threatens the field of plant genomics.

"The first people to go will be the computational biologists," Huala said. As these researchers rely upon publically accessible data, they are unlikely to pursue plant research if the information is not readily available. If computational biologists leave plant genomics, plant biology may fall

behind animal research, Huala said.

Other biologists also may be driven away from plant research. Because it provides graphical, easy-to-use interfaces, TAIR gives researchers access to genome-based data without requiring them to write computer programs, Rogers said.

Innovation vs. Infrastructure

Continuing to fund research infrastructure often runs counter to the NSF's focus on funding innovative research. When a resource or program like TAIR ceases to be innovative, the NSF would like to use its limited budget in other places, Huala said.

Indeed, TAIR may have fallen victim to an emphasis on new innovations in sequencing technology.

"With the flood of genomic data, it may not be the best expenditure to put so many resources into a few species," said Scott Roy, a postdoctoral fellow at Stanford University. A computational biologist, Roy said model organisms may begin to occupy a smaller percentage of genome data that technological advances have made inexpensive to produce. However, the direction of the field is still uncertain, Roy said.

But, although financial resources may limit their numbers, genomic databases have "a tremendous utility to inform closely related genomes," Huala said.

Additionally, though new sequencing technology can produce staggering amounts of raw data, genome databases integrate sequence information with gene descriptions and relevant publications. Some databases also are repositories for unpublished data and minor comments that would not otherwise be available.

Without genome databases, "that kind of information would be lost," Rogers said.

The Future of Databases

Like other National Institutes of Health-funded projects, many genomics databases are supported by grants that must be renewed every several years. While the NIH continues to support several databases, the grants for two major databases, Flybase and Saccharomyces Genome Database, are up for renewal in 2011.

As for TAIR, Huala has discussed the situation with officials at the NIH in hopes that they might fund the database. Although conversations are ongoing, the NIH seems "reluctant to take on another model," Huala said.

For now, TAIR is exploring other funding sources, including corporate sponsorships. Huala said she believes requiring users or institutions to purchase subscriptions may drive away many academic researchers.

Kyle M. Brown (kmbrown@asbmb.org) is an ASBMB science policy fellow.

Anticipation Growing for 2010 Yeast Meeting in Vancouver

There is budding anticipation for the 2010 Yeast Genetics and Molecular Biology Meeting (www.yeast-meet.org/2010/) July 27-August 1 at the University of British Columbia in Vancouver, Canada. More than 500 abstracts were submitted from which 85 will be selected as platform sessions. In addition, 100 applications were received for student travel awards.

SPECIAL TALKS

Besides highlighting the work of yeast researchers in platform sessions, the meeting will include a special symposium on "Discovery, Research and Society," featuring Nobel Laureates Paul Nurse (Rockefeller University) and Lee Hartwell (Fred Hutchinson Cancer Research Center, Seattle) and Mark Garneau, Canadian astronaut and member of Parliament.

There will also be a special lecture, "DNA ends: just the beginning" by Nobel Laureate Jack Szostak (Harvard University and HHMI).

AWARDS AND PRESENTATIONS

In addition to the special talks, there will be four awards and presentations made at this meeting to members of the yeast community. The awards and their recipients for 2010 are as follows:

■ **Lifetime Achievement Award** for lifetime contributions in the field of yeast genetics and outstanding community service.

Recipient: Paul Nurse, Rockefeller University, New York City

■ **Ira Herskowitz Award** presented to younger scientists whose cutting edge research and technological innovation has made the most significant impact on the field in the last 20 years.

Recipient: Brenda Andrews, University of Toronto, Canada

■ **Winge-Lindegren Address** is a lecture presented by scientists whose significant contributions and unique perspectives have provided exceptional leadership in the field.

Presenter: Jasper Rine, University of California, Berkeley

■ **Lee Hartwell Lecture** is named in honor of Nobel Laureate Lee Hartwell and is given to scientists whose research in yeast has made the most impact in the broader areas of biology.

Presenter: Randy Schekman, University of California, Berkeley

There also will be two GSA awards presentations. **Rodney Rothstein** (Columbia University Medical Center) will be presented with the **2009 Edward Novitski Prize** in recognition of his extraordinary creativity and intellectual ingenuity in solving significant problems in genetics research. **Marian Carlson** (Columbia University) will receive the **2009 GSA Medal**, which is given in recognition for outstanding contributions to the field for the past 15 years.

STILL TIME TO REGISTER

If you don't want to miss out on this exciting meeting, now is the time to register at http://www.yeast-meet.org/2010/pages/register.shtml. The deadline for advance meeting registration is June 24, 2010. Registration fees increase after that date. After registering for the meeting, attendees are reminded to reserve a room at the University of British Columbia at http://www.yeast-meet.org/2010/pages/housing.shtml. Housing reservations made after June 24th cannot be guaranteed at the conference rate.

The location of this year's Yeast meeting, Vancouver, Canada, is an added bonus for participants. The site of the 2010 Winter Olympics, Vancouver has pleasant daytime summer temperatures (~70s F, ~20s C), great outdoor activities, museums, theater and galleries to explore, sporting events, fine dining and more.

SPONSORS APPRECIATED

In addition to support from the Genetics Society of America, the Yeast meeting organizers, Chair Phil Hieter (University of British Columbia) and Co-chair Mark Rose (Princeton University) are grateful for the support from the sponsors listed below. GSA Executive Director Sherry Marts noted that "The interest in and support of this conference is a reflection of the outstanding quality of the program. We're looking forward to record attendance."

Platinum Sponsors:

- University of British Columbia, Vancouver
- Canadian Institute for Advanced Research (CIFAR)

Gold Sponsors:

- Institute of Genetics, Canadian Institute of Health Research (CIHR)
- Singer Instruments
- S&P Robotics, Inc.
- Genome British Columbia

Silver Sponsors:

- Sunrise Science Products
- PerkinElmer
- Affymetrix

Bronze Sponsors:

- Agilent Technologies
- Life Technologies
- TECAN Group Ltd
- Japanese Society of Yeast Genetic Forum (YGSJ)
- Lallemand

Obama Promotes Continued Investment in Science

by Jennifer Zeitzer, FASEB Office of Public Affairs, March 31, 2010.

After 14 months in office and amid continuing economic challenges, President Barack Obama has shown no signs that he is backing away from his campaign pledge to increase the federal investment in science and innovation. Shortly before the White House celebrated the one year anniversary of the *American Recovery and Reinvestment Act* (ARRA), the President released his fiscal year (FY) 2011 budget. Although the $3.8 trillion request included a three-year freeze on non-security discretionary spending, federal science programs were largely exempted from the funding restrictions.

Under Obama's plan, NIH would receive $32 billion, approximately $1 billion over FY 2010 (not including ARRA funds) and the agency would continue to dedicate approximately half ($17.1 billion) of its budget to research project grants (RPG's). The 2011 budget also provided inflationary increases of two percent for both competing grants and noncompeting continuations. In addition, the President proposed to increase Ruth Kirschstein National Research Service Awards (NRSA) stipends by six percent (although the total number of awards would be reduced from 2010 levels). Other areas of the NIH budget that would grow under the Obama budget include the Common Fund, the Office of the Director and buildings and facilities which would increase by $25.5 million (25.6 percent) over the FY 2010 enacted level.

The physical sciences community also fared well in the President's budget proposal, with NSF's budget increasing to $7.4 billion ($551.8 million over the 2010 level). That funding level would support Obama's goal of increasing the nation's total public and private investment in research and development to at least three percent of the gross domestic product (GDP). In addition, the 2011 request for NSF included an increase of 41 percent for the Major Research Equipment and Facilities Construction program and would continue efforts to triple the number of new Graduate Research Fellowship Program awards made each year by 2013.

