

**Annual Meeting
Program**

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**Calamitous NIH,
NSF Budget Cuts**

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**Applications
Invited for Postdoc/
Student-Led
Meetings**

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Join the Conversation:

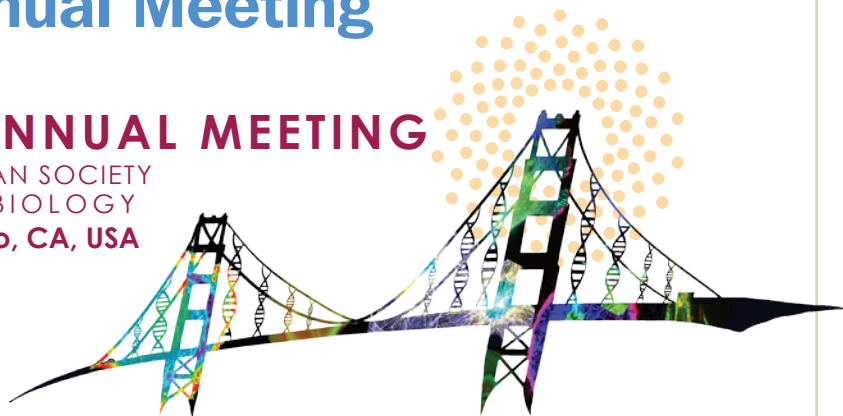


President's Column

**More Reasons to Attend the 2012
ASCB Annual Meeting**

2012 ANNUAL MEETING

THE AMERICAN SOCIETY
FOR CELL BIOLOGY
San Francisco, CA, USA



Tony Hyman and I (program co-chairs of the 2012 ASCB Annual Meeting) outlined our plans for the meeting in the April issue of the *ASCB Newsletter*. In the interim there have been several new additions to the program that I want to tell you about. We also now have a more up-to-date meeting schedule (see p. 6). Plus, the full list of co-chairs and speakers for the Minisymposia will be announced this month. (Visit www.ascb.org/meetings for an update.)

President's Column, continued on p. 3

BREAKING NEWS...

**Stefano Bertuzzi Selected as Next
ASCB Executive Director**



Stefano Bertuzzi

Stefano Bertuzzi has been selected to be the next Executive Director of the American Society for Cell Biology. He will join the ASCB staff on November 1, 2012.

Bertuzzi received a master's degree in public health at the Johns Hopkins University in Baltimore, MD, and a PhD in molecular biotechnology at the Università Cattolica del Sacro Cuore in Milan, Italy. He carried out his postdoctoral research at the Salk Institute for Biological Studies, in San Diego, CA and, after completing his postdoc, he returned to Milan as an Assistant Professor at the Dulbecco Telethon Institute, where he became tenured. In an expansion of an ongoing collaboration with the U.S. National Institutes of Health intramural program, in 2006, Bertuzzi joined the Office of the NIH Director as a science policy analyst. Last year, he became the Director of the Office of Science Policy, Planning, and Communications at the National Institute of Mental Health.

Look for a more extensive introduction to Dr. Bertuzzi coming soon on the ASCB homepage and in the October *Newsletter*. ■

—Kevin M. Wilson

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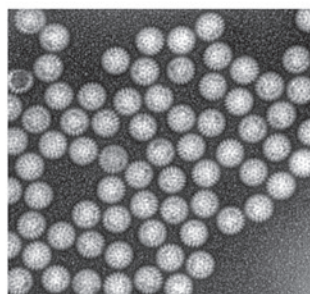
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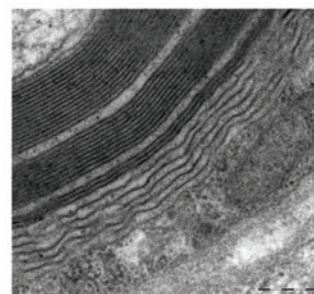
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Negative stain preparation of rota virus.



Nerve biopsy from a patient with a peripheral neuropathy.

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President's Column, continued from p. 1

What Is New in 2012? The Threads

The Threads are themes woven through the meeting that highlight areas in which cell biology intersects with other disciplines. The two Threads emphasize areas that we feel are going to be important for ASCB: 1) cell biology and medicine and 2) cell biology and the physical/computational sciences. Although the vast majority of the meeting will still feature the core areas that are traditionally part of the ASCB Annual Meeting, the Threads will bring in some new areas. The first goal is to attract some scientists to the meeting who otherwise might not attend (e.g., scientists from the biotech industry or academic medical sciences, as well as physical scientists who are or are planning to extend their work into biology). The second goal is to provide loyal attendees of the ASCB Annual Meeting with an opportunity to educate themselves about new areas in addition to catching up with the latest in their own fields.

Talks and events that are pertinent to the Threads will be spread throughout the meeting and identified separately on the schedule. In addition, on Sunday, December 16, we will have a particular focus on Cell Biology and Medicine, including a Symposium and panel discussions, so that members from the local biotech community might be enticed to attend. The Thread events will span venues from big (the Keynote Symposium) to small (5- to 20-person table discussions where students and postdocs can talk with biotech scientists or with researchers who are combining physics/computation with biology).

These two Threads will also weave through the 2013 Annual Meeting in New Orleans. After trying this experiment for two years we can assess, based upon feedback from attendees, how well the idea of Threads has worked and decide how to move forward (e.g., continue these two Threads, bring in new Threads in different years, or have no Threads at all).



Ron Vale

Outreach: Bringing the Public to the Keynote Address

One of ASCB's missions is to make science accessible to the public. This year's Keynote Symposium offers an opportunity to do precisely that. We have two great Keynote speakers who are also in the public spotlight: Steven Chu, the U.S. Secretary of Energy and Nobel laureate, and Arthur Levinson, chairman of the board of Genentech, Inc. and Apple, Inc., two of the most innovative companies in the world. In his research work, Chu is an example of a physicist who successfully moved into studying biological problems. Levinson was trained as a biochemist but then made the transition into drug development and then into business.

Chu and Levinson are perfect individuals to represent the Threads. They also have compelling personal stories and are both well known to the general public. So in keeping with the ASCB's mission, we will offer complimentary passes for the Keynote Symposium to interested members of the public. We plan to advertise the Keynote to high school students and their parents in San Francisco as well as through various community forums. Please welcome members of the local community when you see them on our opening night.

More Communication with Young Scientists

Young scientists are the future of ASCB, and we want to engage them more in the activities of our Society. I discussed this in two earlier President's Columns, including in the July issue where I described our recent effort to catalyze and financially sponsor student/postdoc-run local meetings (see p. 43 for an announcement of the next competition).

We also want to involve young scientists more at the Annual Meeting. Toward that end, we are featuring our first student/postdoc-

The American Society for Cell Biology

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Advertising

The deadline for advertising is the first day of the month preceding the cover date. For information contact Advertising Manager Ed Newman, enewman@ascb.org.

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One of ASCB's missions is to make science accessible to the public. This year's Keynote Symposium offers an opportunity to do precisely that.

chaired Minisymposium, in which graduate students or postdocs select the speakers and run the event. This year, postdocs Rachel Roberts-Galbraith of the University of Illinois, Urbana-Champaign, and Curtis Thorne of the University of Texas Southwestern Medical Center, Dallas, will co-chair a Minisymposium on the Cell Biology of Regeneration on Tuesday, December 18. We had many proposals from students and postdocs who were interested in chairing a session, so we will again offer this opportunity at the 2013 Annual Meeting.

We also want to hear from young scientists about the operations and future of ASCB. This year the leadership group of the ASCB (Executive Committee, Council, committee chairs, staff) invites postdocs and students to a one-hour Town Hall Meeting at 10:00 am on Saturday, December 15, immediately after the leadership meeting that occurs all day Friday and on Saturday morning. Although the Town Hall is early in the Annual Meeting, we hope that we will get a good turnout of young scientists. We plan to discuss and get input on issues that may have emerged during our leadership meeting, and in general we hope to hear opinions and answer questions from young scientists who are interested in ASCB and its future.

We also will have a concert aimed at students and postdocs. Bruce Springsteen unfortunately was not available; however, we were able to land Jim Ferrell, world renowned cell and systems biologist from Stanford University and outstanding guitarist, who will play with his band The Deadbeats on Monday night, December 17. (There is a cover charge, but you can show your ASCB Annual Meeting badge to receive a complimentary drink ticket.)

Science and Art Meet at the ASCB Meeting

This year we have an unusual Working Group entitled "From Histograms to Animations: Effective Visualization Makes Complex Data Clear" that will be co-chaired by two accomplished scientist-digital artists, Janet Iwasa (Harvard Medical School) and Graham Johnson (University

of California, San Francisco). Each has an interesting background. Iwasa obtained a PhD at the University of California, San Francisco, and began to learn digital animation, which she is still pursuing. Johnson began his career as a medical illustrator but began to illustrate protein structures with Tom Pollard and then obtained his PhD at The Scripps Research Institute. Their Working Group will focus on how we depict and convey to our fellow scientists the models and concepts for how biological processes work. Bang Wong of the Broad Institute of the Massachusetts Institute of Technology and Harvard University will also present at the session.

Beyond this Working Group, Iwasa and Johnson will construct a gallery of artwork of biological systems that will be displayed at the Moscone Center for meeting attendees to enjoy. This will feature their own beautiful digital illustrations as well as work from other artist-scientists. These images are also very powerful for conveying excitement about cell and molecular biology to the general public, and we are considering displaying Iwasa's and Johnson's art-science show in a public gallery, perhaps in conjunction with informal science talks in the gallery, sometime in 2013.

Minisymposium "Chalkboard" Tutorials

For someone new to cell biology (like a physicist or a new student), it can be helpful to get the "big picture" of the field before diving down into the individual talks that comprise a Minisymposium. As an experiment, we will offer one-hour "chalkboard" tutorials prior to selected Minisymposia. Each of these sessions will be presented by the Minisymposium chairs, who will provide a perspective of the field and describe the key questions that researchers are trying to address, as well as offer a preview of what will be covered in the talks.

One or two Minisymposia on each day will feature a tutorial. The session will be in a small room and will be interactive, with ample time reserved for questions from

[The ASCB leadership hopes] to hear opinions and answer questions from young scientists who are interested in ASCB and its future.

the audience. We will also encourage the tutorial leaders to use overhead projectors (as close as we can get to chalkboards) so that everyone can see and to preserve an informality to the session. Details about which Minisymposia will offer tutorials and where the sessions will be held will be announced later.

Lots of Informal Interaction Time with Leading Scientists

Although this aspect of the Annual Meeting is not new for this year, I want to emphasize that we are trying to create the atmosphere of a small meeting within the setting of a big meeting. In particular, it is important to have venues in which scientists within particular fields can meet and in which students and postdocs can meet with and get advice from leading scientists. Like at prior Annual Meetings, we have a great line-

up of Special Interest Subgroup meetings on Saturday, December 15 (see p. 6), and poster sessions are excellent venues for interaction among scientists. We also have many small discussion tables planned where students and postdocs can meet senior scientists. As mentioned earlier, we will recruit biotech scientists and scientists working at the physics–cell biology interface to participate in these discussions

Overall, the ASCB Annual Meeting is a great place for young scientists to come and integrate with peers and senior scientists in the field. This was an important aspect of the ASCB Annual Meeting for us when Tony and I were young scientists, and the ASCB leadership is trying to promote and extend such interactions today. ■

Comments are welcome and should be sent to president@ascb.org.

[I]t is important to have venues in which scientists within particular fields can meet and in which students and postdocs can meet with and get advice from leading scientists.

Did You Know...?

You can expand your network, find collaborators, and much more with the Supplementary Information search tool in the *ASCB Member Directory*.

You can search the *Directory* any time to find a colleague with your interests, or you can search for a member by institutional name or location. It's up to you. Just go to www.ascb.org, select "Membership Directory," and log in using your ASCB username and password.

And be sure to update your own profile and share such information as your major research interests, experimental approach, model system, teaching activity, and funding resources with your colleagues. At www.ascb.org, click on "Update Member Profile," log in, then click on "Supplementary Information" and select the appropriate categories. This searchable information will appear in the *ASCB Member Directory* immediately.

