Genetics Society of America

GENEtics

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

From the President's desk:

Since the inception of the newsletter in 2004, this column has been used primarily to inform you about important initiatives undertaken by GSA officers and directors in efforts to add new vitality and momentum to the society. We have talked about our new biennial general meeting. We have talked about important changes being made in the organization and appearance of *GENETICS*. We have talked about new proposals underway to support and promote education in genetics. These new initiatives expand on our other ongoing activities such as sponsorship of the organismal meetings and our participation in the Joint Steering Committee for Public Policy to advocate for federal funding for biomedical research and to influence public policy on science related issues. It is our hope that the new and ongoing activities serve the professional needs and interests of our membership and provide sufficient motivation for individuals who share these interests to want to be part of the GSA.

However, for the most part, the dialogue with GSA members has mostly been one way – from officers and directors to members. There are many reasons why an individual would choose to join (or not join) a professional society, but we lack sufficient data to know what those key factors are. In particular, we do not know what you, our members, and our potential members perceive about GSA membership as being of most value or what you would like to see the Society do that would increase its relevance and appeal to you. Especially now, when our journal is freely available online, why do you choose to join the GSA? To be part of a professional community of individuals with shared interests and goals? Because of an interest in supporting the GSA's promotion of genetics research and education? To obtain discounts on registration for organismal meetings or on page charges for publication in *GENETICS*? If you are not yet a member of the GSA, what are the reasons for not joining? What other activities would you like to see the Society engage in that would encourage you to join?

In addition to these questions, there are many other important issues the GSA leadership will have to deal with in the near future for which input from the membership would be extremely helpful. Among them are:

- How important is a general meeting to you? Should the meeting be kept relatively small or expanded? If expanded, how and in what directions?
- What are your feelings about the prospect of eliminating a print version of *GENETICS* and publishing exclusively online?
- What features would you like to see added or improved on the GSA website?

Continued on page 15

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Presidents Elected to National Academy of Sciences

Congratulations to GSA President Barry Ganetzky, University of Wisconsin, Madison, and Past-President Terry L. Orr-Weaver, Whitehead Institute, MIT, Cambridge, MA, on their election to the National Academy of Sciences in April. They join Allan C. Spradling, GSA vice-president (president elect), Carnegie Institution, Baltimore, MD, who is already a member of the NAS.

Other GSA members elected to the NAS this year were Joseph R. Ecker, Salk Institute of Biological Studies, San Diego, CA; and Anthony A. James, University of California, Irvine. Two of those elected as foreign associates are Eugenia M. Del Pino, Pontifica Universidad Catolica del Ecuador, Quito; and Longping Yuan, China National Hybrid Rice Research and Development Center, Hunan, People's Republic of China, both of whom are recipients of Journals donated by GSA members. Joseph Gall, Carnegie Institution, Baltimore, MD, donates his copy of the Journal to Del Pino and Kim McKim, Waksman Institute, Piscataway, NJ is the donor for Yuan's copy, which shows that a member's donation does make a difference.

Top right: Terry Orr-Weaver, GSA past president and Barry Ganetzky, GSA president receive a champagne toast on being named to the NAS. Right; Allan Spradling, GSA vice-president, is also a member of NAS. Left: Scott Hawley

AAAS Elects GSA Members

Kudos to R. Scott Hawley, Stowers Institute for Medical Research, Kansas City, MO, and a contributing author to *GENEtics* for his election this spring to become a member of The American Academy of Arts and Sciences. Hawley is also editor of the "Issue Highlights" section in the *GENETICS* Journal.

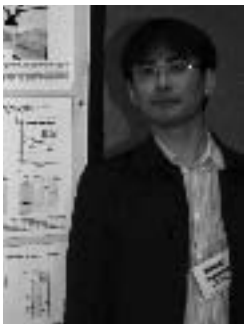
Also to be congratulated on his election to the American Academy is GSA member Robert Eugene Page, Jr., Arizona State University, Tempe.

GSA Poster Award Winners at Chlamy Meeting

The 12th International Conference on the Cell and Molecular Biology of Chlamydomonas held in Portland, OR, May 9-14, 2006 also had an international roster of GSA poster contest winners. Winners of these awards were:

- First prize, $500, to Haru-aki Yanagisawa, University of Tokyo, Japan, for his poster, "Novel longitudinal compartmentalization in the axoneme revealed by localization of putative interdoublet link components."
- Second prize, $300, to Jessica M. Esparza, Washington University School of Medicine, St. Louis, MO, for her poster, "Identification and characterization of two basal body genes in *Chlamydomonas reinhardtii*."
- Third prize, $200, to Bianca Naumann, University of Muenster, Germany, for her poster, "Comparative quantitative proteomics to investigate the remodeling of bioenergetic pathways in response to iron deprivation in *Chlamydomonas reinhardtii*."

Francis-Andre Wollman of CNRS, France, gave the keynote address at this conference attended by 185 scientists. The conference was organized by Susan Dutcher, Washington University School of Medicine, St. Louis, MO and GSA board member.



Haru-aki Yanagisawa with his award-winning poster.

Jessica Esparza explaining her poster

Bianca Naumann, left, receiving her award from Susan Dutcher.

GENETICS: Moving Forward

by Tracey DePellegrin-Connelly, Managing Editor, GENETICS

Starting this month, *GENETICS* will present a new face – each month's cover will be a color image contributed by a *GENETICS* author whose paper appears in the issue. You'll be seeing this change shortly when the September issue of the Journal appears in your mailbox.

It's a step that reflects the excitement in genetics research today. We no longer rely entirely on descriptions or illustrations of organisms and processes – we can see them in all their beauty and complexity. Current imaging and magnification technology provides literal glimpses into new worlds, depicting otherwise abstract concepts and in full-color.

"In the digital age, scientists are more involved than ever in visualization of their own research," added Suzanne Sandmeyer, Board of Senior Editors' chair. "What better way to connect authors with the Journal and their scientific audience than inviting them to contribute their best images?"

"When we started the redesign, we were particularly keen that it convey the prestigious tone of the Journal itself," says Debra Naylor, principal of Washington D.C.-based Naylor Designs. "With this approach established, we chose composition, color and typography to support the concept."

We've made other changes. Modern journal design emphasizes access and attracting reader interest, while stressing the continuity of decades of serious work. Our new design marries a traditional font with a modern layout, with article topics presented on the front cover, with the back cover featuring detailed descriptions of highlighted articles, chosen by Issue Highlights Editor Scott Hawley.

"The back cover offers additional opportunities for innovation," said Sandmeyer. "We are planning future back cover features on model organism databases – so keep watching!"

To further appeal to our broad spectrum of readers, *GENETICS* has also added a monthly Review Article (selected by Reviews Editor Allan Spradling), and will also feature a table of contents reorganized by subtopics — cellular genetics, gene expression, genetics of complex traits, genome integrity and transmission, population and evolutionary genetics, genome and systems biology and developmental and behavioral genetics.