Funding for the DoE Office of Science would grow to $5.1 billion, an increase of $218 million, to support approximately 26,000 researchers, 27,000 Ph.D.s, postdoctoral researchers, graduate and undergraduate students, and technicians, and assist investigators at more than 300 academic institutions. Individual program areas, including high energy physics, biological and environmental research, basic energy sciences, advanced scientific and computing research and workforce development for teachers and scientists also received higher funding.

Publication of the President's request represents the first step in determining the annual budget for the federal government. The House and Senate Appropriations Committees will spend the next several months assembling the 13 separate spending measures that will allocate funding for each agency and program. To prepare for this step, the Appropriations Committees held a series of hearings with senior administration officials to learn more about Obama's FY 2011 request. In early March, the Senate Labor-Health and Human Services (LHHS) Appropriations Subcommittee heard from Department of Health and Human Services (HHS) Secretary Kathleen Sebelius who discussed the $1 billion increase that was proposed for NIH. The Secretary explained that this level of funding would allow the agency to capitalize upon recent successful investments in biomedical research. Sebelius also thanked subcommittee chairman Tom Harkin (D-IA) and Senators Arlen Specter (D-PA) and Thad Cochran (R-MS), for their prior efforts to increase funding for NIH. Senator Harkin mentioned the significant increase for NIH as one of the items that he was particularly pleased to see included in the President's budget.

As the Appropriations Committees continued their review of the Obama request, signs emerged that the process of crafting the annual funding bills could face some additional challenges this year. House Republicans adopted a rule pledging to forego all earmarks, while Appropriations Committee Chairman, Representative Dave Obey (D-WI), announced a new ban on earmarks benefiting for-profit companies. Democrats and Republicans on the Senate Appropriations Committee reacted negatively to the ban on earmarks, underscoring uncertainty about whether the FY 2011 spending bills, many of which are not expected to be approved until after the November mid-term elections, will be

affected by efforts to limit funding for member projects.

Amid the uncertainty surrounding the funding bills, members of Congress began to publicly articulate their spending priorities. More than 70 members of Congress signed a letter to the House LHHS Appropriations Subcommittee requesting at least a seven percent increase for NIH. The letter, which was organized by Representatives Edward Markey (D-MA), Janice Schakowsky (D-IL), Rush Holt (D-NJ), Susan Davis (D-CA), Joe Courtney (D-CT) and Jackie Speier (D-CA), also noted that some members believe that NIH should receive an increase of as much as 12 percent to ensure that the nation does not shelve emerging discoveries or dismantle existing labs.

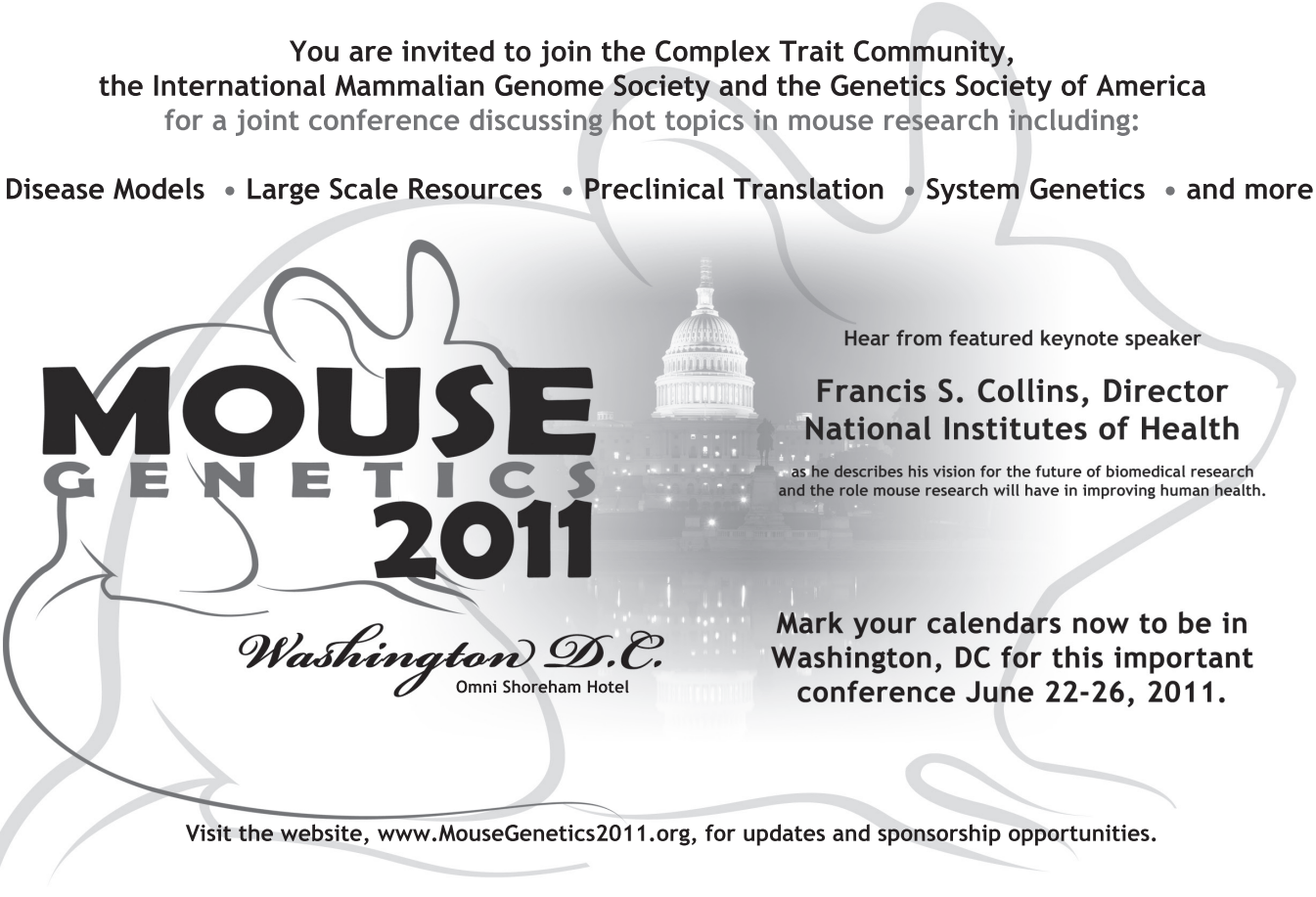
In addition, over 40 representatives joined a letter, sponsored by Representatives Judy Biggert (R-IL) and Rush Holt (D-NJ), seeking $5.12 billion for the DoE Office of Science. Furthermore, 70 members of Congress wrote to the House Commerce, Justice, Science Appropriations Subcommittee requesting $7.42 billion for the National Science Foundation, the same level as the Obama administration's budget request.

…it will take a vigorous advocacy effort from the scientific community to educate lawmakers about the need for sustained budgets for science.