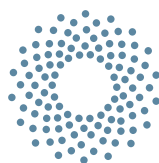
Take advantage of this great research networking tool—the *Directory* is here for *you*—ASCB members! ■

MBoC Encourages Citation of Primary Sources

Molecular Biology of the Cell (MBoC) is taking a stand against the trend for authors to cite review articles rather than primary literature. The journal's Information for Authors has been updated to include this statement:

Because *MBoC* seeks to promote thorough documentation and scholarship and has no page limits, authors are strongly encouraged to cite primary sources rather than review articles. Citations to review articles in general should be reserved for topics that are tangential to the main topic of the manuscript, or for reviews that introduced important new concepts. ■

—David Drubin, *Editor-in-Chief*, *Molecular Biology of the Cell*



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2012 ANNUAL MEETING

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December 15–19, 2012 | Ron Vale, President | Tony Hyman, Program Chair

Annual Meeting Schedule By Day

- M** Cell Biology and Medicine
- P** Intersection of Cell Biology and the Physical Sciences

SATURDAY, DEC. 15 Special Interest Subgroups 12:30 pm–5:00 pm

Note: You must be registered for the ASCB Annual Meeting to attend these sessions.

- M P** **A. A Physical and Mechanical Perspective to Understanding the Emergence and Progression of Cancer**
Organizers: Sean Hanlon, National Cancer Institute/NIH; and Nastaran Kuhn, National Cancer Institute/NIH

- M** **B. Aneuploidy: Causes and Consequences**
Organizer: Daniela Cimini, Virginia Tech

- M** **C. Axonal Transport: Mechanisms of Regulating Cargo Transport in Neuronal Development, Maintenance, and Disease**
Organizers: Erika Holzbaur, University of Pennsylvania; and Sandya Koushika, Tata Institute of Fundamental Research, Mumbai, India

- D. Beyond Border Control: Nuclear Pores, the Nuclear Envelope, and the Rest of the Cell**
Organizers: Mary Dasso, National Institute of Child Health and Human Development, NIH; and Yuh Min Chook, University of Texas Southwestern Medical Center at Dallas

- P** **E. Building the Cell**
Organizer: Wallace Marshall, University of California, San Francisco

- M** **F. Connexins, Innexins, and Pannexins: Roles for Gap Junctions and Intercellular Channels in Cell Signaling**
Organizers: Viviana Berthoud, University of Chicago; and Michael Koval, Emory University

- P** **G. Counting Molecules in Cells: Insights into Structures and Mechanisms**
Organizers: Vladimir Sirotkin, SUNY Upstate Medical University; and Jian-Qiu Wu, The Ohio State University

- H. Cytoskeletal Dynamics and Their Role in Cellular Form and Function**
Organizers: Adriana Dawes, The Ohio State University; and Arpita Upadhyaya, University of Maryland, College Park

- I. Endocytosis and Signal Transduction**
Organizers: Guangpu Li, University of Oklahoma Health Sciences Center; and Sandra Schmid, University of Texas Southwestern Medical Center at Dallas

- J. Entry, Exit, and Movement of Proteins within the Cilium: The Transition Zone (TZ) and Cilary Tip**
Organizers: Maxence Nachury, Stanford University; Jeremy Reiter, University of California, San Francisco; and Joel Rosenbaum, Yale University

- K. Evolutionary Cell Biology**
Organizer: Ursula Goodenough, Washington University in St. Louis

- L. Exosome and Microvesicles**
Organizers: Stephen Gould, Johns Hopkins University; and Doug Taylor, University of Louisville

- M. Frontiers in Cytokinesis**
Organizers: Julie Canman, Columbia University; and Amy Maddox, University of Montreal

- M** **N. Muscle Cytoskeletal Protein Assembly in Normal and Diseased Muscles**
Organizers: Carol Gregorio, University of Arizona College of Medicine; and Joseph Sanger, SUNY Upstate Medical University

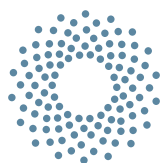
- M** **O. The Cellular and Molecular Basis of Metastatic Disease**
Organizers: Laura Machesky, The Beatson Institute for Cancer Research, UK; and Mark McNiven, Mayo Clinic

Keynote Symposium

6:00 pm

Steven Chu, U.S. Secretary of Energy
Arthur D. Levinson, Chairman of Genentech, Inc., and Apple, Inc.





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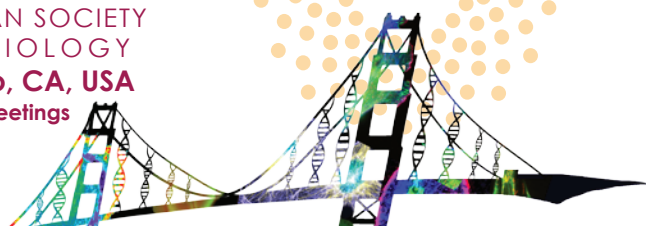
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SUNDAY, DEC. 16

Symposia

8:00 am–9:30 am

Cell Fate Decisions

Hans Clevers, Hubrecht Institute, The Netherlands

Tariq Enver, The Weatherall Institute of Molecular Medicine,
MRC, University of Oxford, UK

Shinya Yamanaka, Center for iPS Cell Research and
Application (CiRA), Kyoto University, Japan

Frontier Symposia

10:30 am–12:00 Noon

M Cell Biology and Medicine

Susan Lindquist, Whitehead Institute for Biomedical Research
and Massachusetts Institute of Technology/HHMI

Anne O'Garra, MRC National Institute for Medical Research,
Mill Hill, London, UK

Joseph Schlessinger, Yale University School of Medicine

Minisymposia

4:30 pm–6:35 pm

M Cancer Cell Biology

Cristina Lo Celso, Imperial College London, UK

Jeffrey Settleman, Genentech, Inc.

P Cell Mechanics and Intermediate Filaments

Harald Herrmann, German Cancer Research Center,
Heidelberg, Germany

Sarah Köster, Georg-August-University Göttingen, Germany

Cell Migration and Motility

Marianne Bronner, California Institute of Technology

John Condeelis, Albert Einstein College of Medicine

Integrated Research and Teaching and Its Benefits to Faculty and Students

David Botstein, Princeton University

Karen Kalumuck, Exploratorium

P Molecular Motors

Vladimir Gelfand, Northwestern University Feinberg School of
Medicine

Kathleen Trybus, University of Vermont, Burlington

Regulation/Organization of the Genome

Daniela Rhodes, Nanyang Technological University,
Singapore, and MRC Laboratory of Molecular Biology
Cambridge, UK

David Sherratt, University of Oxford, UK

Signal Transduction/Signaling Networks

Fumiyo Ikeda, Institute of Molecular Biotechnology, Austria

Galit Lahav, Harvard Medical School

M Stem Cells and Induced Pluripotency

Margaret Fuller, Stanford University School of Medicine

Marius Wernig, Stanford University School of Medicine

MONDAY, DEC. 17

Symposia

8:00 am–9:30 am

New Model Systems for Cell Biology

Lawrence S.B. Goldstein, University of California, San Diego,
School of Medicine

Nicole King, University of California, Berkeley

Alejandro Sánchez Alvarado, Stowers Institute/HHMI

Frontier Symposia

10:30 am–12:00 Noon

P Applying Physics, Engineering, Computation to Cell Biology

William Bialek, Princeton University

Margaret Gardel, University of Chicago

Rob Phillips, California Institute of Technology

Minisymposia

4:30 pm–6:35 pm

Autophagy, Self Renewal, and Cell Death

Ana Maria Cuervo, Albert Einstein College of Medicine

Feroz Papa, University of California, San Francisco

M Cell Biology of Neurodegeneration

Don Cleveland, University of California, San Diego

Morgan Sheng, Genentech, Inc.

Cell-Cell and Cell-Matrix Interactions

Joan Brugge, Harvard Medical School

Viola Vogel, ETH Zurich, Switzerland

Cell Division

Daniel Gerlich, Institute of Molecular Biotechnology of the
Austrian Academy of Sciences, Austria

Gohta Goshima, Nagoya University, Japan

M Cell Biology and
Medicine

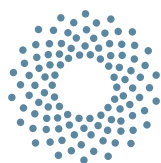
P Intersection of
Cell Biology and
the Physical
Sciences

DEADLINES

October 10
Early Meeting
Registration

October 17
Late Abstract
Submission





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Annual Meeting Schedule By Day

M

Cell Biology and
Medicine

P

Intersection of Cell
Biology and the
Physical Sciences

Intracellular Sorting and Trafficking

Wanjin Hong, Institute of Molecular and Cell Biology,
Singapore

Anne Spang, Biozentrum, University of Basel, Switzerland

Microtubule Organization and Dynamics

Elizabeth C. Engle, Children's Hospital Boston/Harvard
Medical School/HHMI

Luke Rice, University of Texas Southwestern Medical Center

P

Physical and Computational Tools for Cell Biology

Adam Cohen, Harvard University

Jan Liphardt, University of California, Berkeley

P

Working Group: From Histograms to Animations: Effective Visualization Makes Complex Data Clear

Janet Iwasa, Harvard Medical School

Graham Johnson, University of California, San Francisco

TUESDAY, DEC. 18

Symposia

8:00 am–9:30 am

Prokaryotic Communities

Bonnie Bassler, Princeton University/HHMI

Lora Hooper, University of Texas Southwestern Medical Center
at Dallas/HHMI

Dianne K. Newman, California Institute of Technology/HHMI

Frontier Symposia

10:30 am–12:00 Noon

Synthetic Biology

Jay D. Keasling, University of California, Berkeley, and
Lawrence Berkeley National Laboratory

Wendall Lim, University of California, San Francisco/HHMI

Laurie Zoloth, Northwestern University Feinberg School of
Medicine and Weinberg College of Arts and Sciences

Minisymposia

4:30 pm–6:35 pm

Cell Biology of the Neuron

Wieland B. Huttner, Max Planck Institute of Molecular Cell
Biology and Genetics, Germany

Fumio Matsuzaki, RIKEN Center for Developmental Biology,
Kobe, Japan

Cell Biology of Regeneration

Rachel Roberts-Galbraith, University of Illinois, Urbana-
Champaign

Curtis Thorne, University of Texas Southwestern Medical Center
at Dallas

Cell Polarity

Yves Barral, ETH Zurich, Switzerland

Stephan Grill, Max Planck Institute of Molecular Cell Biology
and Genetics, Dresden, Germany

M

Cellular Stress, Protein Folding, and Disease

Nancy M. Bonini, University of Pennsylvania/HHMI

Andy Dillin, Salk Institute for Biological Studies/HHMI

Micro- and Coding RNA

Cliff Brangwynne, Princeton University

Tracy Johnson, University of California, San Diego

M

Molecular Basis of Infectious Disease

Norma Andrews, University of Maryland, College Park

Pascale Cossart, Institut Pasteur, France

Organelle Structure and Vesicle Formation

Elizabeth Conibear, University of British Columbia, Canada

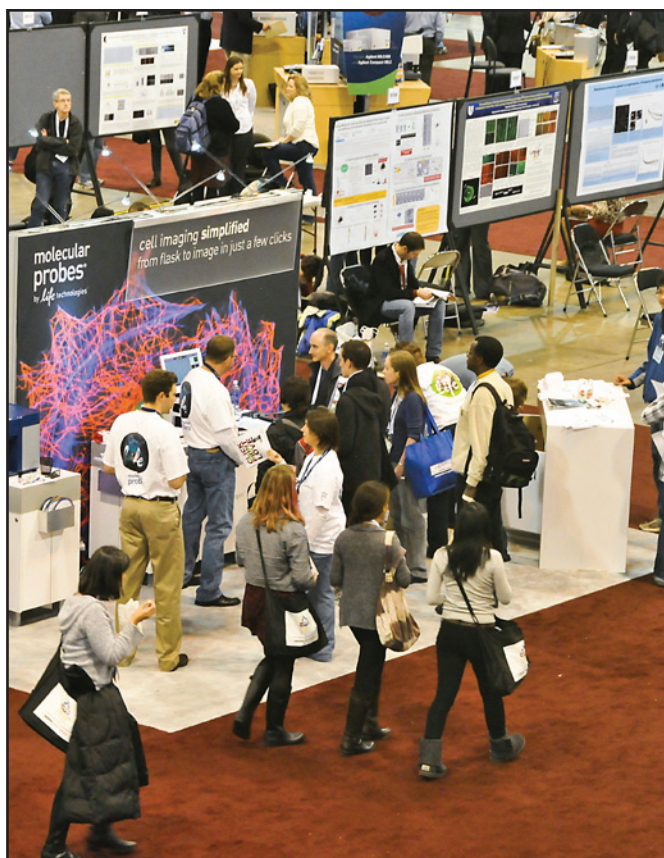
Richard A. Kahn, Emory University School of Medicine