New Logo

GENETICS has not been the only important design project. We've also chosen a new logo for the GSA. The Board of Senior Editors, working with Executive Director Elaine Strass, GSA President Barry Ganetzky, *GENETICS* Editor-in-Chief Beth Jones and other members of the Board and Society selected a new design after detailed discussions, drawings, concept meetings, drafts too countless to mention, and work with several designers.

Logos have "personality" – evoking feelings and memories, representing ideas and philosophies, all wrapped in shape, color and form. At its best, a logo helps to inform an entire community – in this case, scientists, authors, readers, reviewers, editors alike – as to the mission and vision of an organization.

The final design won with its visual appeal and ability to incorporate the double-stranded DNA helix into the society name.

"We wanted a logo that was visually appealing, instantly recognizable, meaningful, and memorable," said Ganetzky. "DNA has become an iconic symbol of biology, technology, and human achievement in the modern age. Who better to lay claim to an intimate connection with this molecule than the GSA?"

"Whether investigators work on viruses, bacteria, yeast, worms, flies, fish, mice, or humans; whether they research individual organisms or populations; whether they work with live organisms or computers, individual genes or entire genomes — DNA represents the starting point," he added.

To reflect the society's breadth and depth, those involved in the design wanted a logo that encompassed all of genetics, regardless of approach or organism, as well as a timeless look that reflects past, present and future.

We hope you like the new design of the Journal and the logo. We have aimed for a look and feel that evokes both tradition and modernity – respect for the Genetics Society of America's 75 years, coupled with a forward-thinking and innovative approach to genetics research.

GREGOR MENDEL

Planting the Seeds of Genetics

September 15, 2006 – April 1, 2007

Explore the remarkable life and dramatic legacy of the father of modern genetics. *Gregor Mendel: Planting the Seeds of Genetics* features interactive displays, videos, and most of the surviving artifacts from the life of this great scientist, including handwritten notes, scientific tools and botanical specimens. "This exhibition presents an exciting opportunity to broaden people's understanding of genetics into the realm of natural history and modern evolutionary biology," said Field Museum Curator, Dr. Shannon Hackett.

The Botany of Desire:
A Plant's-Eye View of the World

Saturday, November 11, at 2pm, James Simpson Theatre

A discussion with Michael Pollan, author of the best selling book *The Botany of Desire: A Plant's-Eye View of the World*. This book is a complex examination of the relationship between humans and plants and our dependency on each other.

$27 includes general admission, tickets to Gregor Mendel: The Genius of Genetics *and the Michael Pollan lecture. Advance tickets recommended. For more information call 312.665.7400*

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For group bookings call 312.665.7300

The Field Museum

This exhibition and its North American tour were developed by The Field Museum, Chicago, in partnership with The Vereinigung zur Förderung der Genomforschung, Vienna, Austria, and The Mendel Museum, Brno, Czech Republic.

Exhibition Sponsor:

MONSANTO imagine

Dear Abbot:

My introductory genetics class has more than 150 students in it! I'm sure you never faced the challenge of trying to teach hundreds of students at once. Don't students learn better in small classes?

– Fatigued in Fargo

Dear Exhausted,

No, indeed, I did not face the challenge of teaching so many students in a class. But, remember that very few students were able to attend college in my day. It seems that large class size may be the price of providing higher education to such a high percentage of your young folks in the 21st century.

The good news is that, in spite of faculty predictions to the contrary, large class size may not always adversely affect student learning. A recent paper by Goodman, Koster, and Redinius presents data from Biology 164, an introductory biology course at the University of South Dakota. This course is one of a series of four introductory biology core courses offered at USD. It typically has a large lecture section with about 150 students and TA-lead lab sections of about 18 students. I'm sure you will recognize this course structure as being very common these days for biology courses with labs.

The faculty directly tested the hypothesis that students in small classes would learn more than those in large classes by randomly selecting one of the lab sections to be taught in a small lecture format. Thus, whereas most of the students had a large lecture and small lab section taught by a TA, this lucky section had both a small (18 person) lecture and lab section taught by the instructors. Because the same professors were teaching both the large and the small lecture sections, using the same activities, differences in student learning attributable to small class size should be revealed.

Surprisingly, students in the small lecture versus the large displayed no statistically significant difference in performance on the post-test that examined understanding of physiological concepts. Thus, being in a small lecture section did not enhance student learning! Although students liked being in a small lecture, it did not promote deeper learning, at least by measurements of student performance on the exams.

Obviously, there are many caveats to this study, as pointed out by the authors. For example, in both large and small lecture sections, the faculty used a variety of active learning strategies that allowed students to interact with one another in small groups as they discussed the material or solved problems. Thus, one possibility is that active learning strategies, such as "think-pair-share" and small group discussions, minimize potential negative effects of large class size.

Although this is only one study, it does offer you some hope: large class size, on its own, may not inevitably have a negative effect on student learning. Perhaps your colleagues will offer additional perspectives on the challenges of teaching large classes by writing to society@genetics-gsa.org.

The Abbot

Reference:
Goodman, B.E., K. L. Koster, and P. L. Redinius. 2005. Comparing biology majors from large lecture classes with TA-facilitated laboratories to those from small lecture classes with faculty-facilitated laboratories. Advan. Physiol. Ed. 29:112-117. http://advan.physiology.org/cgi/reprint/29/2/112

From the September Issue of *GENETICS*

by R. Scott Hawley, Stowers Institute of Medical Research, Kansas City, MO

These are articles from the September issue of *GENETICS* that you can look forward to reading. Make note of the new cover design when the Journal comes in the mail.

Introns regulate RNA and protein abundance in yeast

Authors: Kara Juneau, Molly Miranda, Maureen E. Hillenmeyer, Corey Nislow and Ronald W. Davis

The purpose of introns in the architecturally simple genome of yeast is not well understood. However, intron-containing genes are shown to produce both more RNA and more protein. They are also more likely to be haplo-insufficient than are non-intronic genes. The deletion of introns from three essential genes decreased cellular RNA levels and caused measurable growth defects. These data provide strong evidence that the presence of introns improves transcriptional and translational yield.

Novel role for Checkpoint Rad53 protein kinase in the initiation of chromosomal DNA replication in *S. cerevisiae*

Authors: Paul R. Dohrmann and Robert A. Sclafani

This elegant genetic study provides the best evidence to date that Rad53p is involved in replication initiation. Rad53's role in replication is independent of both DNA and mitotic checkpoints. However, the requirement for Rad53 can be suppressed by the deletion of the major histone H3/H4 gene pair, indicating that Rad53 may be regulating initiation by controlling histone protein levels and/or by affecting origin chromatin structure.

The meiotic bouquet promotes homolog interactions and restricts ectopic recombination in *Schizosaccharomyces pombe*

Authors: Luther Davis and Gerald R. Smith

The telomere bouquet of *S. pombe* promotes allelic recombination and restricts ectopic recombination. In addition, Bqt2, a meiosis-specific protein required for bouquet formation, is required for wild-type levels of homolog pairing and meiotic allelic recombination. Finally, and perhaps most intriguingly, while both the bouquet and nuclear movement promote pairing, only the bouquet restricts ectopic recombination.