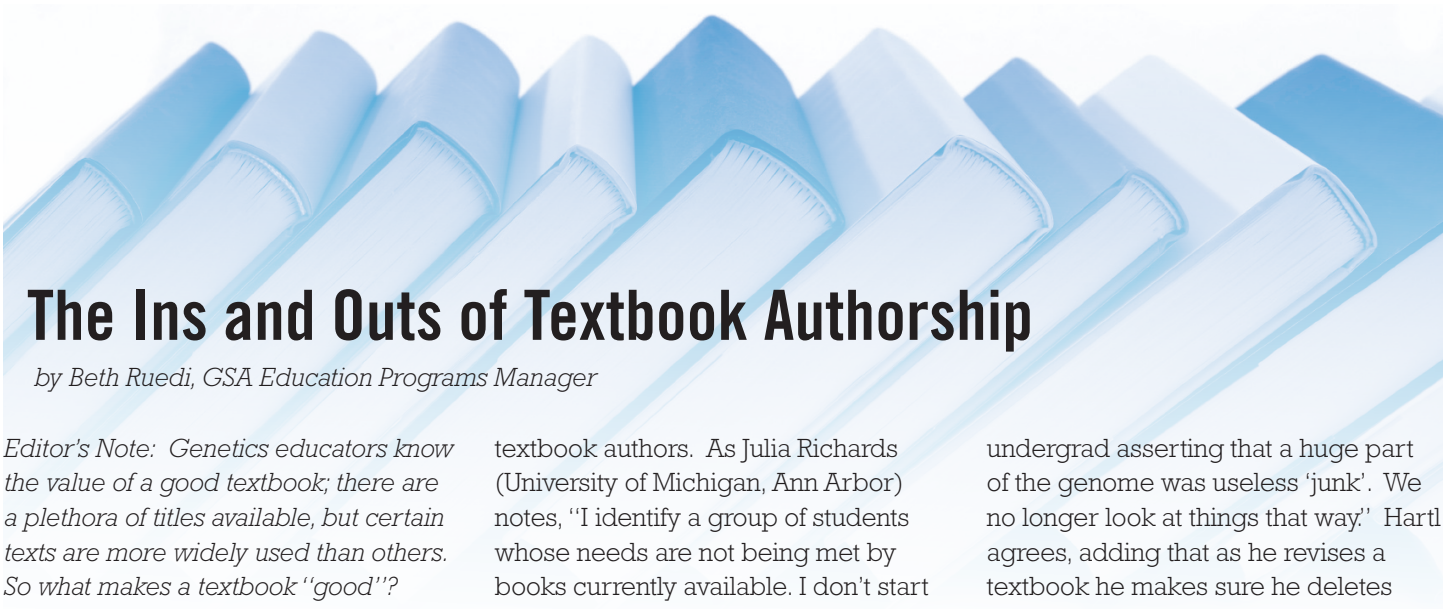
Even with the support of congressional champions for science, it will take a vigorous advocacy effort from the scientific community to educate lawmakers about the need for sustained budgets for science. Growing concern about the federal debt will be a significant obstacle to achieving the budget increases requested by President Obama and some of the more fiscally conservative lawmakers are engaged in efforts to cap spending below current levels. To that end, the Federation of American Societies for Experimental Biology (FASEB), of which the Genetics Society of America is a member, will be visiting Capitol Hill over the next few months, as well as engaging individuals at the grassroots level, to ensure that funding for research is steady and sustainable in order to take maximum advantage of exciting and expanding opportunities in science. Visit FASEB's website (http://www.faseb.org/Policy-and-Government-Affairs.aspx) to keep abreast of the latest developments on Capital Hill and learn how you can get involved in advocacy on behalf of science!

You are invited to join the Complex Trait Community,
the International Mammalian Genome Society and the Genetics Society of America
for a joint conference discussing hot topics in mouse research including:

• Disease Models • Large Scale Resources • Preclinical Translation • System Genetics • and more!



Visit the website, www.MouseGenetics2011.org, for updates and sponsorship opportunities.



The Ins and Outs of Textbook Authorship

by Beth Ruedi, GSA Education Programs Manager

Editor's Note: Genetics educators know the value of a good textbook; there are a plethora of titles available, but certain texts are more widely used than others. So what makes a textbook "good"? GSA's Beth Ruedi asked several successful textbook authors for their input on writing excellent, descriptive texts.

Textbook authorship can be particularly appealing to those who have the dual personalities of writer and scientist. Dan Hartl (Harvard University) was an English major before he fell in love with genetics. After developing a course packet for a non-major class, an editor approached him about turning that packet into a book; he's been writing textbooks ever since. However, turning extensive lecture notes into a textbook is no small task.

Targeting Your Audience

First you must assess your target audience, paying careful attention to how advanced they are in their education and their genetics background. Scott Freeman (Univ of Washington, Seattle) points out that this is why the majority of authors model their textbooks with a specific course in mind, "so that the author knows what level of preparation students have had and what the topics and general learning goals are."

At times, instructors will notice that their students aren't as prepared as they had anticipated, which is another reason why educators become textbook authors. As Julia Richards (University of Michigan, Ann Arbor) notes, "I identify a group of students whose needs are not being met by books currently available. I don't start out saying, 'I want to write a book on this, what level should I seek?' I start out saying, 'What is the background of the students whose need is not being met, whose need I want to meet by writing this book?'" Scott Hawley (Stowers Institute for Medical Research), a collaborator of Richards', agrees: "…in my experience, the invention is indeed mothered by classroom necessity."

Balancing Content and Readability

Even with a detailed set of lecture notes and a solid idea of what readers need, often an author must perform a balancing act with the content of the text. How does one determine what to include or exclude from their book?

Anthony Griffiths (University of British Columbia, Vancouver) places more emphasis on core principles than on specific applications: "The goal is to show how genetic inference is made… hence overall the emphasis is more on process than the discoveries."

Hawley also places a heavy emphasis on core topics, because he "factor[s] in heavily the concept that so-called facts can be pretty ephemeral in science." As Hawley explains, "Many of the 'facts' I was taught in college are either irrelevant now or wrong. For example, I heard many lectures as an undergrad asserting that a huge part of the genome was useless 'junk'. We no longer look at things that way." Hartl agrees, adding that as he revises a textbook he makes sure he deletes something before adding new material to make the text as concise as possible. When revising a book, he "starts at the beginning, reading word for word, sentence for sentence. I ask myself, 'is this needed? Is this relevant?'"

When an instructor is choosing a textbook for a course, clarity and readability are some of the main selling points. How should an author present complex topics in an understandable way? Richards notes: "The hardest part in writing about a complex topic is often not so much which topics to present, but rather choosing the order of presentation. You can't talk about C until you have defined B. You can't talk about B until you have defined A. But at the level of presentation of the course, defining A really requires that the student understands something about C." She adds: "If you find that you are sacrificing any of the three -- content, clarity, readability -- in favor of one of the others, then you have to back up and try presenting the material in some completely new way until you have nailed all three, since they are all essential."

Choosing a Collaborator

Considering the seemingly insurmountable obstacle of compiling so much information, it is no wonder than the majority of textbooks are

written collaboratively. How do authors choose a collaborator?

"They are chosen through personal contact; people we know about who have a good reputation in research, writing and pedagogy (and are available)" says Griffiths. Aside from their reputation in their field, they must also be willing to take on a challenge. Freeman suggests: "You have to have people that can 1) do a massive amount of work … 2) deliver it on time, and 3) do a high quality job." Hartl also notes: "When I choose the co-authors, it is people [who] a) I like and can work with, b) who complement what I can bring to the project [and] c) don't mind if I take the text they produce and edit it so that it has a uniform voice and level." This uniform voice and tone aids in the clarity of the text, and is incredibly important because many collaborators divide up the work by chapters. Freeman adds that a uniform voice can also be achieved with the help of the developmental editor at the publishing company.

New Editions

After an author has successfully published a textbook, which could take a couple of years, (Hartl says that the writing alone, if started from scratch, can take from 12 to14 months) there is the question of releasing new editions. Authors must first assess whether they want to keep the text updated at all.