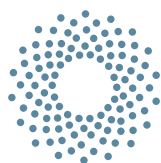
M

Working Group: New Technologies in Proteomics

Pieter Dorrestein, University of California, San Diego

Steve Gygi, Harvard Medical School





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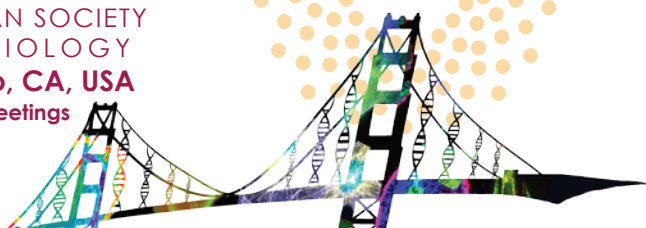
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WEDNESDAY, DEC. 19

Minisymposia

8:30 am–10:35 am

Actin Organization and Dynamics

Enrique M. De La Cruz, Yale University

Ann Miller, University of Michigan, Ann Arbor

Cell Growth and Cell Cycle Control

Sue Jaspersen, Stowers Institute for Medical Research

Jan Skotheim, Stanford University

Development and Morphogenesis

Carl-Philipp Heisenberg, Institute of Science and Technology
Austria, Austria

Ichiro Nishii, Temasek Life Sciences Laboratory, Singapore

Membrane Organization and Lipid Dynamics

Vytas A. Bankaitis, University of North Carolina School of
Medicine

Margarida Barroso, Albany Medical College

Nuclear Structure and Function

Kerry Bloom, University of North Carolina, Chapel Hill

Anne Villeneuve, Stanford University School of Medicine

Prokaryotic Cell Biology

Martin Thanbichler, Max Planck Institute for Terrestrial
Microbiology

Ethan Garner, Harvard Medical School

P

Working Group: New Technologies in Imaging

Catherine Galbraith, National Institute of Child Health and
Human Development/NIH

Eva Nogales, University of California, Berkeley/HHMI

M

Working Group: New Technologies in Molecular Biology/Genetics

L. Stirling Churchman, Harvard Medical School

A. Francis Stewart, BiInnovationsZentrum, TU Dresden,
Germany

M

Cell Biology and
Medicine

P

Intersection of Cell
Biology and the
Physical Sciences

Symposium

11:00 am–12:00 Noon

Chromatin Dynamics

Barbara Meyer, University of California, Berkeley/HHMI

Kim Nasmyth, University of Oxford, UK





Connect

The Physical Sciences to Cell Biology

at the **2012** American Society for Cell Biology
Annual Meeting

Dec 15-19, 2012 • The Moscone Center • San Francisco, CA, USA

Keynotes

Steven Chu

U.S. Secretary of Energy

Arthur D. Levinson

Chair, Apple Inc. and
Genentech Inc.

Special Focus Area

Daily events:

Intersection of physical/
computational sciences
with cell biology

Hear Talks

Solving problems in biology
with physical science
approaches

Cell mechanics and motors

Visualizing biological models

...and more

Discussion Tables

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The Place to Explore Biology



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www.ascb.org/meetings

ANNUAL Meeting

Education Programs/Events

Saturday, Dec. 15

WICB/EdComm Joint Panel and Workshop: Packaging Yourself for College Teaching in Your Career

1:30 pm–4:00 pm

Panelists will include faculty from a 1) liberal arts college, 2) community college, 3) research university (someone whose primary responsibility is teaching), and a 4) teaching prep program such as Preparing Future Faculty and 5) a current teaching postdoctoral fellow. Brief presentations will precede a question-and-answer session.

A hands-on workshop will follow with breakout groups focusing on: 1) designing a complete and effective course using principles of Scientific Teaching, 2) preparing a teaching portfolio, 3) designing a statement on incorporating undergraduates into research, 4) writing your teaching philosophy, 5) writing the perfect cover letter, and 6) CV review. Attendees will have the opportunity to participate in two breakout groups for 45 minutes each. Participants are encouraged to bring to the workshop drafts of any teaching job application materials they are working on.

Attendees can choose to participate in the panel and/or the workshop.

Sponsored jointly by the Women in Cell Biology (WICB) Committee and the Education Committee (EdComm)

Graduate School Fair

12:30 pm–2:30 pm

All undergraduate students are invited to attend this informal event to learn about U.S. and international graduate cell biology programs. Departments and schools can register at www.ascb.org/meetings.

Undergraduate Program

Being Interested in What You Don't Know Ensures That You Will Always Have a Goal

Enrique M. De La Cruz, Yale University

2:30 pm–3:30 pm

In this presentation geared toward undergraduates, De La Cruz will communicate practical aspects of pursuing a professional research career, focusing on lessons he learned throughout his. He will emphasize strategies for staying motivated, including interdisciplinary

research and scientific collaboration. He will also discuss recent research activities from his laboratory on actin filament fragmentation by regulatory proteins. Time will be allotted for questions and answers.

ASCB Poster Session/Competition and Reception

3:30 pm–5:30 pm

New this year, the Minorities Affairs Committee (MAC) poster competition and the Undergraduate Poster Session have been combined. Attendees who receive 2013 MAC travel awards are required to take part in the competition; it is optional for other undergraduate students. Undergraduate students who submit an abstract by October 17 will be invited (via email later in the year) to take part. This session allows students to practice presenting their research posters before their main poster presentation in the Exhibit Hall. Winners will receive cash awards.

Sunday, December 16

K–12 Science Education Workshop Blood, Genes, and Proteins: The Saga of Sickle Cell Disease

Karen Kalumuck, Exploratorium

12:00 Noon–2:00 pm

This workshop will feature interactive and hands-on, inquiry-based activities to explore the cell biology, genetics, molecular biology, and evolution of sickle cell disease. These classroom-tested explorations, which are aligned with the new Framework for K–12 Science Education, will weave strands of science, technology, health, and ethics into an engaging story that can be accessed by students from middle school through high school and beyond.

San Francisco Bay Area high school teachers are invited to attend this program. Free registration is available for high school teachers.

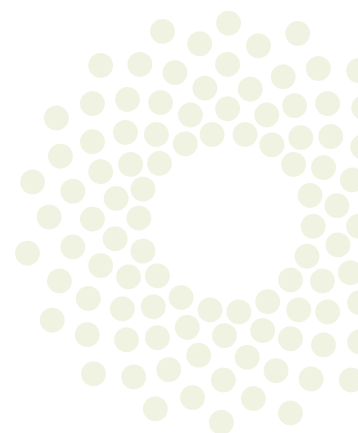
High School Program

From Silent Spring to Silent Night: A Tale of Toads and Men

Tyrone Hayes, University of California, Berkeley

2:00 pm–3:00 pm

More than 80,000 synthetic chemicals are in the environment today. Recently, scientists have observed that many synthetic chemicals act as



“endocrine disrupters” and affect hormones. Even low doses of endocrine disrupters in the environment can dramatically affect wildlife. For example, the herbicide atrazine turns male frogs into females.

There is increasing concern about the effect of endocrine disrupters on human health, especially on the developing fetus. Did you know that humans are exposed to more than 300 synthetic chemicals before we are even born? We must use this emerging science to encourage policies that are more protective of environmental and human health.

Education Minisymposium: Integrated Research and Teaching and Its Benefits to Faculty and Students

Chaired by *David Botstein*, Princeton University, and *Karen Kalumuck*, Exploratorium

4:30 pm–6:35 pm

Robust scientific research and effective teaching are considered by some to be mutually exclusive pursuits. The speakers in this Minisymposium

will present their experiences and evidence-based conclusions that reveal how incorporating research into teaching can enrich the experience and be productive for students, postdocs, teachers, and researchers. Speakers will be invited as well as chosen from submitted Science Education abstracts.

Monday, December 17

Science Education Poster Session

12:30 pm–2:00 pm

Posters on approaches to cell biology education at the K–12, undergraduate, graduate, and medical school levels will be presented during this poster session in the Exhibit Hall.

Education Initiative Forum

9:45 am–10:15 am (Mon and Tues)

Novel approaches to cell biology education will be selected from submitted Science Education abstracts for presentation during this time slot between major scientific Symposia. ■

Career/Networking Programs/Events

Saturday, December 15

Career Center (Sat–Tues)

Sat 5:30 pm–8:00 pm, Sun–Tues 8:00 am–8:00 pm

Searching for a postdoc fellowship or a job?

Want to sign up for one-on-one CV review?

The Career Center also includes “Position Available” posting areas (free, unlimited postings for exhibitors), and a message center for applicants and employees.

Educational Resources/Minorities Affairs Committee Booth (Sat–Tues)

9:00 am–5:00 pm

Join us at the booth that is shared by the ASCB Minorities Affairs (MAC) and Education Committees. Peruse recent education and career materials, attend informal presentations (“table talks”), and speak with Committee members and other meeting attendees. The booth is also a “networking home” for MAC members, travel awardees, Linkage Fellows, and Visiting Professors.

Postdoc/Student Town Hall with Council

10:00 am–11:00 am

Postdocs and students who arrive at the meeting

early enough are invited to join ASCB Council members immediately following the end of the Council meeting. They want to hear from ASCB’s younger scientists.

Minorities Affairs Committee (MAC)

Mentoring Keynote

Winston Anderson, Howard University

9:00 am–10:15 am

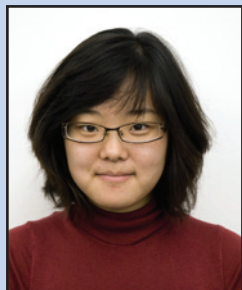
This talk will focus on diversity in biomedical research and professional development.

Grant Writing Seminar

Stephen W. Russell, Grant Writers’ Seminars & Workshops, LLC.

10:30 am–2:00 pm, preregistration required

This workshop (geared toward U.S. postdocs and junior faculty who will be writing grants to the U.S. National Institutes of Health) will address both practical and conceptual aspects that are important to the proposal-writing process. Participants will be taught to write with a linear progression of logic, which leads reviewers through their applications. Audience questions and participation are encouraged. This workshop is jointly sponsored by the MAC and the Education Committee.



Ye-Jin (Jenna) Eun

The travel award was particularly meaningful as it was my first travel award and the conference experience helped shape up my future research goals.

—*Ye-Jin (Jenna) Eun*,
Graduate Student,
Department of
Biochemistry, University of
Wisconsin–Madison

New!

ANNUAL Meeting

MAC Session for Undergraduate and Graduate Students

New Challenges and Old Obstacles 101

10:30 am–12:30 pm

Moderator: *Deborah Harmon Hines*, University of Massachusetts Medical School

Panelists: *Anthony DePass*, University of Long Island; *Michelle Juarez*, University of California, San Diego; and *Lino Gonzalez*, Genentech, Inc.

This presentation is aimed at motivating students to maximize and take ownership of their graduate school experiences by highlighting the trials and tribulations underlying the various stages of the academic pipeline. Distinguished panelists at different stages of their academic careers (postdoc, assistant professor, full professor, and alternative science career professional) will share their experiences.

First-Time Attendee, Meet the Leadership Reception

5:00 pm–5:45 pm

Is this your first ASCB Annual Meeting, or are you a new ASCB member? If so, please attend this event to learn more about the Society. Meet the leadership, and learn how you can translate your commitment to science research and education into advocacy and involvement.

IAC International Research & Training Exchange Fair

Opening Night Reception, immediately following Keynote Symposium

For the third year, the International Affairs Committee (IAC) will hold an International Research & Training Exchange Fair, immediately following the Keynote Symposium during the Opening Reception. The fair will:

- Allow attendees to gain knowledge of IAC activities
- Enable attendees to learn about research, training, and other opportunities in countries around the world
- Encourage students and postdocs to think about possibilities in foreign countries
- Open up exchanges between labs for international collaboration

Sunday, December 16

Science Discussion Tables (Sun–Tues)

9:30 am–10:30 am and 3:30 pm–4:15 pm

Whether you're a student, postdoc, or PI, ASCB will again offer special networking opportunities with senior scientists and peers. Select your interest areas and bring your questions. More information on participating scientists and topics is forthcoming.