Genetic exchange between homeologous sequences in mammalian chromosomes is averted by local homology requirements for initiation and resolution of recombination

Authors: Derek Yang, Edie B. Goldsmith, Yunfu Lin, Barbara Criscuolo Waldman, Vimala Kaza, and Alan S. Waldman

Recombination between imperfectly matched sequences (homeologous recombination) is suppressed in mammalian chromosomes. The experiments reported here support a model in which homeologous recombination in mammalian chromosomes is suppressed by a nondestructive dismantling of mismatched heteroduplex DNA (hDNA) intermediates. Indeed, the data suggest that the rejection of mismatched hDNA is driven by a requirement for localized homology in order to resolve these intermediates into completed recombination events.

Quantitative trait loci for locomotor behavior in *Drosophila melanogaster*

Authors: Katherine W. Jordan, Theodore J. Morgan and Trudy F. C. Mackay

QTL mapping and the quantitative complementation test have identified13 candidate genes affecting locomotor reactivity in Drosophila, including the *Dopa decarboxylase (Ddc)* gene. Linkage disequilibrium mapping showed that polymorphisms at *Ddc* were associated with naturally occurring genetic variation in locomotor behavior. These data implicate variation in the synthesis of bioamines as a factor contributing to natural variation in locomotor reactivity.

Genomewide evolutionary rates in laboratory and wild yeast

Authors: James Ronald, Hua Tang, and Rachel B. Brem

As wild organisms adapt to the laboratory environment, they become less relevant as biological models. It has been suggested that a commonly used *S. cerevisiae* strain has rapidly accumulated mutations in the lab. However, this analysis provides rigorous evidence that the lab strain is evolving within the range of wild isolates.

GSA Voting Open until September 29th

Have you voted for GSA officers and directors for 2007? If not, there's still time – until Friday, September 29th – for you to cast your ballot for next year's leadership team. An e-mail reminder was sent in July, another in August, and the final one will be sent to you shortly. You must use the individual key code from your e-mail to vote. If you already voted, you will not receive the September reminder. If you do not use e-mail and need a paper ballot, please contact the GSA Administrative Offices at (301) 634-7300.

On December 31, 2006, the tenures of Terry Orr-Weaver, Anita K. Hopper, Thomas W. Cline, Terry R. Magnuson and John Harvey Postlethwait will end. Continuing on the Board in 2007 will be Allan R. Spradling, who will assume the presidency; Barry S. Ganetzky, who will become past president; Trudy F. Mackay, treasurer; Elizabeth W. Jones, editor-in-chief, *GENETICS*; and directors, Kathryn M. Barton, Susan K. Dutcher, Stanley Fields, Geraldine Seydoux, Michael P. Snyder, and Mariana F. Wolfner.

All members in good standing – those that have paid their dues for the current year – are invited to vote. Listed on the next few pages are the candidates for officers and directors. The candidates receiving the majority of votes will be elected. GSA members cast votes for one candidate for vice-president and treasurer, and for three candidates as directors.

Candidates for Vice-President: (vote for one)

Gertrud (Trudi) M. Schüpbach, Ph.D.

Professor, Department of Molecular Biology, Princeton University; Investigator, Howard Hughes Medical Institute; Adjunct Professor of Biochemistry at the University of Medicine and Dentistry of New Jersey, Robert Wood Johnson Medical School.

Advanced Degree(s): Ph.D. in Biology, University of Zurich, Switzerland (1978).

Career Summary: Research Associate and Research Biologist (1981-1990), Associate Professor and Professor (1990–) Princeton University; Associate Investigator and Investigator, Howard Hughes Medical Institute (1994–).

Honors and Awards: E.F. Conklin Medal, Society for Developmental Biology (2006); National Academy of Sciences (2005); Associate Member, European Molecular Biology Organization (2000); Fellow, American Academy of Arts and Sciences (1999); Alfred Schlafli Prize for thesis research awarded by Swiss Zoological Society (1981).

Professional Service Activities (selected): Board of Directors, Genetics Society of America (2002-2005); Drosophila Board of America (2002-2005), President (2002); Flybase Advisory Committee (2001–); External Reviewer, Developmental Biology Programme, European Molecular Biology Laboratory, Heidelberg, Germany (2000-2003); Grant Review Panels (since 2000) NSF, Developmental Mechanisms (2001, 2004); Editorial Committee, *Annual Review of Genetics* (1997-2001); Chair (1996), Scientific Advisory Committee of Damon Runyon-Walter Winchell Cancer Research Fund (1993-1997); Associate Editor, *Genetics* (1988–).

Major Research Interests: Developmental genetics, cell-cell signaling, axis formation in oogenesis, RNA localization and translational control, meiotic checkpoints, epithelial development.

Jasper Rine, Ph.D.

Professor of Genetics, Genomics and Development, Department of Molecular and Cell Biology, University of California, Berkeley; HHMI Professor.

Advanced Degree(s): Ph.D. in Molecular Genetics, University of Oregon (1979).

Career Summary: Assistant Professor (1982), Associate Professor (1988), Professor (1990–), University of California, Berkeley; Director, Human Genome Center, Lawrence Berkeley National Laboratory (1991-1994).

Honors and Awards: HHMI Professor (2006); AAAS Fellow (2003); Lester Lecture, Reed College (2003); NIH Merit Award (1998); Richard and Rhoda Distinguished Professor of Biology (1997); Distinguished Teaching Award, UCB (1997); Philips Lecture, Haverford College (1993); Streisinger Lecture, University of Oregon (1993); American Academy of Microbiology Fellow (1993); Miller Research Professor (1993); Camille and Henry Dreyfus Award (1986).

Professional Service Activities: National Yeast Committee (1985 -1987); ACS California Division Postdoctoral Fellowship Panel (1989-1992); NIH Study Section Microbial Physiology (1991-1993); McArdle Laboratory External Review Committee (1993–) Chair, Genetics External Review Committee (1998), University of Wisconsin; USDA Plant Gene Expression Center Sequencing Project Advisory Committee (1997-1999); Damon Runyon-Walter Winchell Cancer Fund Fellowship Committee (1999-2004); Genetics Training Grant PI (1990-1993) and Genomics Training Grant co-PI (2000–) UCB; NIH-NHGRI ENCODE Advisory Committee (2003–); Chair, University of Washington Yeast Resource Center Advisory Committee

(2002–); European Union NoE Heterochromatin Project Advisory Panel (2004–); University of Alaska INBRE Advisory Board (2005–); System X Advisory Board-Universities of Zurich/Basel (2005–); Aretmisinin Project Advisory Board (2006). *Editorial Boards: Molecular and Cellular Biology* (1989-2003), *Genetics* (2000-2002), *Genome Biology* (1999–), *Annual Review Cell Developmental Biology* (2003–).