When asked why he decides to put a book to rest, Hartl explains, "the publisher wants to discontinue, or I have competing interests and there is the limitation of hours in the day; none would be put to rest otherwise. I don't quit a chapter or paragraph until I think I have said it the best I can." Griffiths notes: "In most revisions the main goal is to improve the text pedagogically rather than to include the latest research (although obviously that is needed too)." Others agree, and try to release a new edition every 2-6 years. Authors, often limited by their obligations to research and teaching, do not revise their texts as often as they would like. Hawley and Richards both note how modern technology may improve that. Said, Hawley, "In a best of all worlds, which might be coming soon, all texts would be electronic and updating would be a continuous process." Richards adds: "We hope that the advent of electronic publishing venues will let us move to a continuous process of updating selected chapters and topics as new breakthroughs open up new concepts the students should know. In the past, with hard copy, the time elapsed has often been about five to six years, which is too long when a field is moving rapidly."

Finding a Publisher

Who courts whom if an educator wants to write a textbook? Does the publisher approach the author, or vice-versa? When Griffiths was co-teaching a course with David Suzuki, they compiled their notes "and had the bookstore make it up into a bound version that the students could buy (cheaply!). A rep from a book publisher saw it in the bookstore and approached us with an offer to publish it." Griffiths has since been asked by publishers to write texts before he has notes or a need, but has chosen the 'write first, publish later' route instead.

For his first book, Freeman and "Jon Herron had written a prospectus and some sample chapters for an evolutionary biology textbook and sent it to an editor we'd met." After that initial publication, Freeman says he "was approached -- they [publishers] start courting you if you can deliver." Hawley says that he's had both experiences: for his first book, he approached several publishers with a finished work. For others, publishers have contacted him. Richards mentions that for her textbook collaboration with Hawley, they were signed with the publisher for a revision while working out the contract details for the first edition: "Sometimes they want you to commit for future books once they know you are a success." Hawley adds: "Publishers go looking for good people to write good books. You can either contact them directly or 'let the word out' that you are interested and they WILL find you!"

So, for any aspiring textbook authors out there, *bonne chance!* As Hartl says, "The process is intense, but it is wonderful to be proud of a good thing."

Selected texts written by those interviewed:

Freeman, Scott and Jon C. Herron, 2007. *Evolutionary Analysis, 4th ed* (Prentice Hall: Upper Saddle River, NJ)

Griffiths, Anthony J.F., Susan R. Wessler, Richard C. Lewontin and Sean B. Carroll, 2007. *Introduction to Genetic Analysis,* (W. H. Freeman)

Hartl, Daniel L. and Elizabeth W. Jones, 2005. *Essential Genetics: A Genomic Perspective* (Jones & Bartlett Publishers)

Richards, Julia and R. Scott Hawley, 2005. *The Human Genome: A User's Guide* (Elsevier / Academic Press)

Record-Breaking 51st Annual Drosophila Research Conference Held in D.C.

By Beth Ruedi, GSA Education Programs Manager and Phyllis Edelman, Managing Editor, The GSA Reporter

As Washington, D.C. experienced a record-breaking April heat wave, the 51st Annual Drosophila Research Conference, sponsored by the Genetics Society of America, experienced a record-breaking number of registrants for this annual meeting. Nearly 1,670 PIs, postdoctoral, doctoral and undergraduate students registered for this meeting, which, according to Suzy Brown, the GSA Meetings Manager was "the largest number of registrants at any Drosophila conference."

From the beginning to the end of the four-day conference, attendees were treated to an immense variety of information, and could choose from 170 talks, more than 850 posters, and 13 workshops to satisfy their search for knowledge on Drosophila. Additionally, representatives from FlyBase, FlyMine, modENCODE, and other systems were there to walk researchers through demonstrations of new software and improved information content.

▲ Co-organizers Mike Fortini (Thomas Jefferson Univ, Phila), left and Leslie Pick (Univ of Maryland, College Park) kicking welcoming participants at the start of the meeting. (Photo courtesy of Susan Russo Gelbart)

▲ Historical panel members from l to r: Thom Kaufman (Indiana Univ) , Gerald M. Rubin (HHMI) and Allan Spradling (Carnegie Inst of Washington/HHMI). (Photo courtesy of Susan Russo Gelbart)

▲ Larry Sandler Award winner, Leonardo Barbosa Koerich (Federal Univ Rio de Janeiro) giving his presentation. (Photo courtesy of Susan Russo Gelbart)

In the Beginning

Starting Wednesday evening at the Opening General Session, attendees heard from the Larry Sandler Award recipient, Leonardo Barbosa Koerich (Federal Univ Rio de Janeiro, Brazil), whose innovative and elegant research has suggested that the Y chromosome is not, as had been thought, a degenerated X without one leg. He and his colleagues have completed thorough sequencing of 11 genes (originally identified on the Y chromosome of *D. melanogaster*) from 9 species in an effort to deduce the origin of gene content on the Y chromosome. Does information transfer from autosomes to the Y, or from the Y to an autosome? In fact, Y-linkage

◀ GSA Board Member Utpal Banerjee (UCLA), right, receives the 2010 Elizabeth W. Jones Award for Excellence in Education from GSA President Scott Hawley, left, and Executive Director Sherry Marts, center. (Photo courtesy of Susan Russo Gelbart)

▲ Thom Kaufman, right, presents the 2010 George W. Beadle Award to Bill Gelbart. (Photo courtesy of Susan Russo Gelbart)

◀ Hugo Bellen (Baylor College of Medicine) introducing the historical session at the opening session of the Drosophila meeting. (Photo courtesy of Susan Russo Gelbart)

varied incredibly between species and between genes. The results from these studies indicated an incredible history of losses and gains of gene content on the Y chromosome, and this is the same pattern that was recently reported in the Y chromosome of chimps and humans. The old canonical theory of a degenerated X is not fitting well with the current sequencing data obtained for the Y. Instead, the data suggests that the ancestral chromosome to the Y was a supernumerary chromosome that gained the ability to pair with the X, and acquired fertility genes that increased male fitness. Those things combined might morph a supernumerary chromosome into the Y that we may have to learn to love.

The historical retrospective on Drosophila, always a highlight of the conference, followed the Sandler Award Lecture. A panel presentation was introduced by Hugo Bellen (Baylor College of Medicine) and composed of Thom Kaufman (Indiana Univ), Gerald M. Rubin (HHMI), Allan Spradling (Carnegie Institution of Washington/HHMI), Sue Celniker (Lawrence Berkeley National Lab), Norbert Perrimon (Harvard Medical School, HHMI), and William Gelbart (Harvard Medical School). Thom Kaufman began by highlighting the advances of Drosophila genetics from 1975, characterized as "B.C. (before cloning) and A.D. (after DNA)" (and pre- and post-full genome sequence.) He offered an illuminating look at the incredible advances in the Drosophila field over a relatively short period of time. From cloning to transposable elements, GAL4-UAS to RNAi, these leading researchers in the field detailed the struggle to conquer Drosophila genetics before the advent of the newer, cheaper, and faster technology we have today. The leaps and bounds made after 2000 are astounding; the quantity of sequence information generated in 2009 was 800 times that of sequence information generated in the

continued on page twelve

continued 11

Record-Breaking 51st Annual Drosophila Research Conference

previous eight years from 2000-2008. This inspiring retrospective was closed by Bill Gelbart, a founding member of FlyBase, with a look at information sharing about Drosophila genetics from the first print catalog developed by Dan Linsley to the development of the online sequence map and database of FlyBase, first funded in the early 1990s by the National Institutes of Health.