Getting Out of the Box: Transitioning to a Career away from the Bench

10:00 am–12:00 Noon

Panelists will include *Sheryl Denker*, Senior Program Advisor, BayBio Institute; *Rachel Henderson*, Program Coordinator, Biology Scholars Program, University of California, Berkeley; *Ellen Kats*, Office of Innovation, Technology, and Alliances, University of California, San Francisco; *Dharia McGrew*, California Science and Technology Fellow; and *Shannon Weiman*, Science Writer.

Are you a graduate student, postdoc, or early career scientist and interested in working outside of traditional academic research? If so, come hear panelists representing careers in biotechnology, academic administration, science writing, and policy discuss their professions and offer career advice. Time will be allotted for questions and answers and for breakout sessions where panelists will offer advice on tailoring a CV, interviewing, networking, and marketing toward a given career path.

WICB Awards Presentation and Mentoring Theater

2:30 pm–4:00 pm

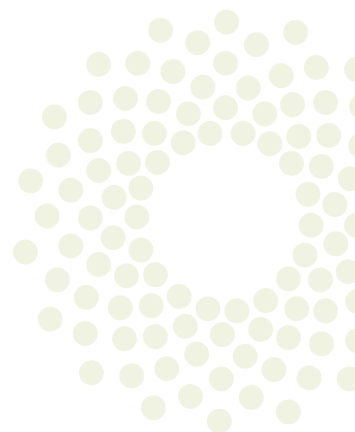
Monday, December 17

Advocacy Toolbox: The Two-Minute Speech

9:30 am–10:30 am

The skill of explaining your research is one of the most critical tools in the science advocates' toolbox. Come to this session and improve your own two-minute speech with help from experienced science policy advocates.

At the end of the session, you will have the chance to try out your new speech by entering the Elevator Speech Contest (see p. 16).



Andrew Clark

This year's meeting was as fun as it was scientifically stimulating, and the end of January found me once again with a good handful of results from (sometimes crazy, sometimes failed) experiments inspired by the Annual Meeting.

—Andrew G. Clark, PhD
Student, Max Planck
Institute for Molecular
Cell Biology and Genetics,
Dresden, Germany

ANNUAL Meeting

Open Forum Sponsored by the Subcommittee on Professional Training

10:00 am–11:00 am

Come discuss issues with other postdocs, graduate students, and early-career scientists.

ASCB India Young Investigators Meeting

12:00 Noon–1:00 pm

A panel of moderators will describe recent changes in the life sciences in India, as well as offer practical information on grants and how to apply for jobs. Half the session will be reserved for questions and answers. This meeting is part of a series of Young Investigator Meetings intended to facilitate the careers of young scientists of any nationality in India. Individuals interested in pursuing postdoctoral or graduate studies in India will also benefit from this session. For more information, visit www.indiabioscience.org. Lunch will be served. Come join us!

MAC Awards Luncheon (by invitation only)

12:00 Noon–2:00 pm

MAC poster winners are honored, information about MAC yearly activities is shared, and lots of networking takes place.

Cell Biology Research in China

1:00 pm–2:00 pm

Presenters: *Yequang Chen, Xiaoyan Ding, Guangshuo Ou, and Xuebiao Yao*, Chinese Society of Cell Biology and Chinese Academy of Sciences

This session will highlight the current cell biology research activities and opportunities in China. It will also touch on the potential opportunities for international collaboration on fundamental and translational research. The event is specifically designed for those who plan to explore employment opportunities and/or establish collaborative efforts in China.

Visiting Professor Lecture Series

2:00 pm–3:00 pm

Second-year Minorities Affairs Committee Visiting Professor *Teresa Shakespeare* from Fort Valley State University will discuss her research over the past two summers.

New!

New!

NSF Funding Opportunities

2:00 pm–3:00 pm

Use this opportunity to hear from and meet with National Science Foundation (NSF) representatives to learn about NSF programs and ask questions.

WICB Career Discussion and Mentoring Roundtables

3:00 pm–4:30 pm (*no food/beverage served*)

No charge but preregistration is required and attendance will be limited.

The Career Discussion allows participants to meet informally for roundtable discussions on issues of importance to cell biologists in various stages of their careers. Conversations are moderated by individuals who have experience in various professional areas or with particular issues. The organizers envision this session as an excellent way to disseminate practical information on career choices, to discuss strategies for effectively developing a career, and to network with others who share career interests and concerns. Sign up to: 1) participate **OR** 2) be a Table Leader on the Annual Meeting Registration form.

Meet the Editor of *Molecular Biology of the Cell*

3:15 pm–4:00 pm

ASCB Booth, Exhibit Hall

Stop by for an informal discussion about the journal with Editor-in-Chief *David Drubin*.

Meet the Editor of *CBE—Life Sciences Education*

3:30 pm–4:15 pm

ASCB Booth, Exhibit Hall

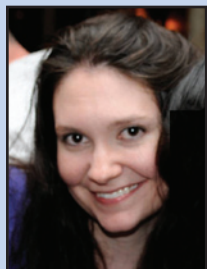
Stop by for an informal discussion about the journal with Editor-in-Chief *Erin Dolan*.

Student and Postdoc Social, featuring The Deadbeats

An offsite event for students, postdocs, and the public at Fourth Street Bar and Grill in the

Marriott Marquis Hotel. This is your chance to get to know other young scientists in a fun setting while enjoying live music by the The Deadbeats, starring cell biologist Jim Ferrell and his bandmates. Cover charge \$10. Show your meeting badge for a complimentary drink ticket.

New!



Lindsay Case

I have always been impressed by the breadth of topics presented at ASCB, and the meeting in Denver showcased the variety of questions at the forefront of cell biology. There were also many opportunities to network and make connections with labs from all over the world.

—Lindsay Case, Graduate Student, National Heart, Lung and Blood Institute, NIH

ANNUAL Meeting

Tuesday, December 18

ASCB Business Meeting and Town Hall

12:00 Noon–1:00 pm

An opportunity for ASCB members to discuss the most important issues in the field! After a brief overview of the year's accomplishments and challenges, acknowledgment of critical volunteers and staff, and the official passing of the gavel from President Ron Vale to President-Elect Don Cleveland, the Town Hall will be open for questions. Join Vale, Cleveland, Treasurer Thoru Pederson, and many other members of the ASCB Council and committees to discuss pressing needs, future plans, suggestions, and more. Get more involved in your Society, your community!

Face-to-Face with the NIH

1:30 pm–3:00 pm

Meet with National Institutes of Health (NIH) program and review officials as they discuss various aspects of the NIH grants process, including peer review, career development opportunities, new investigator policies,

workforce diversity, locating the right funding opportunity, and more.

Gay, Lesbian, Bisexual, and Transgender (GLBT) Session

1:30 pm–2:30 pm

Politicians Don't Bite

3:00 pm–4:00 pm

Hear Public Policy Committee member Tom Pollard and others discuss their experiences in educating officials about the importance of federally funded biology research and how you can become a science advocate.

WICB Network Reception

3:30 pm–4:30 pm (*refreshments served*)

Members of the ASCB Women in Cell Biology Committee's Network and people interested in learning more about the Network and the Committee's activities—and meeting one another—are cordially invited to attend the WICB Network Reception. ■

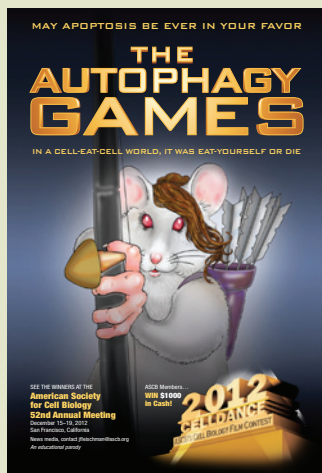
By receiving an ASCB travel award, I was provided the opportunity to meet other graduate students and “budding biologists” as well as established researchers in the field. The fact that I received a travel award from ASCB also served as a means of personal validation because the cell biologists who I hold in utmost respect deemed my project as worthy of an award.

—Cheston Saunders, Graduate Student, Department of Biology, West Virginia University



Cheston Saunders

Celldance 2012 Deadline is September 27



Celldance, ASCB's Cell Biology Film Contest, returns for its eighth year to the ASCB Annual Meeting in San Francisco and offers \$1,000 in cash prizes.

Celldance aims to open the eyes of the world to the best video and animated images showcasing the wonders of cell biology. Judges look for the best videos, “remixes” of classic cell biology sequences, animations, or products of any other dynamic imaging process that combine striking visuals with effective elucidation. In addition, the Society's Public Information Committee (PIC), which organizes Celldance, makes a Public Outreach Award to a film of strong artistic and creative merit that communicates the excitement of cell biology to the general public or students. Being funny, entertaining, or breathtakingly beautiful counts for Public Outreach.

Celldance is open to all ASCB members or member applicants. The deadline for entries is Thursday, September 27, by 5:00 pm EDT. Winners will be notified by October 19. The Celldance Awards will be unveiled in San Francisco on Tuesday, December 18. Winners do not have to be present, although they are encouraged to come and receive the public acclaim that is their due.

The complete rules and entry portal for Celldance 2012 are available at www.ascb.org/2012Celldance.html. ■

—John Fleischman

Going Up?

ASCB's first-ever, all video Elevator Speech Contest will take place at the 2012 Annual Meeting in San Francisco.

The elevator door closes and you've got a trapped audience—a U.S. Senator, your dean, or your sister-in-law. Now is your chance to sell your science before the door opens!

There are two divisions:

- Fact and furious: "Sell Your Science in 60 Seconds!"
- Long form: "Sell Your Science in 120 Seconds!"

The Elevator Speech Contest runs at the ASCB Annual Meeting from Saturday noon to Tuesday noon (PST). Once you have arrived at the Annual Meeting and picked up your meeting badge, you can enter the contest in person at a designated ASCB Elevator Contest Video Booth or record yourself on your smart phone and email your .mov file to ElevatorContest@ascb.org.

You must be registered for the 2012 ASCB Annual Meeting to enter. Each entry must begin with a 10-second camera shot of your ASCB Annual Meeting badge. This doesn't count against your time, but please be sure that your name can be read in case you're the winner. Depending on your division, your entry will be cut off by the judges exactly 60 or 120 seconds after you begin. You can enter more than once but only one complete entry will be judged, typically the last submission.

All entries will be posted to the ASCB YouTube Channel, ASCB 8120, under a Creative Commons license. ASCB judges will screen their top picks at the Celldance Theater in the Exhibit Hall at 3:30 pm, Tuesday, December 18.

Prizes, if awarded, will be minimal and fun. The decision of the judges will be fun and final. ■

— John Fleischman

For more information, visit ascb.org/meetings



THE AMERICAN SOCIETY
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ANNUAL Meeting

Planning for the 2012 Annual Meeting

The 2012 ASCB Annual Meeting will be held at San Francisco's Moscone Center. Located at the edge of the city's dynamic South of Market district, the Moscone Center is just four blocks from Union Square, the city's vibrant shopping district, and the Powell Street cable car to Nob Hill, Chinatown, and Fisherman's Wharf. Bay Area Rapid Transit System (BART) and Muni Metro stations are within two blocks of the Moscone Center. More than 100 restaurants are within a seven-block radius.

Come Early, Stay Late!

Now is the time to begin planning your trip to the ASCB Annual Meeting.

- Register for the Annual Meeting (early registration deadline is October 10).
- Submit a late abstract. You still have time to submit and present a poster at the meeting (deadline is October 17).
- Make your hotel reservation through onPeak (ASCB's official housing partner).
- Make your travel arrangements with discounts offered by United Airlines.
- Make changes to your meeting registration and pay your annual dues.

Visit www.ascb.org/meetings today.

Hotel Reservations

Reserving your room early is best. onPeak offers multiple ways to reserve your hotel room:

- Online: www.ascb.org/meetings

Want to Know Who's Attending the Meeting?