Major Research Interests: Yeast genetics, heterochromatin, chromosome biology, dog genetics, epigenetics, human genetic variation, genomics.

Candidates for Secretary: (vote for one)

David Mark Kingsley, Ph.D.

Professor of Developmental Biology, Howard Hughes Medical Institute and Stanford University School of Medicine.

Advanced Degree(s): Ph.D. in Biology, The Massachusetts Institute of Technology (1986).

Career Summary: Postdoctoral research fellow, NCI-Frederick Cancer Research and Development Center (1987); Assistant, Associate and Full Professor, Department of Developmental Biology, Stanford University (1991–); Investigator, Howard Hughes Medical Institute (1997–).

Honors and Awards: Yale Belknap Prize in Biology (1981); Yale Chittenden Prize in Science and Math (1981); American Cancer Society Fellow (1989); Lucille P. Markey Scholar in Biomedical Science (1989-1996); Member, American Academy of Arts and Sciences (2005).

Professional Service Activities: Chromosome 9 Mapping Committee Chairman, International Mouse Genome Mapping Workshops (1990-1994); Editorial Board, *Current Biology* Mouse Mutations and Knockout Database (1996 - 2000); Associate Editor, *Genetics* (1998 - 2003); *Editorial Board: Annual Review of Genetics* (2000 - 2004); Board of Directors, Genetics Society of America (2001-2003); National Human Genome Research Institute Scientific Advisory Panel (2004–).

Major Research Interests: Genetic control of skeletal development and patterning in mice, formation and maintenance of joints, arthritis and joint disease in humans, molecular basis of evolutionary changes in threespine sticklebacks.

James E. Haber, Ph.D.

Professor of Biology, Rosenstiel Center for Basic Medical Sciences, Brandeis University, Waltham, MA.

Advanced Degree(s): Ph.D. in Biochemistry, University of California, Berkeley (1970); A.B. in Biochemical Sciences, Harvard College (1961).

Career Summary: NSF Postdoctoral Fellow, University of Wisconsin, Madison (1970-1972); Assistant then Associate Professor, Brandeis University (1972-1984), Professor, Brandeis University, (1984–); Chair, Department of Biology (1995-2000).

Honors and Awards: Woodrow Wilson Fellowship (1965); Sloan Foundation Award in Molecular Studies in Evolution (1990); American Cancer Society Scholar Grant (1994); Fellow, American Academy of Microbiology, elected 1996; John Simon Guggenheim Fellowship (1999); Fellow, American Association for the Advancement of Science, elected 2005.

Professional Service Activities: National Cancer Institute Board of Scientific Counselors (2005 –). Board of Directors, Genetics Society of America (2003-2005). Study Sections: Ad Hoc Member of various NIH study sections (1981, 1983, 1987, 2005); Member, Study Section (1994-1998), American Cancer Society. *Program Organizer*: FASEB Meeting on Yeast Chromosome Structure and Segregation; Co-chair (1995), Chair (1997), FASEB Meeting on Recombination; *Invited Speaker*: Gordon and FASEB Conferences on Cancer, Meiosis, Chromatin, Epigenetics, Nucleic Acids, Molecular Genetics, and Mammalian DNA Repair; *Keynote Speaker:* FASEB Summer Research Conference on Recombination (2004); Keystone Meeting on DNA Repair (2005). *Editorial Boards: Molecular Cell, Molecular and Cellular Biology; DNA Repair, PLoS Biology, PLoS Genetics*.

Major Research Interests: Mechanisms of homologous recombination to repair double-strand breaks in mitotic and meiotic budding yeast; mechanisms of non-homologous end-joining; DNA damage checkpoint regulation. Chromosome architecture and regulation of recombination and DNA repair.

Candidates for Directors (vote for three):

Tim Schedl, Ph.D.

Professor of Genetics, Washington University School of Medicine, St. Louis, Missouri.

Advanced Degree(s): Ph.D. in Molecular Biology, University of Wisconsin (1984); B.A. Lawrence University (1977).

Career Summary: Assistant Professor (1989), Associate Professor (1997), Professor (2005), Department of Genetics, Washington University School of Medicine.

Honors and Awards: James M. Price Award for Cancer Research, University of Wisconsin (1983); Sigma Xi Research Award

(1984); NIH Postdoctoral Fellowship (1984-1987); Basil O'Connor Scholar (1990-1993).

Professional Service Activities: Co-organizer of the Keystone Symposium "Germ Cell Differentiation" (1997); Member, Development, Differentiation and Cancer Study Section, American Cancer Society (1997-2000); Co-Organizer, Jackson Park Elementary School Science Fair (2001-2003); Member, NIH Genetics Study Section (2002-2004); Nominating Committee, Genetics Society of America (2004); Co-organizer, 15th International *C. elegans* Meeting (2005); Member, NIH Molecular Genetics C Study Section (2004-2006); WormBase Scientific Advisory Board (2005–).

Major Research Interests: Germ cell development, control of the switch from proliferation to meiotic development, regulation of oogenesis by Ras/ERK signaling, translational control, germ line sex determination.

Evan Eichler, Ph.D.

Associate Professor, Department of Genome Sciences; Investigator, Howard Hughes Medical Institute; Affiliate Member, Fred Hutchinson Cancer Research Center.

Advanced Degree(s): Ph.D. in Genetics, Baylor College of Medicine (1995).

Career Summary: Hollaender Fellow, Biology and Biotechnology Research Program, Lawrence Livermore National Laboratory (1995); Assistant Professor (1997), Associate Professor (2003), Department of Genetics, Case Western Reserve University; Associate Professor, Department of Genome Sciences, University of Washington (2004); Investigator, Howard Hughes Medical Institute (2005).

Honors and Awards: NSERC Research Scientist Award (1988); Deutscher Akademischer Austauschdienst Research Award (1990); Predoctoral Basic Research American Society of Human Genetics Award (1994); Alexander Hollaender Distinguished Human Genome Postdoctoral Fellowship (1997); March of Dimes Basil O'Connor Scholar (1998-2001).

Professional Service Activities: Member, Human Genome Organization (HUGO) Organizing Committee (2001-2002); Associate Editor, *American Journal of Human Genetics* (2002-2004); Editor, *Genome Research* (2002–); ad hoc Member, NIH Mammalian Genetics Study Section (2003, 2004); Scientific Advisory Board, Evolutionary Genetics, Max-Planck Institute Molecular Anthropology (2003–); FASEB Advisory Committee for Federal Appropriations (2004); NSF Study Section, Hominid Review Panel (2003-2004); Member, NIH Genome Study Section (2003-2004); Scientific Advisory Board, Genome Center, McGill University (2004–); Member, Genome Study Section, Canadian Institutes of Health (2004-2005); Awards Committee, American Society of Human Genetics (2005-2007); Member NIH Study Section, GCAT (2004-2007).