First Day Starts with Sleep

Awake and alert for Thursday morning's plenary presentations, participants were treated to a talk by Chiara Cirelli on "Sleep and Synaptic Plasticity." She detailed her findings supporting the idea that sleep is essential, and has profound effects on synaptic strength and activity as well as metabolism. In essence, sleep might work to consolidate memories and renormalize synapses, and also reduce them in size to prevent them from dominating the brain's energetic resources. Gene expression differences have been documented in sleeping vs. awake flies and other animals. To examine the changes in neurons that express these candidate genes, Cirelli and her collaborators investigated flies after sleep, after sleep deprivation, and after several hours of wakefulness. The neurons did indeed change between these groups, with sleep deprived flies showing increased expression, which was not solely due to circadian rhythm changes. Her work provides a great deal of support for the synaptic renormalization hypothesis.

Focus on Students

Nearly 100 undergraduate and more than 500 graduate students registered for this meeting. This was the first Drosophila meeting where undergraduates were specially invited to attend. Particularly impressive was the Saturday workshop highlighting "Drosophila Research and Pedagogy at Primarily Undergraduate Institutions." The undergraduate presentations were of an incredibly high caliber, as were the undergraduate posters. The GSA will continue to work with PUIs to promote this worthwhile learning experience and increase undergraduate attendance to the Drosophila conferences.

The annual Student-Mentor Luncheon enabled nearly 60 graduate students, undergraduates, and postdoctoral fellows, to ask questions and share their concerns with well-established academics. Topics ranged from finding a job in academia to writing a successful grant (postdoc or R01), teaching at a primarily undergraduate university to balancing work and family. Feedback from the event showed that the students left the luncheon with critical knowledge for advancing in their field and a new contact for further mentoring.

From Fruit Flies to Butterflies

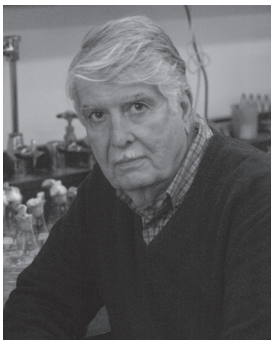
Finally, the Conference closed with an especially interesting plenary talk which highlighted – butterflies. This may have surprised some conference-goers, but as speaker Antonia Monteiro pointed out, the work that she is doing with butterflies was made possible by pioneers in fruit fly research. She posed a question relevant to any geneticist: How do we study the evolution of novel complex traits? Using eyespots in Nymphalid butterflies, she has started to deduce the answers to whether eyespot number has increased or decreased over time, whether evolutionary forces worked to develop eyespots one gene at a time, or if an already-existing gene network was co-opted to create the phenotype. This research is incredibly exciting and will have broad implications across a myriad of phenotypes. Her approaches, including phylogenetics, functional analyses, and transgenic butterflies, have all been made possible thanks to Drosophila.

Kudos to the Organizers

Co-organizers Debbie Andrews (Johns Hopkins Medical School), Mark Fortini (Thomas Jefferson Univ), Leslie Pick (Univ of Maryland, College Park) and Steven Hou (NIH) deserve kudos for their outstanding selection of speakers and topics. As Michelle Starz-Gaiano (Univ of Maryland, Baltimore), a new faculty member, summed it up, "I thought the fly meeting was great this year. . . . I saw lots of exciting and unpublished science. . . .I also thought there were more workshops than usual, which really allowed people to focus on their area of interest. . . . It was an inspiring meeting all around."

Plans for next year's 52nd Annual Drosophila Research Conference, March 30-April 3, 2011 in San Diego are already underway with the formation of a coordinating committee consisting of Giovanni Bosco (Univ of Arizona, Tucson), Dan Barbash (Cornell Univ) and Leslie Griffith (Brandeis Univ).

continued 1 GSA Honors Five Members


Alexander Tzagoloff, Ph.D.


Thomas Cline Ph.D.


Barbara J. Meyer, Ph.D.


William M. Gelbart, Ph.D.

Utpal Banerjee, Ph.D.

We are indebted to these recipients not only for their work, but the contributions they have made to the quality of our community. Their work illustrates the power of genetic analysis, the critical importance of research in genetically tractable model organisms, and the ability to communicate that knowledge to others. We congratulate them all most heartily," said GSA President Scott Hawley.

The recipients of these awards represent several of the model organism research communities within GSA including *Saccharomyces cerevisae* (yeast), Drosophila (fruit fly), and *C. elegans* (the roundworm). The awards and their recipients are listed below:

• **Recipient: Alexander Tzagoloff, Ph.D.**, Columbia University.

Award: **Thomas Hunt Morgan Medal** for lifetime contributions in the field of genetics.

Using yeast as a model system, Dr. Tzagoloff has defined the biogenesis and function of the mitochondrial respiratory chain. He was the first to systematically define the nearly 400 nuclear (PET) genes required for respiration in yeast. His work has not only influenced yeast researchers, but has also affected research in human disease, apoptosis and cancer genetics. Through the years he has developed an extensive collection of yeast strains, which he has generously shared with colleagues worldwide.

• **Recipient: Thomas Cline, Ph.D.**, University of California, Berkeley.

Award: **Edward Novitski Prize** for exhibiting an extraordinary level of creativity and intellectual ingenuity in solving a significant problem in genetics.

Dr. Cline studies sex determination in the fruit fly, *Drosophila melanogaster*, and has demonstrated that *Sex-lethal (Sxl)* is the master regulatory switch for sex determination and dosage compensation, exerting its control through interactions with RNA. These important discoveries in the fields of sex determination and developmental genetics led to an important revision of Calvin Bridges' model of sex determination. Dr. Cline is a previous recipient of the NAS Award in Molecular Biology.

• **Recipient: Barbara J. Meyer, Ph.D.**, University of California, Berkeley. Award: **Genetics Society of America Medal** for outstanding contributions to the field of genetics in the last 15 years.

Over decades of research, Dr. Meyer has relentlessly and patiently pursued complex problems to their resolution. She studies sex determination in the roundworm, Caenorhabditis elegans, to determine fundamental principles in developmental biology, including the regulation of meiosis

continued on page fourteen

DROSOPHILA INCUBATORS

Incubators with controlled temperature, lighting, and humidity for fly research. Chambers have a 15-30°C temperature range*, highest quality Electrofin© coated coils, RH meter, casters… and many other features, depending on the level of sophistication needed. Six sizes (from 6 c.f. to 72 c.f. capacity) and four levels of temperature, lighting, and humidity control.

*Extended temperature ranges available. Incubators for mosquito and sand fly research are also available.

Powers Scientific, Inc.
800.998.0500 • tel 215.230.7100
www.powersscientific.com

ASHG
THE AMERICAN SOCIETY OF HUMAN GENETICS
60th Annual Meeting
NOVEMBER 2–6, 2010 WASHINGTON, DC
www.ashg.org/2010meeting

60th ANNUAL MEETING

Abstract Submission and Student Awards Deadline: June 2, 2010
• 24 invited sessions (120 scientific, education, and social issues presentations)
• 40 platform sessions (400 abstract-driven presentations)
• 6 plenary platform presentations and the Distinguished Speakers' Symposium
• Special Symposium: Perspectives on Science from "Inside the Beltway"
• Student programs including student-mentor luncheon, career development and networking
• Student travel and minority travel awards available

For abstract submission, the preliminary schedule including the invited sessions schedule, and meeting information, visit the 2010 ASHG Meeting Web site: www.ashg.org/2010meeting.

continued 13 GSA Honors Five Members

and X-chromosome dosage compensation. In addition to being an HHMI investigator, Dr. Meyer is a member of the U.S. National Academy of Sciences, a fellow of the American Academy of Arts and Sciences, the American Academy of Microbiology, and the American Association for the Advancement of Science.