ASCB provides a list of those who have registered for the meeting. The Attendee Lookup list is searchable by name, affiliation/institution, and area of research interest. To search this list, visit www.ascb.org/meetings and click "Rates/Registration Information." *Note: This list may not be used for marketing or promotional purposes, and attendees who register for the meeting can opt out of being listed.* ■

- Phone: 800-220-9540 (U.S., toll-free) or +1 312-527-7300 (international); open 8:00 am–5:00 pm (CST), Monday–Friday
- Email: ascb@onpeakevents.com

With onPeak:

- You get the lowest available room rates in the ASCB housing block.
- ASCB rates are renegotiated if necessary, and the lower rates are applied to already reserved rooms.
- You receive additional cost savings with complimentary hotel extras offered by select ASCB official hotels, from breakfast to Internet access and special discounts.
- You have an advocate to support you if any issues arise with your hotel reservation.
- You can easily reserve a single room or manage multiple rooms. Fully flexible policies minimize cancellation fees, and you can usually book now and pay later with no up-front costs.
- You are protected from unauthorized booking companies that often make promises but don't deliver.
- You assist ASCB in future hotel negotiations to secure lower rates and better hotel extras for our meeting attendees and exhibitors.

Hotel Payment Guarantee: You pay nothing at the time of your reservation; however, a payment guarantee in the amount of one night's stay at the confirmed hotel rate plus current tax of 15.57% (subject to change) is required to hold your reservation. The hotel will charge payment to the credit card provided upon check-in. Please refer to your confirmation for full details, which vary by hotel.

Special Note about Hotel Prices: In this economy, hotel prices can fluctuate widely, and ASCB is aware that attractive rates are available online. However, ASCB and onPeak

Avoid Carrying Your Poster to the Meeting

MIRA offers a poster printing service for accepted poster presenters at the 2012 ASCB Annual Meeting. Presenters will receive details on how to access this service in their acceptance notices, which will be emailed by September 28 (or October 26 for late abstracts). The poster service costs \$100 and includes gloss printing, packaging, and shipping directly to the Moscone Center. Posters will be available for pickup at a designated counter in the registration area beginning at 8:00 am on Saturday, December 15, 2012.

The deadline to upload files and receive the \$100 rate is November 30, 2012. Presenters can still use this service after November 30, 2012, until December 7, 2012, but rush fees (\$150) will apply. ■

have negotiated special rates and added-value incentives with hotels that are fully competitive with other online offerings. Moreover, reserving rooms in the ASCB housing block offers attendees important benefits (as listed above).

Please cooperate by booking your hotel room through onPeak by November 16, after which rooms are not guaranteed at the negotiated rate. If ASCB fills its housing block, the Society secures both competitive room rates and larger blocks of rooms for future Annual Meetings.

If you see online rates at any of the hotels in our block that are markedly lower than current ASCB offerings, please contact Director of Meetings Trina Armstrong at tarmstrong@ascb.org.

Attendee Hotel Cancellation Policy:

(Exhibitors: Refer to online Exhibit Prospectus for cancellation policy.)

Reservations canceled within 72 hours of your intended arrival or reservations not canceled at all (no-show) will result in a charge of one night's room and tax to the credit card provided and loss of reservation. Failure to check in on your confirmed arrival date will also result in a penalty of one night's room and tax and loss of reservation. Please refer to your hotel reservation confirmation for full policy details, which vary by hotel.

Please don't be a "no-show." If you cancel your plans to attend the 2012 ASCB Annual Meeting, remember to cancel your meeting registration and hotel reservations as quickly as possible. A low no-show rate helps ASCB obtain conveniently located rooms at the lowest possible rate for its meeting attendees. Plus properly canceling a reservation will help you avoid charges and allows other ASCB meeting attendees the chance to book the room.

Save Money with Room-Share: To assist with hotel expenses, which can be an expensive part of attending any meeting, ASCB offers a room-share service for all registered meeting participants. Room-share lists are sent once a week, beginning August 17, 2012, and applications can be submitted through December 3, 2012, at noon EST. Although you may send applications through December 3, onPeak guarantees special ASCB hotel rates only through November 16, 2012. To participate, please visit www.ascb.org/meetings and click "Hotel and Travel."

Saving Money on Transportation

■ **Airfare.** Want to save 2%–5% off your airfare? Take advantage of a specially negotiated discount on United Airlines. Visit www.ascb.org/meetings and click "Hotel and Travel" and then "Transportation and Parking."

■ **Ride-Share.** The ASCB ride-share program helps local registered attendees in the San Francisco Bay Area save meetings costs by sharing rides. Ride-share lists are available to registered meeting attendees who contact us via email to voluntarily enroll in the program and agree to specific terms. For further information, please visit www.ascb.org/meetings and click "Hotel and Travel." The deadline is December 3, 2012, at noon EST.

■ **SuperShuttle.** SuperShuttle offers ground transportation service between the San Francisco International Airport (SFO) and all major hotels downtown. With an advance reservation through the SuperShuttle website, ASCB attendees can get a discounted one-way fare of \$14 from SFO. The discount is valid online only with travel dates between December 10 and December 24, 2012. You do not need a reservation to ride SuperShuttle, but without a reservation, you will pay the full fare at the ticket counter.

■ **BART.** BART is a fast, easy, inexpensive way to get to San Francisco and around the Bay Area. Trains arrive at SFO every 15 minutes and reach downtown San Francisco in just 30 minutes. A one-way ticket from SFO to downtown is \$8.10; find fares from the airport to any station by using the BART QuickPlanner.

The BART station at SFO is located in the International Terminal. Terminals 1, 2, and 3 are approximately a one- to three-minute free AirTrain (Red Line) ride to the BART station at the International Terminal. BART is offering ASCB meeting attendees a discount: Visit www.ascb.org/meetings and click "Hotel and Travel."

■ **Share a taxi.** One-way taxi fares to downtown San Francisco are approximately \$37. Metered rates apply to all destinations, and most cab companies accept credit cards. All San Francisco taxicab meter fares for rides originating from SFO include a \$2 exit surcharge.



Ivo Telley

I had the opportunity to meet colleagues, learn the newest developments in my and other fields, and to present my work in an oral presentation. I am in a transitional phase of my career, and I personally believe that the meeting was the best networking platform. Every year the Society introduces new ways of science communication, for example discussion tables or the Threads. Truly inspirational!

—Ivo Telley, Postdoctoral Fellow, Developmental Biology Unit, European Molecular Biology Laboratory, Heidelberg, Germany

ANNUAL Meeting

International Meeting Attendees

ASCB invites scientists from around the world to attend its 2012 Annual Meeting, December 15–19, 2012. Individual invitations are not required to attend the ASCB Annual Meeting. Because the meeting is open for scientific events, ASCB invites all interested persons to register and attend.

International meeting attendees requiring visas have been encouraged to apply for visas no later than Monday, August 13. ASCB will not issue registration refunds after November 26 for denied visas. If you require a letter of invitation from ASCB, please check the appropriate box on the registration form.

Note: A letter of invitation **does not guarantee** issuance of a visa. The decision whether to issue a visa is at the sole judgment of the local U.S. embassy or consulate. ASCB cannot assist with any aspect of actual visa processing but does offer information if you encounter problems; see www.ascb.org/meetings under “Hotel and Travel.”

Accessibility for People with Disabilities and Special Needs

The Moscone Center and most ASCB hotels are accessible to people with disabilities. If you require special services, please mark the appropriate box on the Annual Meeting Registration Form or contact Trina Armstrong at 301-347-9325. A San Francisco Access Guide is available at www.ascb.org/meetings.

This year, ASCB is offering a nondenominational prayer room open to all registered meeting attendees and exhibitors.

Reservations Tonight! Not Sure Where to Dine in San Francisco?

Let Reservations Tonight! help. Services include restaurant reservations, party arrangements, and business entertaining assistance. Visit www.ascb.org/meetings and click on “San Francisco” and then “Reservations Tonight!” Onsite assistance will be available, with limited dates and times, in the registration area of the South Lobby at the Moscone Center.

ASCB Annual Meeting Program

ASCB does not mail its *Annual Meeting Program*. A fully searchable online Program will be available one month before the meeting; the

print version will be available at the Moscone Center.

You’ve Submitted an Abstract ... But Did You Register for the Meeting?

Reminder: Abstract submission and payment are separate from meeting registration and payment. To register and pay for the Annual Meeting, visit www.ascb.org/meetings. Register by October 10, 2012, to take advantage of discounted registration rates.

A Special Event for Students and Postdocs!

On Monday, December 17, 8:00 pm–1:00 am, enjoy music by the Deadbeats, featuring Bob Adams, Missy Peabody, Dan Purtell, and Jim Ferrell, at the Marriott’s Fourth Street Bar and Grill. There is a \$10 cover charge at the door. Show your ASCB Annual Meeting badge to receive one complimentary drink ticket. You will be responsible for all food and additional beverages. ■

—Trina Armstrong, Director of Meetings



Hotel Contest!

Attendees reserving a hotel room through onPeak at www.ascb.org/meetings by October 12, 2012, will automatically be entered in a drawing for a chance to win one of the following prizes, compliments of these hotels:

- **Hotel Nikko San Francisco:** Complimentary breakfast for two at the ANZU restaurant
- **Intercontinental San Francisco:** Dinner with a Star/Cocktail with a View package, which includes two cocktails at Top of the Mark (InterContinental Mark Hopkins) followed by dinner for two at Luce, winner of a coveted Michelin star rating (at InterContinental San Francisco)
- **San Francisco Marriott Marquis:** Two upgrades that will include concierge level access at the hotel ■

Help ASCB Generate a Buzz about the Meeting.

If you have been approved for a Subgroup, are speaking in a Symposium, Minisymposium, or Working Group, or are an ASCB awardee, encourage others to register and attend by using the following Social Media:

- On Twitter, @AmerSocCellBio. Use hashtag #ASCB2012 for Annual Meeting–related tweets
- On Facebook at facebook.com/AmerSocCellBio ■

The ASCB is grateful to its Corporate Members for 2012:

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See, Learn, Win, Eat, and Be Wowed in the Exhibit Hall

Interested in learning about the latest technology and products for use in your lab? Want to see the latest products, books, and journals? Wouldn't mind winning a prize or adding a giveaway to your suitcase? Then the ASCB Exhibit Hall is the place to visit! Not only is it the site of thousands of posters—showcasing the latest science—it is the place to visit more than 200 companies displaying products and services you use—or likely will someday.

Seasoned meeting attendees know it's also the place to get their questions answered and receive a personal tour of new technologies, products, and services. Allow an exhibitor to “swipe” your badge and you can get more information after the meeting—and help confirm for exhibitors the value of exhibiting at the ASCB Annual Meeting.

Many companies will feature giveaways, games, and prize drawings as well as discounted pricing if you order during the meeting.

Books, Showcases, and Tutorials

Be sure to browse Publishers Row to see a display of new books and journals. Looking for a particular product? Be sure to check the *Annual Meeting Program* for a description of what each company will display, and consult the Product Index for items you are seeking. Visit the online *Buyer's Guide* at www.ascb.org/iweb/BuyersGuide/VendorSearch.aspx. The *Annual Meeting Program* will be available online approximately one month before the meeting at www.ascb.org/meetings. Your print copy will be waiting for you at Moscone Center.

Don't forget to check the schedule for the

30 Exhibitor Showcase presentations offered Sunday–Tuesday from 7:00 am–8:15 pm and the Exhibitor Tutorials presented Monday night from 6:45 pm–8:15 pm. These are special opportunities to learn more about products and technologies from the experts.

Refreshments and Commentary

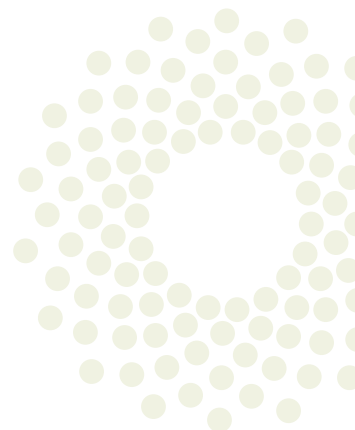
The exhibits will be open Sunday–Tuesday from 9:30 am–5:00 pm. You are cordially invited to the Exhibit Hall each morning after the first Symposium (8:00 am–9:30 am) of the day to enjoy refreshments, including coffee, tea, and muffins, from 9:30 am–10:30 am. In the afternoon, popcorn and lemonade will be available in the Exhibit Hall from 3:00 pm–4:00 pm.