Major Research Interests: Gene duplication, segmental duplication, genomic structural variation, primate evolution, chromosomal rearrangement, genome evolution, genomic disorders and disease.

Lilianna Solnica-Krezel, Ph.D.

Professor, Department of Biological Sciences, Vanderbilt University, Nashville, Tennessee.

Advanced Degree(s): Magister in Molecular Biology, Warsaw University, Poland (1985); Ph.D. in Oncology, McArdle Laboratory for Cancer Research, University of Wisconsin, Madison (1991).

Career Summary: Postdoctoral Fellow, Massachusetts General Hospital and Harvard Medical School (1991); Assistant Professor (1996), Associate Professor (2001), Professor (2005), Department of Biological Sciences, Vanderbilt University.

Honors and Awards: Distinguished Faculty Member, Vanderbilt University (2005), Pew Scholar in the Biomedical Sciences (1998), Basil O'Connor Starter Scholar Award (1997), Distinguished Publication Award, Polish Ministry of Science and Higher Education, Poland (1985), Champion, National Contest in Biology for High School Students, Poland (1979).

Professional Service Activities: Co-organizer, 2nd Strategic Conference of Zebrafish Investigators, Asilomar (2007); Member, AAAS Annual Meeting Scientific Program Committee (2006-2009); NIH DEV-2 Study Section Member (2004-2008); Organizing Committee, 5th International Meeting, Zebrafish Development & Genetics, Madison (2002); Member, Faculty of 1000, (2001–). *Editorial Boards: genesis – The Journal of Genetics and Development* (2000–) *Developmental Dynamics* (2003–), *Current Biology* (2003–), *Developmental Cell* (2003–).

Major Research Interests: Genetic regulation of vertebrate development, gastrulation, morphogenesis, genetic technology.

Monica J. Justice, Ph.D.

Associate Professor, Departments of Molecular and Human Genetics and Molecular Physiology and Biophysics, Baylor College of Medicine, Houston, Texas.

Advanced Degree(s): Ph.D. in Genetics, Kansas State University (1987).

Career Summary: Dept. of Molecular and Human Genetics, Baylor College of Medicine (1998); Research Staff Scientist and Leader, Cancer &

Development Group, Mammalian Genetics Section, Life Sciences Division, Oak Ridge National Laboratory, Tennessee (1995); Assistant Professor, Division of Biology, Kansas State University, Manhattan (1993).

Honors and Awards: Faculty of 1000 Biology (2005); Michael E. DeBakey Excellence in Research Award (2004); Innovation Award in Functional Genomics, Burroughs Wellcome Fund (2001); American Cancer Society Junior Faculty Research Award (1995); James Ackert Graduate Student Award (1985); The Honor Society of Phi Kappa Phi (1986 –).

Professional Service Activities: Member, Genetics Society of America (1986–); Associate Editor, *Genetics*, (2003–); Member, (1996–), Nominations and Elections Committee (1997-1998), Secretariat, (1999), President-Elect (2002), and President (2004), International Mammalian Genome Society; International Committee for Standardized Genetic Nomenclature in Mice (1996-2005); Member, NIH Hematology 1 Study Section (2006–2010, *Ad hoc* 2003–2005); The Jackson Laboratory Induced Mutant Resource Advisory Board, (2001-2006); Consultant, Priority Setting for Genetics and Genomics Resources, NIH (1999). *Editorial Boards: Genome Research* (2004–), *Trends in Genetics* (1998–), *Mammalian Genome* (1997–), *Current Genomics* (1999–).

Major Research Interests: Mouse models of human disease, hematopoiesis, leukemia genetics, new genetic and genomic technologies.

Victor R. Ambros, Ph.D.

Professor of Genetics, Dartmouth Medical School

Advanced Degree(s): Ph.D. Biology, The Massachusetts Institute of Technology (1979).

Career Summary: Assistant Professor (1985-1988), Associate Professor (1988-1992), Department of Cellular and Developmental Biology, Harvard University; Associate Professor (1992-1996), Professor (1996-2001), Department of Biology, Dartmouth College; Professor (2001–), Department of Genetics, Dartmouth Medical School.

Honors and Awards: Newcomb Cleveland Prize (shared), American Association for the Advancement of Science for the most outstanding paper published in *Science*, July 2001-June 2002 (2003); Gene Knudson Lecturer in Molecular Genetics, Oregon State University (2003); Lewis S. Rosenstiel Award (shared), in Basic Medical Science, Brandeis University (2005); Genetics Society of America Medal for outstanding contributions in the past 15 years (2006).

Professional Service Activities: Damon Runyon Fellowship Review (1994, 2006); NIH GMS Genetics Study Section (2000-2004); Chair, NIH Genetics Study Section (2002-2004); Siemens Westinghouse Competition Judge (2002-2005); *ad hoc* Reviewer NIH Molecular Genetics Study Section (2005); Wellcome Trust Mouse and other Organisms Development Review (2005). *Editorial Board: RNA Biology* (2004).

Major Research Interests: Developmental timing, noncoding RNAs, microRNA function.

Nancy M. Bonini, Ph.D.

Lucille B. Williams Term Professor, Department of Biology, University of Pennsylvania; Investigator, Howard Hughes Medical Institute; Professor of Neuroscience (Adjunct), Department of Neurosciences, University of Pennsylvania School of Medicine.