• **Recipient: William M. Gelbart, Ph.D.**, Harvard University.

Award: **George W. Beadle Award** for outstanding contributions to the community of genetics researchers.

For the past two decades, Dr. Gelbart has devoted himself to creating and maintaining FlyBase, the central digital repository that enables the world-wide Drosophila community to connect genetic and molecular data with the Drosophila genome sequence. FlyBase is the model for other model organism databases and Dr. Gelbart also serves on the Scientific Advisory Boards of WormBase, ZFIN, TAIR and GRIN, the National Human Genome Research Institute (NHGRI) Large-Scale Genome Sequencing Network Advisory Committee, and the NHGRI National Advisory Council. He is Chair of the NHGRI Coordinating Committee for Selection of Large-Scale Sequencing Projects, and a Director of Genome Canada. In addition to his database work, Dr. Gelbart is a developmental geneticist interested in understanding the molecular basis of pattern formation in higher order animals.

• **Recipient: Utpal Banerjee, Ph.D.**, University of California, Los Angeles.

Award: **Elizabeth W. Jones Award for Excellence in Education** in recognition of a significant and sustained impact on genetics education.

A dedicated and award-winning educator of both undergraduate and graduate students, Dr. Banerjee has designed large-scale genomics projects involving hundreds of undergraduates in research. These research-based courses have resulted in the publication of findings with dozens of students as contributing authors – many of whom developed an interest in exploratory science as a career. In 2000, UCLA named Dr. Banerjee as one of the "Best 20 Professors" of the "Bruin Century." He is also a fellow of the American Academy of Arts and Sciences and an HHMI professor.

Bill Gelbart and Utpal Banerjee were presented with their awards at the 51st Annual Drosophila Research Conference in Washington, D.C. Thomas Cline, Barbara Meyer and Alexander Tzagoloff will receive their awards at the GENETICS 2010: Model Organism to Human Biology meeting in Boston, June 12-15.

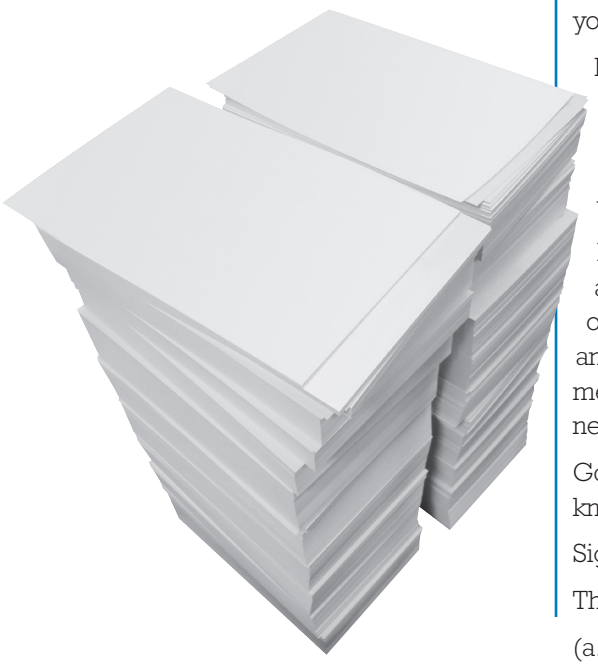
For more information about each award and for a list of past recipients, please visit the GSA Awards page at http://www.genetics-gsa.org/pages/awards.shtml.

Dear Abbot,

I am finishing my dissertation and would like to plan my thesis defense. However, my adviser does not seem too concerned with this; any chapters I have recently given her for comment are gathering dust on her desk. From time-to-time I ask her if she has looked at them, but she always says it is ''next'' on her to-do list. I am worried that I will not finish in a timely manner, or be able to publish any of my thesis work! Please help.

Sincerely,

Panicked in Palo Alto



Dear Panicked,

Never fear -- there are several options available to help you resolve this issue. Unfortunately, what you are describing can be a common problem.

First, let's outline some of the factors that might be preventing your adviser from focusing on your work. This is not meant to excuse your adviser's behavior; in academia, one of our ethical obligations is to mentor students effectively. However, knowing the root of the problem may help you to better understand your situation.

Researchers are at times over-committed, having accepted responsibilities outside of the typical research, teaching, and service obligations expected from their institution. While titles such as department head or board member may be coveted, they greatly reduce the amount of time the PI can devote to his or her students. Additionally, if you are asking for comments on a manuscript or thesis chapter close to a grant deadline, your adviser might see the grant as her number one priority. A similar situation can arise if you are competing with a finishing post-doc or another finishing grad student who has been in her lab longer than you.

Aside from issues with time commitment and balancing workload, there may be a more basic problem here. Some PIs have never been taught how to be a good adviser but find themselves charged with mentoring students and shaping careers. Advising is not necessarily something that comes naturally; it takes practice and a good role model. It is possible that your academic ''grandparent'' -- your adviser's adviser -- also did not respond in a timely manner when commenting on her work, and thus your adviser feels that this is perfectly appropriate and normal.

Now, let's focus on your options in this situation. My first suggestion is for you to meet with your adviser so you can specifically voice your concerns. Tell her that you are worried about your timeline instead of simply asking her if she has taken a look at your work. You need to get her to refocus her attention on you. If you have already tried this, or if you give it a try and still see no change, then it's time to ask for outside help.

Having another faculty mentor review your work, discuss your career, or provide advice can be extremely helpful. It is especially useful to have another faculty member act as a co-adviser, whether official or unofficial, specifically because of situations like the one you are in. A little pressure from a colleague may just get your adviser to focus on you.

If your adviser still makes no move to review your work, even after she knows that another faculty member has assisted you, consider meeting with your department head. The chair of your department or program will want to aid in the timely, successful graduation of you and all the departmental students; in your case, that might mean putting some necessary pressure on your adviser.

If none of these ideas help your situation, then I would suggest turning to a resource outside of your department: a graduate student advocate, or ombudsman. Advocates are specially trained in mediation and conflict resolution, and are available for students at most institutions. They can provide effective methods of resolution while maintaining your confidentiality, if you feel that is necessary.

Good luck with your dissertation and the resolution of this problem. Please let me know how you reach a successful outcome.

Signed,

The Abbot

(a.k.a. Beth Ruedi, Genetics Society of America, eruedi@genetics-gsa.org)

Policy Update

by Lynn Marquis, National Director, Coalition for the Life Sciences

NIH and FDA Announce a New Partnership

On Wednesday, February 24, 2010, the National Institutes of Health (NIH) Director Francis S. Collins, M.D., Ph.D., and the US Food and Drug Administration (FDA) Commissioner Margaret Hamburg, M.D., announced a new collaboration supporting translational and regulatory science. The Department of Health and Human Services Secretary Kathleen Sebelius was also on hand and delivered prepared remarks.

The announced plan calls for the creation of a joint NIH-FDA leadership council. The council's goal will be to accelerate the process of moving potential new therapies and treatments from research to market—from the microscope to the marketplace.

Secretary Sebelius noted, ''We've all been following the remarkable advances in biomedical sciences led by the NIH with great enthusiasm for years. However, much more can be done to speed the process from new scientific discoveries to treatments for patients.''

The group is expected to hold its first public meeting some time this spring, during which it will solicit input from the public, said Collins. NIH and FDA will also make $6.75 million available over the next three years to help fund regulatory science research, said officials. The NIH will contribute its share of the funding from common fund dollars.