On Tuesday, stop by the Celldance Theater to find out who won the Celldance Video Contest (see p. 15) and the Elevator Speech Contest (see p. 16). Hear directors' commentary before or after getting your popcorn and visiting some booths. The Celldance Theater will be located next to the ASCB Booth in the middle of the Exhibit Hall.

Why not take a few minutes daily to visit the Exhibit Hall? Prepare to be wowed by the science! Your visits and questions are welcomed. And keep in mind: The revenue from exhibiting companies helps to defray the cost of your registration. So please show your appreciation to the exhibiting companies by visiting their booths and getting your badge scanned. And if you make buying decisions for your lab, and have grant funds to spend, be sure to let them know that too.

To view a list of 2012 exhibitors, go to www.ascb.org/exhibits/12exhibitors.cfm. ■

—Ed Newman



Attention All PIs, Lab Heads, and Search Committees

Interested in recruiting postdocs for your lab or conducting a different search? We invite you to post your positions in the Career Center at the ASCB Annual Meeting. What better place to begin your search? And it's all free! Just post the position on one of our poster boards in the Career Center. Those interested in the position can leave their CVs in a folder on the same board. For information, visit www.ascb.org/meetings and click on “Career Resources.”

Note: You can also take advantage of the ASCB Online Job Board (visit <http://jobboard.ascb.org>) and advertise in the *ASCB Newsletter* (email Ed Newman at enewman@ascb.org for more information). ■

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Got Talent? Genentech's Commitment to Creating a Great Workplace for Women Scientists

For more than 35 years Genentech has used human genetic information to discover, develop, manufacture, and commercialize medicines to treat patients with serious or life-threatening medical conditions. Those efforts require exceptional people, so hiring, developing, and retaining its employees is critically important to Genentech. In 2010 it launched a major effort to ensure a diverse workforce: the Genentech Gender Diversity Strategy. This effort aims to identify and remove barriers to the advancement of women to senior leadership positions and to increase the pool of women qualified for such positions by 50% by January 2015.



Paula S. Jones

Best Practices and Flexible Implementation

The Genentech Gender Diversity Strategy is a multifaceted, multiyear effort based on research by the Healthcare Businesswomen's Association E.D.G.E (Empowerment, Diversity, Growth, Excellence) in Leadership Study.¹ The strategy guides implementation of best practices in areas such as leadership support, merit- and performance-based promotion systems, recruitment practices, advancement programs for high-potential female employees, and career and work flexibility models.

A member of the Roche Group since March 2009, Genentech has approximately 11,200 employees, about half of whom are women, working in research, early development, product development, commercial, manufacturing, and other functions such as finance, informatics, legal, site engineering, and human resources. The company is organized into five business functions: Genentech Research and Early Development, Product Development, U.S. Commercial Operations, Global Pharma Technology Operations, and Corporate groups.

After the gender diversity goal was announced, each group assessed the most important actions it could take in light of the best practices model. This customized approach allowed each group to commit resources where they would have the greatest impact to advance qualified women toward leadership. Genentech Research and Early Development, for example, decided to focus on visible senior leadership support, attraction and hiring practices, and advancement programs. Other groups targeted other areas.

Attraction and Hiring

Genentech's Research and Early Development group undertook a study of the dynamics of the talent pipeline from applicant pool through hiring manager review, interview, and hire. Information from the National Science Foundation on the growing rate at which women receive doctorates in biology and chemistry suggests that there is a growing pool of women who are viable candidates for positions at Genentech.

While the company was doing a good job of bringing in women scientists, the leadership team wanted to understand if there were places in the attraction and hiring process where the organization could do better. Genentech Research and Early Development now aspires to include qualified women candidates in as many interview pools as possible. This allows the organization to consider a larger number of good candidates. Genentech Research and Early Development also makes sure that women scientists sit on interview panels. The presence of women on interview panels gives women candidates who are considering careers in industry a chance to meet role models who can offer a realistic picture of the company, the work, the culture, and how they manage their lives and careers. Genentech Research and Early Development staff responsible for recruitment



[The Genentech Gender Diversity Strategy] aims to identify and remove barriers to the advancement of women to senior leadership positions and to increase the pool of women qualified for such positions by 50% by January 2015.

have also begun to identify sources of future talent and to think about what factors would attract women to work at Genentech. External research suggests that Genentech's passion for serving patients is a strong attractor.

Development and Retention

Senior leaders wanted to ensure that employees have the resources they need to develop their careers, and mentoring is an important part of each person's growth. So in 2011, Genentech Research and Early Development launched a mentoring program targeted to its scientists and emerging leaders. This program is available to both men and women but was intended as one of the efforts to advance women into leadership. It fosters career development through one-on-one mentoring that provides employees with access to more senior individuals within the organization. This is an efficient way to transfer knowledge and to help employees navigate the organization as their careers grow.

Employees nominate themselves to the program, define their goals, and are asked to select up to three mentors they feel would be helpful. A team of vice presidents from Genentech Research and Early Development, with support from Human Resources, then meets to match mentors and mentees. This process provides senior leaders with a line of sight deep into the organization about employees' aspirations and needs. The identities of mentoring pairs are kept confidential to enhance the trust needed for successful mentoring.

The first cohort rated the mentoring program very highly. Mentees gained an understanding of their career options and insight into how to better position themselves for promotion and navigate the challenges of working in a highly matrixed company. Mentors were struck by the dedication of more junior employees and rediscovered their passion to be good managers. Because of its success, in 2012 the mentoring program was expanded by 50%, from 30 pairs to 45, to reach more employees.

In another effort to promote the advancement of women employees, a coalition of Genentech Research and Early Development, Product Development, and Pharma Technical Operations leaders under the sponsorship of Richard Scheller, executive vice president of Genentech Research and Early Development, launched Genentech Women in Science and Engineering. It is an internal employee community

and network created to provide increased opportunities for leadership and career growth. Through its roundtable discussions and external speaker events, it creates forums for women to help each other succeed, meet peers and leaders with technical backgrounds, and engage in skill development to help overcome barriers to success. In addition, Genentech Women in Science and Engineering creates leadership development opportunities for women who serve on the core team, organize the roundtables, and serve as panelists and mentors.

Genentech Women in Science and Engineering solicits input from its members about what topics hold the greatest interest for them and provides small roundtable meetings with women leaders to discuss effective communication, work and career flexibility, and organizational savvy. For example, Laura Shawver, chief executive officer of a biotech company, cancer survivor, and founder of the Clarity Foundation, recently spoke to 400 women in science about her journey from bench scientist to executive and how she thinks about scientific leadership.

Practical tips and tricks are gathered and posted on the Genentech Women in Science and Engineering website, where approximately 2,000 women scientists and engineers have access to them. Because the resources are on the internal company website, they are also available to any employee who wants to know more about Genentech Women in Science and Engineering.

In addition, Genentech Women in Science and Engineering has collaborated with the broader women's resource group, Genentech Women Professionals, to provide a workshop on negotiation skills. It also partners with the Diversity and Inclusion group to understand issues and design solutions that meet the needs of women in science, engineering, and technology. Genentech Women in Science and Engineering has been very successful in connecting and engaging women scientists and engineers at Genentech. In addition, it has begun efforts to develop male allies by initiating cross-gender roundtables to discuss how diversity of teams can produce better results and how to manage that diversity.

Work and Career Flexibility

Juggling work and life priorities is a constant challenge for many employees. To help, in 2010 Genentech launched flexible work arrangements that include telecommuting programs, flextime,

The presence of women on interview panels gives women candidates who are considering careers in industry a chance to meet role models who can offer a realistic picture of the company, the work, the culture, and how they manage their lives and careers.

and compressed workweeks. While we have made tremendous progress in our efforts to promote a more flexible work environment, we have more work to do to ensure that flexibility is the norm rather than the exception. Employees are still concerned about the importance of “face time” and about the impact of asking for flexibility. Some leaders have been hesitant to embrace flexible work arrangements and are worried about employees not being properly included in the culture of the organization if they work remotely. Following the merger with Roche, many of these concerns have been allayed as more and more employees are working on globally dispersed teams that require remote work and flexible hours.

Another program to create a better work culture is Genentech’s onsite childcare for children ages six weeks through prekindergarten. Our childcare center, 2nd Generation, was implemented to help simplify the lives of Genentech employees with families by providing the security of knowing their children are close by and receiving outstanding care in a safe and nurturing environment. To supplement the childcare program we also have backup childcare available to all employees.

To help busy employees take care of life outside of work, Genentech offers a concierge service. The service is onsite and can assist employees with everything from personal shopping, running errands, researching eldercare, planning vacations, and finding pet services. Genentech pays for this service, with employees picking up the cost of any goods, services, or travel arrangements discovered by the concierges.

We also wanted to understand how employees use flexibility programs. Toward this end, we leveraged Genentech Women in Science and Engineering and held roundtables and panels to foster candid and engaging discussion. The conversation was spirited and the advice practical: make time for yourself; create a supportive network; set expectations with your

manager; set boundaries with everyone; and understand that sometimes “no” is a complete sentence. Women were also able to discuss openly the emotional impact of juggling life and work priorities and to help one another let go of guilt and perfectionism.

Moving Forward

In addition to the more targeted efforts in certain parts of the organization, Genentech is taking a research-based look at women in scientific, engineering, and technology roles. In collaboration with the Center for Talent Innovation run by Sylvia Ann Hewlett, the company launched the Athena Factor Research Study in early 2012. The study will collect and analyze the data needed to develop a comprehensive strategy to retain women in the science, engineering, and technology areas and enable them to advance their careers. Among other topics, the study will explore employees’ perceptions of the barriers to their success.

Talented people crave the opportunity to grow and develop. Most companies leave a tremendous amount of human talent unrealized because they don’t address the issues that stop an organization from being a great place to work. At Genentech we believe that we have taken a good first step in building a culture where everyone can reach his or her potential, where diversity is valued, and where developing our employees is viewed as essential. ■

— Paula S. Jones, Genentech

Note

The author thanks Jim Rottman for his contributions to this article.

Reference

¹Pettersson AK, Talley AC, Pritchard B, Karbe M, HBA E.D.G.E. in Leadership Study Team (2007). *The Progress of Women Executives in Pharmaceuticals and Biotechnology: A Leadership Benchmarking Study*. Fairfield, NJ: Healthcare Businesswomen’s Association.

[The process of matching mentors and mentees] provides senior leaders with a line of sight deep into the organization about employees’ aspirations and needs.

New ASCB Member Benefit: One-on-One CV Review

Need some help with a cover letter, CV, resume, statement of teaching philosophy, or other document for the next step in your career? Members of the ASCB Education and Women in Cell Biology Committees are willing to help. Just fill out a short form (www.ascb.org), and we’ll put you in touch with the right reviewer. Then the two of you can decide which digital collaboration tool to use (email, Google Docs, Skype, Wikispaces, etc.). You must be an ASCB member to take advantage of this new service. ■

—Thea Clarke

Calamitous Budget Cuts Ahead for NIH, NSF

Unless Congress and the White House can come to an agreement before January 2, 2013, on a FY13 federal budget that includes a bipartisan approach to deficit reduction, cuts to the National Institutes of Health (NIH) and the National Science Foundation (NSF) budgets could be severe. Cuts to the NIH budget could be as small as 8% or more than 20%; cuts to the NSF budget could be as small as 8% or over 30%.

The appropriations process that normally leads to a federal budget has come to a stop. The House Appropriations Subcommittee has approved a bill that includes flat funding for the NIH. The Senate Appropriations Committee has approved a similar bill with \$100 million more for the NIH than in FY12, President Obama's budget request, or the House bill.

The full House of Representatives has passed an NSF appropriations bill that includes \$299 million more than FY12 but \$41 million less than the amount requested by the president. A Senate version of the NSF funding bill has been approved by the Appropriations Committee but not by the full Senate. That bill includes \$240 million more than the FY12 NSF budget but is \$100 million below the amount requested by the president.

Neither the House nor the Senate is going to do any more.

Congressional attention now turns to sequestration. Last summer, the agreement resolving the federal debt limit crisis included the creation of a Super Committee to identify at least \$1.2 trillion in cuts to federal spending over 10 years. Included in the agreement was a provision that if the committee could not reach an agreement, \$1.2 trillion in cuts would be made across all portions of the federal budget, except veteran's programs, on January 2, 2013. This sequestration provision was intended to be a Sword of Damocles to force the committee to make the targeted cuts. In reality, it became an alternative to making hard choices.