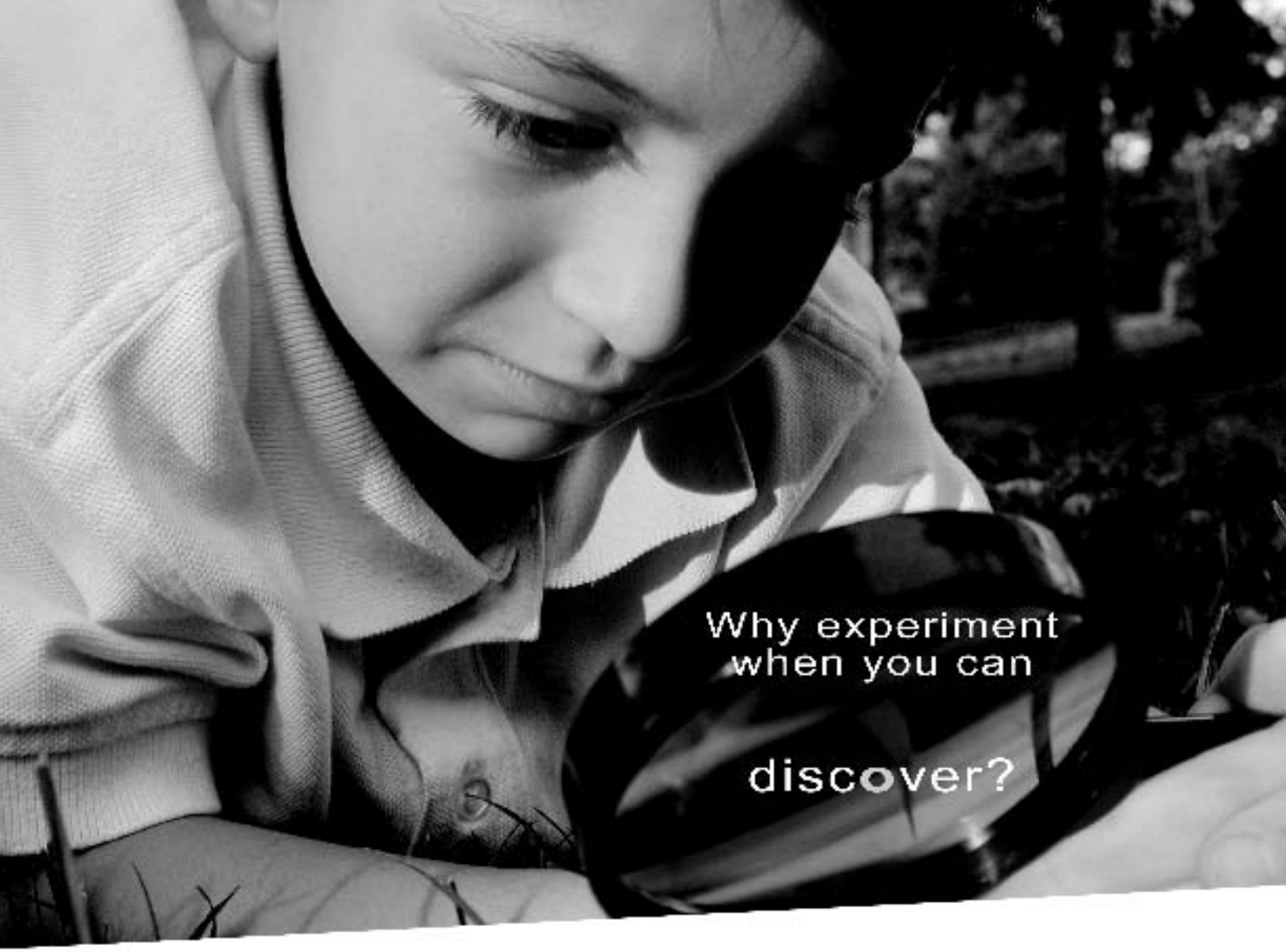
Advanced Degree(s): Ph.D. in Neurosciences, University of Wisconsin, Madison (1987).

Career Summary: Assistant Professor (1994), Associate Professor (2000), Full Professor (2005), Lucille B. Williams Term Professor (2006), Department of Biology, University of Pennsylvania; Investigator, Howard Hughes Medical Institute (2000).

Honors and Awards: Grass Foundation Fellowship, Cold Spring Harbor Laboratory (1983); Jerzy E. Rose Award for Research in the Neural Sciences, University of Wisconsin, Madison (1988); Postdoctoral Fellowship (1989-1991), American Cancer Society; senior Postdoctoral Fellowship (1991-1993), California Division, American Cancer Society; John Merck Scholars Award in the Biology of Developmental Disabilities in Children (1995); Basil O'Connor Award, March of Dimes (1996); David and Lucile Packard Fellowship for Science and Engineering (1997); Huntington's Disease Society of America, Coalition for the Cure Awards (1998, 1999, 2000); Hereditary Disease Foundation, Cure Huntington's Disease Initiative Award (1999-2001).

Professional Service Activities: *Organizer:* 12th National Academy of Sciences Symposium on Frontiers of Science (2000); Neurobiology of Disease Workshop on Triplet Repeat Diseases, Society for Neuroscience (2001); Parkinson's Disease: Insights from Genetic and Toxin Models, Banbury Center, Cold Spring Harbor Laboratory (2006). NINDS, Board of Scientific Counselors (2002-2004); Coalition for the Cure Steering Committee (2001-2003), Medical & Scientific Advisory Committee (2004–), Coalition Review Committee (2004–), Huntington's Disease Society of America; Associate Editor, *Journal of Neuroscience* (2004–); Scientific Advisory Board for the Thomas Hartman Foundation Parkinson's Disease Research Partnership, Cold Spring Harbor Laboratory (2005–); Member, NDBG Study Section (2006–); *Member:* Genetics Society of America; Society for Neuroscience; American Society for Cell Biology; American Society for Biochemistry and Molecular Biology.

Major Research Interests: Simple genetic system models for human neurodegenerative disease, including Parkinson's and triplet repeat diseases; genetic modifiers of disease models; protein misfolding; genomic repeat instability; environmental toxin effects on disease models.



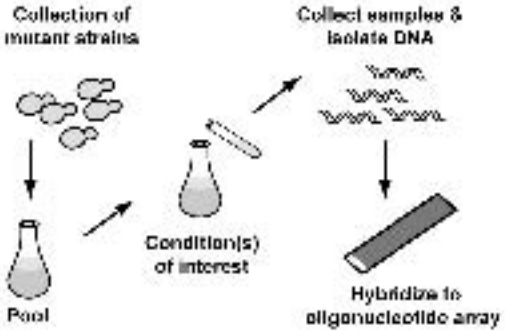
Accelerate your discovery of gene function with the Yeast Magic Marker strains

Getting good data from pooled YKOs with barcode microarrays just got a lot easier. **The Yeast Magic Marker Collection** combines the genetic quality and robust growth of heterozygous diploid YKOs with the phenotypic sensitivity of haploid YKOs.

Using the revolutionary SGA reporter[1], Jef Boeke and coworkers[2] have engineered this genome-wide collection of strains, where heterozygous diploids are rapidly and easily converted to haploid YKOs by a simple selection step following sporulation. Buy the whole collection arrayed in microplates or individual strains—all easily found using our online clone query.

[1]Tong *et al* (2001) *Science* **294**, 2364–2368
[2]Pan *et al* (2004) *Molecular Cell* **16**, 487–496