University Research Infrastructure Needs Federal Support

The House Committee on Science and Technology's Subcommittee on Research and Science Education held a hearing in late February to examine the research and research training infrastructure of universities and colleges. The hearing was held as part of the Committee's effort to reauthorize the America COMPETES Act. Members and witnesses focused on academic research facilities, cyberinfrastructure capabilities, and the appropriate role of the federal government in sustaining such infrastructure.

In his opening remarks, Chairman Daniel Lipinski (D-IL) recognized that successful research and development takes more than intellectual freedom and grant funding. It also takes state-of-the-art lab space, networks, instruments, and computing facilities. He stated, ''Public institutions especially are suffering as the recession has eroded state support. I am worried that unless we actively modernize our R&D facilities that we could not only be spending federal research dollars inefficiently, but that we could lose our position as scientific leaders, finding it harder to attract top scientists and engineers.''

One of Chairman Lipinski's objectives was to hear witnesses on whether the NSF should once again directly invest in research infrastructure for universities.

Witnesses testifying at this hearing included, Albert Horvath, Senior Vice President for Finance and Business at The Pennsylvania State University; Thom Dunning, Director of the National Center for Supercomputing Applications at the University of Illinois at Urbana-Champaign; Leslie P. Tolbert, Ph.D., Vice President for Research at the University of Arizona; and John R. Raymond, Ph.D., Vice President for Academic Affairs and Provost, Medical University of South Carolina and Chair, State of South Carolina EPSCoR Committee.

According to the Committee's website, members and witnesses also discussed the balance between investing in the research itself and investing in the infrastructure that underlies and supports both research activities and workforce training. Witnesses noted that investments in infrastructure at their universities have increased the productivity of researchers. They expressed the hope that adequate support for both areas could be achieved without detracting from one or the other.

The witnesses concurred that the infrastructure necessary to perform cutting edge-research is expensive. As a result, many of our nation's research universities are falling behind

continued on page nineteen

and in new organisms whose genetic characterization has just begun. This new journal will publish papers describing ground-breaking studies, such as the major mutant screens or the detailed SNP maps for new model systems that are a necessary prelude to exciting and truly transformative genetics. It will also publish extensive sequence and population studies, as well as including a section for the very good science that often comes out of research-based undergraduate education.

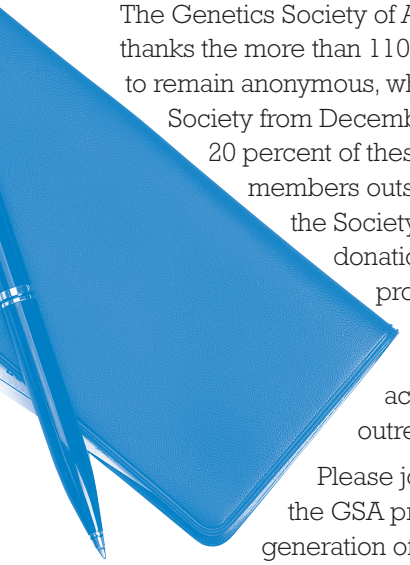
Still, all of this is just a beginning – the best ideas regarding what the Society can do to make itself important to your scientific life need to come from you. Both our Executive Director Sherry Marts (smarts@genetics-gsa.org) and I (rsh@stowers.org) encourage you to let us know what you think we *should* do, or *could* do, to make your GSA membership more valuable to your career. We look forward to hearing from you.

With best wishes,

Scott Hawley, President

rsh@stowers.org or society@genetics-gsa.org

Thank You to Our December 2009-March 2010 Donors



The Genetics Society of America acknowledges and thanks the more than 110 members, many of them desiring to remain anonymous, who have given donations to the Society from December 2009 to March 2010. Nearly 20 percent of these donations came from GSA members outside of North America, reflecting the Society's impact around the world. These donations support numerous ongoing programs and activities of the Society, including student awards at the GSA Conferences, public policy activities, GSA media and public outreach, and educational activities.

Please join your colleagues in supporting the GSA programs and especially, the next generation of geneticists by donating online at www.genetics-gsa.org/pages/joinrenew.shtml when you pay or renew your 2010 dues. You can also donate at the GSA online site www.genetics-gsa.org/pages/donate_gsa.shtml or send a check, payable to "Genetics Society of America" with "donation" written in the memo to: GSA, 9650 Rockville Pike, Bethesda, MD 20814, Attn: Sherry A. Marts, Executive Director.

Boosters ($100+)

Mary J. Clancy, Univ New Orleans, New Orleans, LA
Jay C. Dunlap, Dartmouth Med School, Hanover, NH
Bikram S. Gill, Kansas State Univ, Manhattan, KS
Marian R. Goldsmith, Univ Rhode Island, Kingston, RI
Philip C. Hanawalt, Stanford Univ, Stanford, CA
Michael Lichten, CCR/NCI, Bethesda, MD
Dan L. Lindsley, Univ California, La Jolla, CA
Matthew S. Meselson, Harvard Univ, Cambridge, MA
Lynn Miller, Hampshire Col, Amherst, MA
Rock Pulak, Union Biometricia, Inc., Holliston, MA
Allan C. Spradling, Carnegie Institution,HHMI, Baltimore, MD
Kelly Tatchell, Louisiana State Univ Med Ctr, Shreveport, LA
Susan R. Wessler, Univ Georgia, Athens, GA
Norma P. Williams, Howard Univ, Washington, DC
Anonymous (6)

Supporters ($50-99)

Satyanarayana Ande, National Cancer Institute, Frederick, MD
Winifred W. Doane, Arizona State Univ, Tempe, AZ
Albert H. Ellingboe, Univ Wisconsin, Madison, WI
Jack Favor, HZM-Inst Humangenetik, Neuherberg, Germany
Walter E. Hill, Seattle, WA
Laura A. Lee, Vanderbilt Univ Medical Ctr, Nashville, TN
Erik A. Lundquist, Univ Kansas, Lawrence, KS
Susan L. McNabb, Univ Washington, Seattle, WA
F. Pardo-Manuel de Villen, Univ North Carolina, Chapel Hill, NC
John Plenefisch, Univ Toledo, Toledo, OH
James H. Roberds, Harrison Expt For Saucier, MS
Judith L. Yanowitz, Magee-Womens Research Institute, Pittsburgh, PA
Kelvin Yen, UMass Med, Boston, MA
Anonymous (13)

Friends ($1-49)

Kirk A. Bartholomew, Sacred Heart Univ, Fairfield, CT
Edward Blumenthal, Marquette Univ, Milwaukee, WI
Monica L. Boyle, Dart NeuroScience, San Diego, CA
Beverly Clendening, Hofstra Univiversity, Hempstead, NY
Douglas G. Cole, Univ Idaho, Moscow, ID
Catherine A. Coyle-Thompson, California State Univ, Northridge, CA
Jonathan Andrew D'Ambrozio, Essex, MD
Sheng-Li Ding, Texas A&M University, College Station, TX
Nina V. Fedoroff, Pennsylvania State Univ, University Park, PA
Richard A. Hackel, Oakland Gardens, NY
Marie-Theres Hauser, BOKU-Univ Natural Res/AFS, Vienna, Austria
James E. Hopper, Ohio State Univ, Columbus, OH
Hwei-Jan Hsu, Owings Mills, MD
Barbara B. Knowles, A*STAR, Institute of Medical Biology, Singapore
Matthew B. Mahoney, Newton, MA
Beth A. Montelone, Kansas State Univ, Manhattan, KS
Michael G. Muszynski, Iowa State Univ, Ames, IA
Elizabeth C. Raff, Indiana Univ, Bloomington, IN
Rodney J. Rothstein, Columbia Univ Med Ctr, New York, NY
James A. Waddle, Southern Methodist Univ, Dallas, TX
Colette M. Witkowski, Missouri State Univ, Springfield, MO
Anonymous (44)

Nine Students Receive Posters Awards at the DROS Conference

A committee of expert Drosophila researchers selected nine students to receive poster awards at the 51st Annual Drosophila Research Conference in Washington, D.C. last month. Students were selected for first, second, and third place awards for each of three academic levels: postdoctoral, graduate and undergraduate. For the first time, undergraduate students received awards for posters they submitted. In recognition of their outstanding posters, all recipients of place awards received a monetary allocation.