Sequestration would mean a cut of about 8.4% to the nondefense discretionary (NDD) portion of the federal budget, including the NIH and the NSF.

However, now that the sequestration deadline is getting closer, there is an organized campaign to convince federal lawmakers to exempt the Defense Department from the cuts. If defense spending were exempted, it would mean that the NDD portion of the federal budget would have to absorb all \$1.2 trillion in cuts. A report by the American Association for the Advancement of Science estimates that exempting defense spending would mean the following cuts over 10 years to these portions of the federal budget:

- 29% cut to General Sciences (including NSF)
- 67% cut to Energy
- 33% cut to Natural Resources
- 22% cut to Health (including NIH)
- 22% cut to Agriculture
- 35% cut to Transportation

During the same period, veterans programs would not be cut and defense budgets would increase by 3%.

Groups representing those who would be affected by cuts to the NDD budget have joined to make sure Congress understands what the cuts to the NDD portion would mean to the U.S. economy and to the communities that benefit from the federal programs being cut.

In early July, nearly 3,000 national, state, and local organizations, including the ASCB, sent a letter to all members of Congress describing the scope of the federal NDD programs and urging Congress and the White House to work together to ensure sequestration does not take effect. The letter calls instead for a balanced approach to deficit reduction.

Later in the month, over 300 NDD advocates gathered for a rally on Capitol Hill. Speakers included Senators Tom Harkin (D-IA) and Patty Murray (D-WA) and Representatives Rosa DeLauro (D-CT) and George Miller (D-CA).

It is unlikely that the sequestration issue will be resolved in the near future. It may not be resolved until next spring. The ASCB and the public policy coalitions it works with will continue to keep focusing attention on the harm across-the-board cuts will have to the scientific community. ■

—Kevin M. Wilson

Meet Your Congressional Representative: It's As Simple As "Hello"



Rep. Jared Polis (D-CO) met with scientists in his district. Left to right: Eric Ross, Jim Bamburg, Olve Peersen, Don Mykles, Rep. Polis, Jennifer DeLuca, Rachel Mueller, George Seidel, Jennifer Nyborg, Paul Laybourn, Susan Laybourn, and Shing Ho.

"What do you think of your new district?" was the question that led to a meeting between Congressman Jared Polis (D-CO) and faculty members from Colorado State University (CSU) in Fort Collins. Fort Collins will be part of Colorado's new Second Congressional District beginning next year. The district already includes the University of Colorado Boulder campus.

After the usual introduction upon meeting Rep. Polis, and words of thanks for his past support of biomedical research, I asked about the new district. Polis mentioned that he was trying to meet constituent groups in the new parts of the district. "That's great," I said, "Who do you talk to about science? You're now representing two research campuses." Polis asked if I knew people at CSU. I answered "Yes," and a plan was hatched. I was surprised by his level of interest in gaining access to our constituency of research scientists and educators. This was my first lesson.

The second lesson was that I needed to act fast while the idea is fresh. Congressman Polis gave me a local staff contact who I emailed later in the day. She quickly confirmed with the Congressman his desire to meet and she made the arrangements. There was great interest and participation from my colleagues at CSU, including several ASCB members. With the aid of an email from Kevin Wilson, ASCB's Director of Public Policy, coaching the participants on their two-minute speeches, we had a great conversation. Among the topics were the research at CSU, the importance of federal funding to support research and economic development, and issues surrounding the training of future scientists.

The Congressman was impressed with the event and asked to do another in the future. He also hopes to add the House Science Committee to his Committee assignments, and is likely to be one of our champions in Congress. ■

—Mark Winey, for the ASCB Public Policy Committee

Five Excuses for Not Getting Involved in Science Policy Advocacy

1. I wouldn't be good at it. Being a science advocate doesn't require any unique skill.

ASCB's public policy staff will help you with anything you need to know. All you need to do is to be able to explain your research in an easily understandable way—and we can help you with that, too. Your excitement for science and for the potential of your research is the most important tool you need to be a successful advocate for science.

2. I don't have the time. Science policy advocacy takes as much time as you have to give. Being a science policy advocate doesn't just mean flying to Washington, DC, and walking the halls of Congress. Science policy advocacy can also mean taking a few minutes to send an email to your elected officials in response to Advocacy Alert emails from the ASCB, or inviting your local elected officials to visit your lab or your department. Advocacy can also mean meeting with local chapters of patient advocacy groups or local civic organizations to explain to them the research being done in their community and its potential benefits for them.

3. My individual voice or letter wouldn't make a difference. Your voice does matter. Your elected officials work for you and they always want to know what you think. In a recent survey of congressional staff, 90% of those surveyed said that individual letters from constituents have a significant influence on policy decisions in their office. Ninety-seven

percent said that in-person visits by constituents are equally important.

4. I don't know where to begin. The ASCB knows and we are here to help. The advocacy section of the ASCB website has information that will help you write a letter, invite your elected official to tour your lab, or request a meeting with your representative. You can read and print these documents at <http://ascb.org/scientificcitizenship.html>.

The ASCB Public Policy Committee is also sponsoring a special science policy advocacy week during Nobel Week, October 1–5, 2012. The We Are Research website, [www.ascb.org/wearesearch.html](http://www.ascb.org/weareresearch.html), includes an extensive list of science policy advocacy opportunities that don't involve coming to Washington, DC, and won't take too much of your time.

5. I don't have to worry, the NIH budget will be okay. Annual increases in the National Institutes of Health (NIH) budget have been at or below the Biomedical R&D Price Index since 2004. In that time, the buying power of NIH budget dollars has decreased by almost 20%. In that same seven-year time frame, the NIH estimates that the total number of extramural awards has decreased by more than 5% and the number of extramural research grants has decreased by almost 6%. According to the NIH, success rates have also plummeted. The NIH-wide success rate has decreased by 7%, and the success rate at the National Institute of General

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Medical Sciences—the largest funder of basic biomedical research—has fallen by 6%.

That is only half the story. In 2011, when the Congressional Super Committee failed to make \$1.2 trillion in targeted cuts to the federal budget, a process of automatic, across-the-board spending cuts called sequestration went into effect. Broadly speaking, there will be about an 8.4% cut in 2013 to all nondefense federal programs, including the NIH and the National Science Foundation, and gradually decreasing annual cuts subsequently. In testimony before Congress, NIH Director Francis Collins estimated that if allowed to go into effect, these

cuts would result in a 25% reduction in the number of new and competing grants awarded by the NIH. And far more drastic cuts could occur under alternative scenarios that would exempt defense spending from sequestration and make all of the required cuts to nondefense programs. (See “Calamitous Budget Cuts Ahead for NIH, NSF.”)

The NIH isn’t going to go away, but the future for NIH-funded science is bleak. If we, as a community, don’t speak up for ourselves, no one else will.

Science policy advocacy is easy and critically important. So, what are you waiting for? ■

—Kevin M. Wilson



CLS on Capitol Hill

The Coalition for the Life Sciences (CLS) hosted a Congressional Biomedical Research Caucus on July 25. Joe Nadeau from the Institute for Systems Biology in Seattle, WA, presented a briefing entitled “Sins of the Fathers and Mothers: Epigenetic Influences Passed from Parent to Child.” Nadeau (left) is seen here with Rep. Jim McDermott (D-WA).

Help Students by Being a Poster Judge at the ASCB Annual Meeting

The ASCB Minorities Affairs and Education Committees are looking for judges for the ASCB Poster Session Competition that will be held at the ASCB Annual Meeting on Saturday, December 15, 2012, from 3:30 pm–5:30 pm. There will be 60–80 posters, but each judge will be responsible for evaluating only two or three. Judging should take approximately one hour, so we ask that all judges arrive between 3:30 pm and 4:30 pm.

If you are interested in judging, please sign up at https://www.ascb.org/Meetings/Forms/MAC_Poster/mac.cfm. If you have any questions, please contact Deborah McCall at dmccall@ascb.org. ■

—Deborah McCall



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Volume 11 Fall 2012

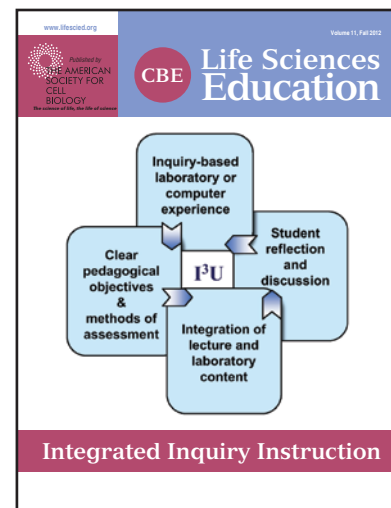


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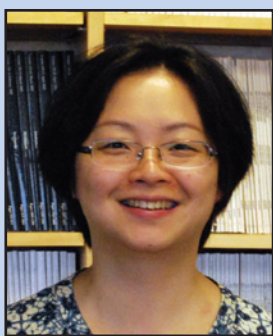
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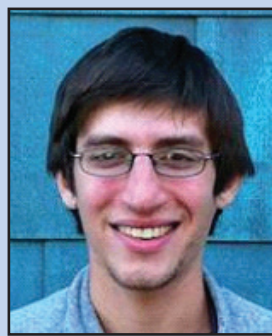
Bernfield, Gilula Awardees Named



Ting Chen



Gabriel C. Lander



Gregory Alushin

Ting Chen, a postdoctoral fellow at The Rockefeller University, and Gabriel C. Lander, a postdoctoral fellow at the Lawrence Berkeley National Laboratory, University of California, Berkeley, will receive the 12th annual ASCB Merton Bernfield Memorial Award at this year's Annual Meeting.

Chen brings exemplary ability, skill, and fresh ideas to stem cell biology. In the laboratory of Elaine Fuchs, Chen has been studying the mechanisms underlying

how quiescent stem cells of the hair follicle transition to an activated state and how they self-renew to maintain hair growth throughout the lifetime of the animal. Her work has led to a co-first-authored paper published in *Cell Stem Cell* in 2009 and a sole-first-authored paper published in *Nature* in 2012. Offering major new insights into the genes that regulate these processes in stem cells, both papers described the use of innovative, state-of-the-art technologies to unearth these findings. Chen has emerged as a highly successful stem cell biologist. She has developed her own exciting new ideas, thought through scientific problems, and derived solutions to the hurdles she has faced. Chen interacts well with fellow lab members and has excellent student-mentoring skills. She makes lucid presentations and engages in stimulating, enthusiastic discussions over a broad range of cell biology.

Lander has made exceptional scientific progress in the complete structural characterization of the proteasome complex, a central molecular machine in all eukaryotic cells. Lander has contributed substantially to making Berkeley one of the world's focal points of proteasome research. He has proved impressively productive, poised to make one landmark contribution after another in understanding complex macromolecular machines. Lander is technically flawless, madly prolific, intellectually gifted, and impressively creative in everything he does.

Both awardees will receive free Annual Meeting registration, airfare, complimentary hotel accommodations, a per diem allowance, a plaque, and an honorarium.

Gregory Alushin, a graduate student at the University of California, Berkeley, will receive the 12th annual ASCB Norton B. Gilula Memorial Award. He was recognized for his outstanding and reflective potential as an independent researcher of the highest caliber in structural and cell biology. Alushin characterizes the interaction of the essential, highly conserved Ndc80 kinetochore complex with microtubules. While continuing his work on Ndc80, Alushin contributed significantly to two collaborative projects concerning other components of the yeast and human kinetochore. Alushin will receive free Annual Meeting registration, airfare, complimentary hotel accommodations, a per diem allowance, a plaque, and a ribbon at his poster.

The Bernfield Award honors a postdoctoral fellow or graduate student who has excelled in research. Chen and Landers will speak in Minisymposia at the 2012 ASCB Annual Meeting. The Gilula Award is supported by The Rockefeller University Press and recognizes an outstanding graduate or undergraduate student who has excelled in research.

ASCB congratulates the awardees and thanks the many nominators and the Bernfield/Gilula Awards Joint Selection Committee Chair and Committee members. Nominating others for ASCB awards is a privilege of ASCB membership. ■

—Cheryl Lehr, Executive Assistant/Office Manager

The Editorial Board of *Molecular Biology of the Cell* has highlighted the following articles from the August 2012 issues. From among the many fine articles in the journal, the Board selects for these Highlights articles that are of broad interest and significantly advance knowledge or provide new concepts or approaches that extend our understanding.