Whole-Genome Parallel Analysis



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Yeast is Still the Beast

by Michael P. Snyder, Yale University, New Haven, CT

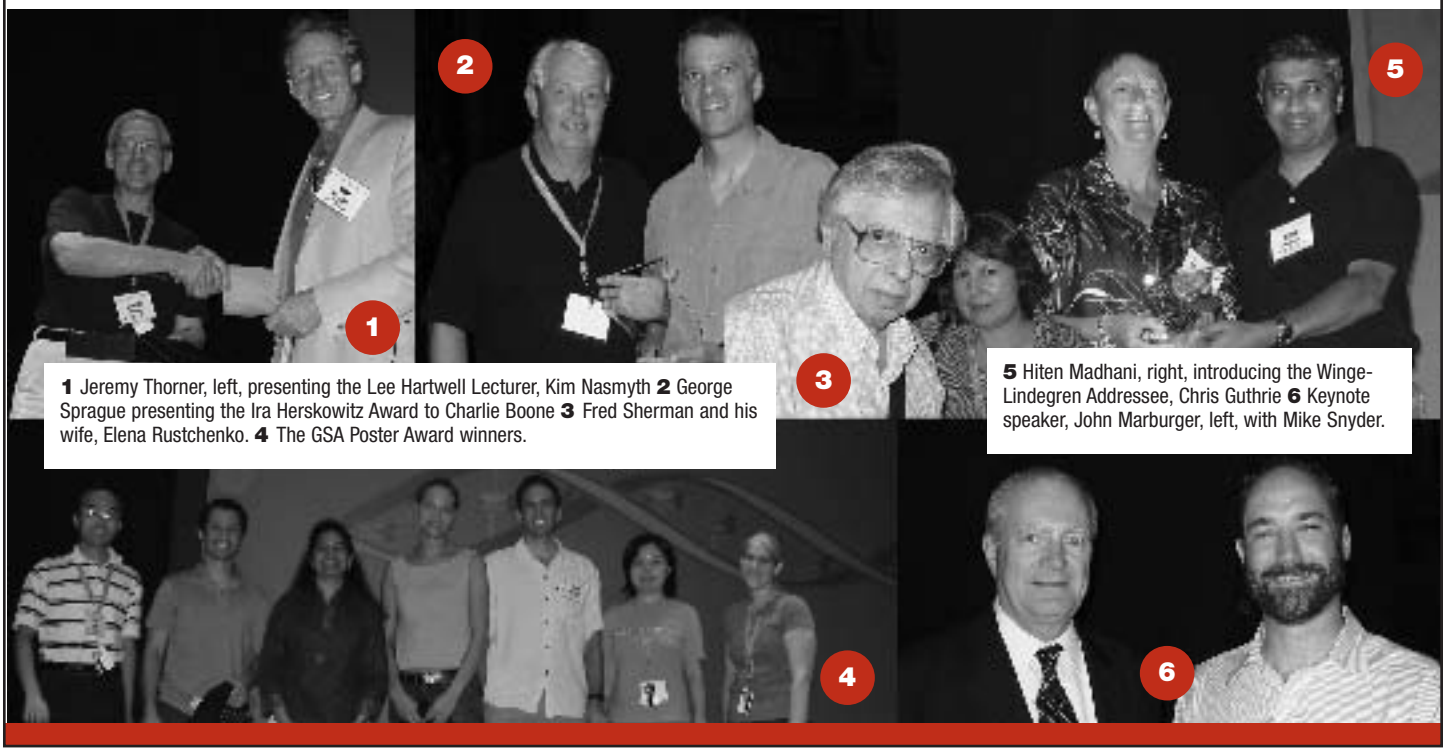
The 2006 Yeast Genetics and Molecular Biology Meeting sponsored by GSA, was held in Princeton, N.J., July 25-30. There were 820 attendees presenting 81 oral presentations and over 500 posters. The meeting presented the latest advances in yeast genomics, proteomics, cell biology, cell signaling, environmental sensing, pathogenesis and DNA dynamics. Particularly noticeable were the rapid advances in virtually all areas of basic cellular and developmental processes, and the manner in which genomics approaches, tools and data sets have permeated all areas of yeast research. Comparative genomics, clearly a very small portion of yeast research two years ago is now becoming enormously popular, and systems biology, whatever it is, is clearly omnipresent in yeast research.

This year the keynote speaker was Dr. John Marburger III, scientific advisor to President Bush and Director of the Office of Science and Technology. Marburger noted the important contributions yeast research has made to science and the support he and the current administration has for basic science. He discussed the manner in which his office operates and a spirited and wide ranging question and answer session ensued.

Recipients of this year's awards and their areas of research were as follows: Charlie Boone (Omics), Ira Herskowitz Award; Kim Nasymth (Cell Cycle and Chromosome Segregation), Lee Hartwell Lecture; Christine Guthrie (RNA Splicing), Winge-Lindgren Lecture; Fred Sherman (Yeast Genetics), Lifetime Achievement Award. Poster prize winners were: 1st place: Meredith Boyle, 2nd place: Joseph Stephan, 3rd place: Qiaoning Guan, 4th place: David Gresham, Honorable Mentions: Shawn Heon, Jennifer Bharucha, Bo Yang, Alison Rattray, Bilge Ozayin, Hannah Stubbs.

In addition to a meeting packed with fun filled science, the participants were treated to a banquet followed by the lively Cellmates (a band comprised of Yale University faculty and staff; Richard Flavell, vocals/guitar, Ira Mellman, vocals/bass, Madlyn Flavell, vocals/keyboard, William Philbrick, drums, and special guest appearances by: Alex Nichols, vocals/guitar, Steve (The Gasman) Attwood, vocals/guitar). Plenty of yeast by-products were on hand. In spite of the late night festivities on the evening of the banquet, participants made it to the final morning session.

Members of the organizing committee for this year's meeting were: Charlie Boone, Linda Breeden, Jim Broach, Orna Cohen-Fix, Martha Cyert, Trisha Davis, Stan Fields, Tim Galitski, Audrey Gasch, Bruce Goode, Daniel Gottschling, Kathy Gould, Warren Heideman, David Kaback, Joachim Li, Eric Phizicky, Mark Rose, Rodney Rothstein, Frank Rosenzweig, Jonathan Weissman. Brenda Andrews and Mike Snyder served as co-chairs.



1 Jeremy Thorner, left, presenting the Lee Hartwell Lecturer, Kim Nasmyth **2** George Sprague presenting the Ira Herskowitz Award to Charlie Boone **3** Fred Sherman and his wife, Elena Rustchenko. **4** The GSA Poster Award winners.

5 Hiten Madhani, right, introducing the Winge-Lindegren Addressee, Chris Guthrie **6** Keynote speaker, John Marburger, left, with Mike Snyder.

Awards Nominations Website Now Open

Now is the time for GSA members to nominate candidates for the GSA medals via the awards nomination website at http://www.genetics-gsa.org/genetics/g-gsa/awards/GSA-awards-07.htm. There are three medals given each year: The Thomas Hunt Morgan Medal, given for a lifetime of contribution to genetics; The GSA Medal, given for outstanding contributions to genetics within the past 15 years; and the George W. Beadle Award, given for outstanding contributions to the science community.

The nominations received this summer will be discussed by the GSA Board at its next meeting in November. The awards will be for the year 2007. See the Awards web page at http://www.genetics-gsa.org/genetics/g-gsa/awards.shtml for a history of awardees. No one currently serving on the Board of Directors of GSA may be the recipient of a medal and an award cannot be given more than once to the same person.

To nominate someone for an award, go to the web form at http://www.genetics-gsa.org/genetics/g-gsa/awards/GSA-awards-07.htm. Complete a separate form for each nomination. Be sure to include two or three sentences explaining why you think your candidate should receive the award. The deadline for submissions is November 1, 2006.

Award recipients will be announced at the GSA website and in the next issue of this newsletter. In the February volume of *GENETICS* an article about the awardees will be published.