In addition, three students at each academic level received honorable mentions for their posters. All student winners are listed below.

Postdoctoral Fellow Posters

First: Jeremiah J. Zartman, Princeton Univ, NJ, "Negative feedback bends the gene expression boundary in a developing tissue" (666C). PI: Stanislav Shvartsman.

Second: Hiroshi Ishimoto, Univ of Iowa, Iowa City, "Non-genomic actions of the steroid hormone ecdysone in adult *Drosophila*" (594C). PI: Toshihiro Kitamoto.

Third: Jianhua Huang, Univ of Maryland, College Park, "TGF-β Signaling Regulates *Drosophila* Metamorphosis by Activating Expression of JHAMT, a Key Regulatory Enzyme of Juvenile Hormone Biosynthesis" (704B). PI: Jian Wang.

Graduate Student Posters

First: W. Ryan Williamson and Dong Wang, Univ of Texas Southwestern Medical Center, Dallas, "A dual function of the v-ATPase reveals a neuron-specific degradation pathway in Drosophila" (191B). PI: P. Robin Hiesinger.

Second: Vafa Bayat, Baylor College of Medicine, Houston, TX, "Mutations in the Mitochondrial Methionyl-tRNA Synthetase Cause Neurodegeneration in *Drosophila* and Humans" (386B).

Third: Andrew D. Skora, Carnegie Institution of Science, Baltimore, MD, "Epigenetic Stability Increases in the *Drosophila* Follicle Stem Cell lineage" (760A). PI: Allan Spradling. Skora just received his Ph.D. at Johns Hopkins University and is now a postdoc researcher.

Undergraduate Student Posters

First: Cloyce E. Nelson, Univ of New Mexico, Albuquerque, "Deciphering cis-regulation in different adult muscle" (741C). PI: Richard Cripps.

Second: Cassandra Amesoli, New Mexico State Univ, Las Cruces, "Identifying Rap1 Interacting Genes in Drosophila Eye Development" (157A).

Third: Alexander M. Tseng, University of Washington, Seattle, "Dac and Dll interact with each other in leg to wing transdetermination" (536B).

Honorable Mentions

Postdoctoral :

- **Ioannis Eleftherianos**, Institute Biol Molec et Cellulaire, Strasbourg, France (562A)
- **Karen Beckett**, National Institute for Medical Research, London, United Kingdom (240C)
- **Patrick M. Ferree**, Cornell Univ, Ithaca, NY (291C)

Graduate Students:

- **Matt Sieber**, Univ of Utah, Salt Lake City (698B)
- **Soumya Banerjee**, Miami Univ, Oxford, OH (628A)
- **Ryan M. Baxley**, Univ of Iowa, Iowa City, (516C)

Undergraduate Students:

- **Alicia R. Martin**, Univ of Washington, Seattle (384C)
- **Embriette Hyde**, Grand Valley State Univ, Allendale, MI (600C)
- **Vishal K. Patel**, Boston Univ, MA (273C)

The poster abstract of each award recipient can be found at www.drosophila-conf.org/2010/abstracts/search.html . Search by abstract number located in parentheses above.

Jeremiah J. Zartman, Princeton Univ.

Hiroshi Ishimoto
Univ. of Iowa

Jianhua Huang
Univ. of Maryland

Andrew D. Skora
Carnegie Institution of Science

Cloyce E. Nelson
Univ. of New Mexico

in their ability to provide the physical infrastructure – both the laboratory buildings and the high-end technical facilities in those buildings — needed to keep our researchers working at full capacity.

Tell Congress Your ARRA Story

The Coalition for Life Sciences (CLS) continues to encourage practicing scientists who have benefitted from President Obama's stimulus package — the American Recovery and Reinvestment Act (ARRA) — to write their members of Congress.

Some members of Congress and of the press question the success of this funding and the integrity of some ARRA-funded projects. Those opposed to ARRA have appeared on TV talk shows, written op-eds in their local newspapers, and continue to beat the drum about ARRA's perceived failure. Unless this misperception is corrected, the public and the rest of Congress will begin to believe this negative hype.

To dispel any negative impressions, if you have received ARRA funding for your research, tell Congress how the ARRA dollars are really being spent. CLS knows that scientists across the country are using ARRA funds to advance scientific knowledge in the hopes of improving the health of all citizens. ARRA-funded research also is having a positive impact on the economy thanks to the purchase of lab equipment and supplies, and the creation or preservation of lab staff positions.

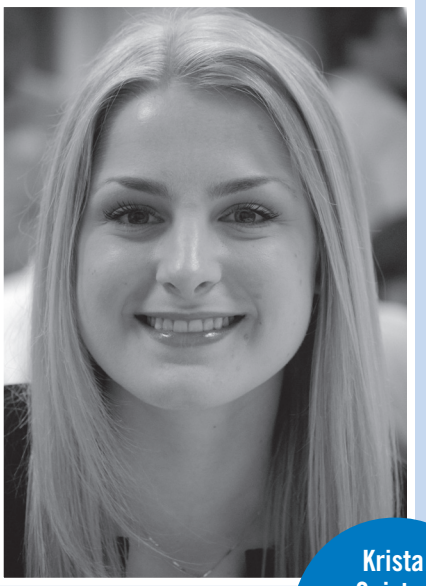
The CLS has posted a sample letter, which allows you to input your personal story. To take action, go to http://capwiz.com/jscpp/home/, type your zip code in the box to your right. You will be automatically forwarded to a sample letter. You can edit the letter and send it to your elected officials from this site. We also encourage you to forward this alert to your friends and colleagues. Capitol Hill needs to hear the truth about the impact of ARRA funding in biomedical research.

Two Students Receive GSA-Sponsored Awards at IGMC

The GSA congratulates two students who won GSA-sponsored poster awards at the 23rd Annual Conference of the International Mammalian Genome Society held in November 2009 in La Jolla, California. The two students and the titles of their award-winning posters are:

Amy Baran
Thomas Jefferson University

• **Amy Baran**, Department of Microbiology and Immunology, Thomas Jefferson University, Philadelphia, PA, "Intestinal Tumorigenesis and Modifier of Min 2 (Mom2): From Suppression to Progression". Amy was a doctoral student in Linda Siracusa's lab at the time of the meeting and is now a newly-minted Ph.D.



Krista Geister
University of Michigan

• **Krista Geister**, Department of Human Genetics, University of Michigan, Ann Arbor, MI. "Identification of the Molecular Basis for Autosomal Recessive Skeletal Dysplasias in Mouse and Man". She is a graduate student in Sally Camper's lab.

Genetics Society of America
9650 Rockville Pike
Bethesda, MD 20814-3998

Non-Profit
U.S. POSTAGE
PAID
Bethesda, MD
Permit No. 4748

GSA MAY-SEPTEMBER 2010 CALENDAR