A Central Repository for Published Plasmids

Sharing of reagents among the academic community is essential for scientific progress but is often hindered by inefficiencies in the distribution process. Most laboratories presently store their own plasmids and are responsible for answering requests in a timely fashion. This is often an onerous duty, and many factors contribute to variable plasmid quality and delays in shipment. Addgene, a 501(c)3 nonprofit organization located in Cambridge, MA, is building a centralized plasmid repository to address the need for a better way to share plasmids. Addgene accepts plasmid deposits from scientists, and makes these plasmids available by request via its website.

Addgene offers scientists a number of advantages. For those depositing plasmids, it serves as an archive to prevent plasmid and information loss over time and it also relieves scientists of the time and effort needed to answer requests. Addgene handles Material Transfer Agreements, and provides depositors with access to a log of requests for their plasmids. There is no cost to deposit plasmids at Addgene.

For scientists seeking plasmids, Addgene's website contains a searchable database of stored plasmids. This makes it convenient to locate available plasmids containing a particular gene, including tagged or mutated versions. Each plasmid page includes cloning information submitted by the depositing scientist, a link to the original publication, and single pass sequencing results. Plasmid requests are shipped as bacterial stabs to scientists within the United States and internationally. To cover the costs of operating the nonprofit repository, Addgene charges a $65 per plasmid fee, with a discounted price of $10 per plasmid available for labs that cannot afford the full fee.

GSA members are encouraged to participate in this shared resource for the scientific community. It is an ideal way to save time, archive your materials, and raise awareness for your research. For more information, please visit www.addgene.org or email deposit@addgene.org.

Public Policy Update

Ccontinued from page 16

Members of Congress have vowed to renew their efforts in January 2007. Until then, the energy and passion that carried H.R. 810 to success in both the House and Senate will now be focused on Congressional races across the country.

NIH Chief Briefs Members of the Congressional Biomedical Research Caucus

The Joint Steering Committee for Public Policy was pleased to host a presentation by Dr. Elias Zerhouni, Director of the National Institutes of Health (NIH), to the members of the Congressional Biomedical Research Caucus (a group of 98 House members and 10 Senators) on Capitol Hill.

The Congressional Biomedical Research Caucus provides a forum where members of Congress and congressional staff can interact directly with the researchers responsible for critical, scientific discoveries. With changing federal priorities, Zerhouni felt it necessary to address the Caucus and discuss the discoveries fueled by federal investment and the way this investment is transforming the practice of medicine.

In his presentation entitled "NIH at the Crossroads: Strategies for the Future" Zerhouni addressed the real challenges facing the NIH, which he described as "the perfect storm:" deep federal and trade deficits, rising expenditures for homeland security, the response to Hurricane Katrina, preparations for potential pandemic flu, and an inflation rate in research costs that is outpacing the general inflation rate. Added to these factors is a sense among some legislators that, having doubled NIH's budget from 1999-2003, there's nothing more the NIH really needs.

Laying out his strategic vision to members of the Caucus, he emphasized the following principles. First, the NIH must remain true to its core values and central mission: discovery and fostering the generation of new knowledge for better health. Second, they need to protect the future by helping new and promising investigators. Third, as in any crisis situation, the NIH must manage the relationship between supply and demand of investigator-initiated grants. Lastly, proactively promote NIH's vision for the future.

Medical science is entering a revolutionary period marked by a shift in focus from acute to chronic diseases, rapidly escalating healthcare costs, a torrent of biological data generated by the sequencing of the human genome, and the development of advanced, high-throughput technologies that allow for the study of vast molecular networks in health and disease. The message Zerhouni sought to leave with the members of the Caucus was that thanks to their investment and the work of the researchers funded by the NIH, Americans are living longer, healthier lives. We can't stop the progress we have been making. It is essential that Congress continue to fund the NIH's life-saving research.

The NIH's summer 2006 issue of "From the Desk of Elias A. Zerhouni, M.D., Director NIH," an e-publication from the NIH Director is now available on-line. You can find it at http://www.jscpp.org/output.cfm?ID=235.

From the President's desk:

Continued from page 1

- What do you consider to be the most important challenges and opportunities for our field and how would you like to see the GSA respond to them?

It is important to remember that GSA is *your* Society. The role of the GSA leadership is to continue to mold and improve the society to better serve you. The more the GSA officers and board know about how you feel toward the GSA and what you seek in a professional society, the better able we are to steer the Society effectively and in the right directions.

For these reasons, it is now more important than ever for the dialogue with GSA members to be mutual and often. Please communicate with us and let us know your thoughts. We encourage you to contact directly any of the GSA officers and board members (email and street addresses at: http://genetics.faseb.org/genetics/g-gsa/board_of_directors.shtml). You can also send email to us via the GSA administrative office at: society@genetics-gsa.org. To make it even easier to communicate with us, we have added a "Contact the GSA" link on our website (http://www.genetics-gsa.org). Click on the link and drop us a note. We need to hear your comments, criticisms, questions, and suggestions. And if there are things you think we are doing right, we would love to hear that too. Let's increase our dialogue as we continue to work together to build a strong and vibrant GSA.

Sincerely,

Barry Ganetzky

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

Public Policy Update

by Lynn Marquis, Joint Steering Committee for Public Policy

President Bush Vetoes Stem Cell Bill

In July, President Bush issued his first veto in six years, to kill H.R. 810, the Stem Cell Research Enhancement Act. The measure would have allowed federal funding for researchers to use embryos that are stored for, but no longer needed by couples who have gone through in vitro fertilization.

The veto put an end to the bill's prospects for the year, but not to the stem cell debate. Stem cell research has escalated into a major issue on Capitol Hill, with Democrats and Republicans predicting electoral repercussions in November. According to *USA Today*, Sen. Charles Schumer (D-NY) head of the Democratic Senate Campaign Committee, and others in his party say they will make the veto an issue in the Nov. 7 elections. Ads are running in Wisconsin and are planned in Missouri, Pennsylvania and other states against Republicans who opposed the bill.

Likewise, opponents of this bill have launched their own public relations effort to negate the importance of this issue. Republicans running in districts where stem cell research is a salient issue with voters immediately attempted to nullify their votes with ads reiterating their support for the idea of human embryonic stem cell research. The ads emphasize that the president has already approved such lines [of stem cells subject to federally funded research] — but doesn't want to expand them until more ethical safeguards are in place.

Given the posturing on both sides of the issue even Republican insiders are questioning the strategy taken by the White House. According to a Greenberg Quinlan Rosner Poll, 51% of the American public is more likely to support a Democrat for Congress based on the issue of stem cell research. Increasingly, those members of Congress in tough re-election races fear that they will be perceived as anti-science. Even members like Congressman Chris Shays (R-CT) who has been consistently supportive of expanding current policy on stem cell research has been accused by the American Family Voices (a nonpartisan issue advocacy group) as "voting with religious extremists instead of Nancy Reagan and medical experts." American Family Voices has since rescinded its ads, but this example leaves many Republicans feeling vulnerable – regardless of their stand on the issue.

Continued on page 15