The Rho-guanine nucleotide exchange factor Trio controls leukocyte transendothelial migration by promoting docking structure formation

J. van Rijssel, J. Kroon, M. Hoogenboezem, F. P. J. van Alphen, R. J. de Jong, E. Kostadinova, D. Geerts, P. L. Hordijk, and J. D. van Buul

Neutrophils induce endothelial docking structures prior to crossing the blood vessel wall. The Rho guanine nucleotide exchange factor Trio regulates the formation of these structures through ICAM-1 clustering in a filament-dependent fashion. We show that Trio is a crucial mediator of the signaling pathway that controls leukocyte extravasation through docking structure formation.

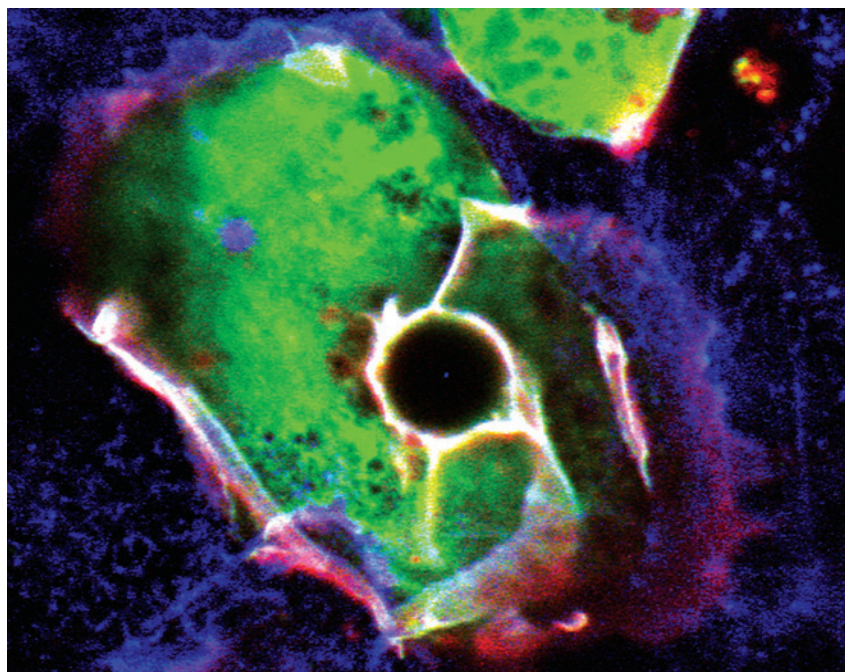
Mol. Biol. Cell 23 (15), 2831–2844

Kv2.1 cell surface clusters are insertion platforms for ion channel delivery to the plasma membrane

E. Deutsch, A. V. Weigel, E. J. Akin, P. Fox, G. Hansen, C. J. Haberkorn, R. Loftus, D. Krapf, and M. M. Tamkun

Kv2.1 surface clusters in transfected HEK cells and hippocampal neurons are shown to be trafficking platforms involved in potassium channel movement to and from the cell surface. This work is the first to define stable cell surface sites for ion channel delivery and retrieval at the cell surface.

Mol. Biol. Cell 23 (15), 2917–2929



HeLa cells transfected with ICAM-1-mCherry surround a bead (center) coated with antibody to α -ICAM-1. The clustering of ICAM-1-mCherry (red) to the bead recruits GFP-TrioD1 (green). Trio is a crucial mediator of the signaling pathway that controls leukocyte extravasation through docking structure formation. See *Mol. Biol. Cell* 23, 2831–2844. (Image: J. van Rijssel, Sanquin Research and Landsteiner Laboratory, Amsterdam, The Netherlands)

Insights into structural and regulatory roles of Sec16 in COPII vesicle formation at ER exit sites

T. Yorimitsu and K. Sato

Sec16 is an essential factor in “ER exit site” formation, as well as in COPII-mediated traffic in vivo. Results reported here indicate that purified Sec16 alone can self-assemble into homo-oligomeric complexes on a planar lipid membrane and plays an important role in regulating Sar1 GTPase activity at the late steps of COPII vesicle formation.

Mol. Biol. Cell 23 (15), 2930–2942

The nucleoporin Nup205/NPP-3 is lost near centrosomes at mitotic onset and can modulate the timing of this process in *Caenorhabditis elegans* embryos

V. Hachet, C. Busso, M. Toya, A. Sugimoto, P. Askjaer, and P. Gönczy

Through an RNAi-based modifier screen, we identified the nucleoporin Nup205/NPP-3 as a negative regulator of mitotic onset in *Caenorhabditis elegans*. Strikingly, NPP-3 is lost from the nuclear envelope at mitotic onset in an AIR-1- and centrosome-dependent manner. We propose a model whereby centrosomes and AIR-1 promote timely mitosis by locally removing NPP-3.

Mol. Biol. Cell 23 (16), 3111–3121

The CSC connects three major axonemal complexes involved in dynein regulation

T. Heuser, E. E. Dymek, J. Lin, E. F. Smith, and D. Nicastro

This study reveals the 3D structure of the CSC and its connections to three major axonemal complexes involved in dynein regulation, including the distal radial spoke and the nexin-DRC. The findings corroborate radial spoke heterogeneity and suggest a unique role for the distal spoke in calcium-mediated signal transduction and flagellar motility.

Mol. Biol. Cell 23 (16), 3143–3155

Differential recognition of a dileucine-based sorting signal by AP-1 and AP-3 reveals a requirement for both BLOC-1 and AP-3 in delivery of OCA2 to melanosomes

A. Sitaram, M. K. Dennis, R. Chaudhuri, W. De Jesus-Rojas, D. Tenza, S. R. G. Setty, C. S. Wood, E. V. Sviderskaya, D. C. Bennett, G. Raposo, J. S. Bonifacino, and M. S. Marks

OCA2 is used as a model melanosome cargo protein to define primary sequence elements required for acidic dileucine-motif binding to adaptors AP-1 and AP-3. OCA2 must bind to AP-3 for melanosome localization. BLOC-1 is also required and thus can cooperate with either adaptor for cargo delivery to lysosome-related organelles.

Mol. Biol. Cell 23 (16), 3178–3192

Trafficking defects in WASH-knockout fibroblasts originate from collapsed endosomal and lysosomal networks

T. S. Gomez, J. A. Gorman, A. Artal-Martinez de Navajas, A. O. Koenig, and D. D. Billadeau

WASH regulates endosomal sorting, but its roles are ill defined. WASH-knockout MEFs display enlarged yet ordered endosomes without aberrant tubulation and a collapsed lysosomal network. Without WASH, EGFR is basally degraded, whereas TfnR is not, which supports discrete receptor trafficking via WASH-dependent and WASH-independent mechanisms.

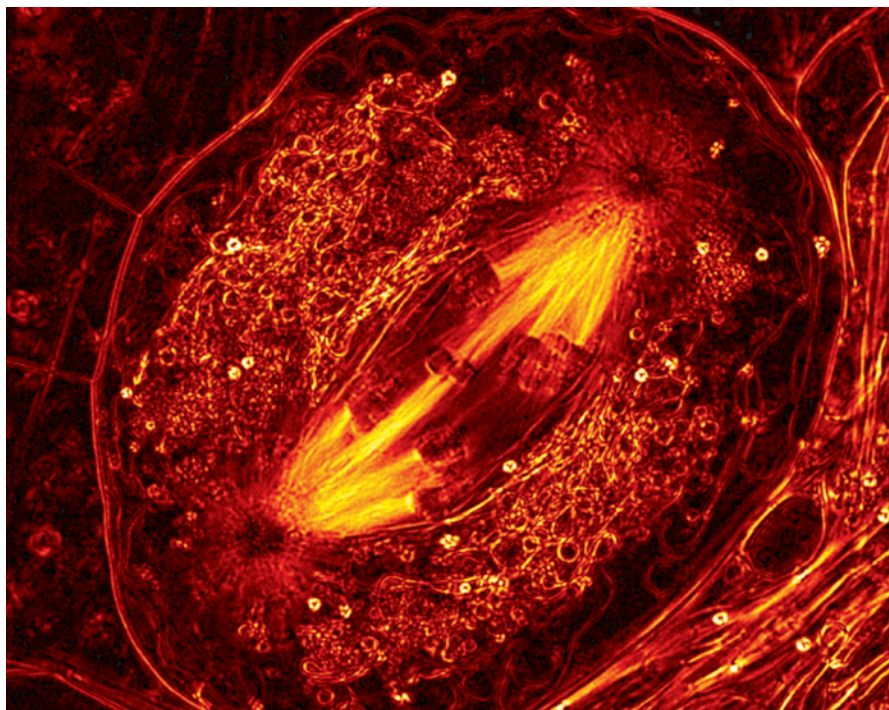
Mol. Biol. Cell 23 (16), 3215–3228

A balance of FGF and BMP signals regulates cell cycle exit and Equarín expression in lens cells

M. Jarrin, T. Pandit, and L. Gunhaga

The roles of BMP and FGF during the transition of proliferating lens epithelial cells to differentiated primary lens fiber cells are examined. The results show that proliferation, cell cycle exit, and early differentiation of primary lens fiber cells are regulated by counterbalancing BMP and FGF signals.

Mol. Biol. Cell 23 (16), 3266–3274 ■



*A color-enhanced image made with liquid crystal polarized light optics reveals birefringent kinetochore fibers in a spermatocyte from the crane fly *Nephrotoma suturalis* during anaphase A of meiosis I. Kinetochores of the lagging sex univalents connect them to both poles and are convenient targets for laser microsurgery to release the chromosomes from their bipolar connections. The results of such manipulations suggest that kinetochores can exhibit pac-man motility even though their normal behavior is dominated by traction fiber mechanics. See *Mol. Biol. Cell* 23, 3133–3142. (Image: James LaFountain, Department of Biological Sciences, University at Buffalo, Buffalo, NY, and Marine Biological Laboratory, Woods Hole, MA)*

Forget Antibodies. Use Aptamers!

What is an Aptamer?

- [illegible]

Benefits of Using Aptamer Oligos?

- Manufacturing costs and time are all lower compared to that of monoclonal antibody production.
- Once the aptamer sequence is known, the aptamer can be produced on the fly using an oligo synthesizer to meet one's immediate needs.
- Easy to label with reporters, enzymes, or fluorescent tags.

- ☐ Abrin Toxin
- ☐ Amyloid Peptide Beta
- ☐ ATP
- ☐ Bovine Thrombin
- ☐ cAMP
- ☐ CCRF-CEM
- ☐ Cellobiose
- ☐ Cholic Acid

- Hepatitis C Virus RdRp
- HIV-1 RT
- Human Interleukin-17A/F
- IgE
- IgG
- Insulin Receptor Antibody
- Interferon- γ
- Kanamycin B
- L-Arginine
- L-Isoleucine
- L-Tyrosinamide
- MCP-1
- Methylenedianiline
- Moenomycin A



- Sialyllactose
- Sialyl Lewis X
- Streptavidin
- Taq DNA Polymerase
- Thrombin
- Tobramycin
- Tumour Marker MUC1
- Xanthine
- **...AND MUCH MORE ONLINE**



Judith Kimble

It is still very much a career in progress, but Judith Kimble and a once-obscure nematode, *Caenorhabditis elegans*, have already notched up a remarkable series of discoveries and breakthroughs since their first meeting nearly four decades ago. If the current output from Kimble's lab at the University of Wisconsin–Madison, is any indication, the partnership continues.

Kimble got in on the ground floor with *C. elegans*, being among the first to demonstrate the worm's potential as an experimental organism. With her graduate advisor, David I. Hirsh at the University of Colorado, Boulder, Kimble published in 1979 the complete larval lineage of the worm's gonadal cells, the first for any animal on Earth. Kimble moved on to a postdoc with John Sulston at the worm's scientific birthplace, the Medical Research Council (MRC) Laboratory for Molecular Biology in Cambridge, UK. There she discovered the distal tip cell (DTC), the single somatic cell absolutely required to maintain *C. elegans* germline stem cells (GSCs). In 1981, the DTC became the first stem cell niche ever identified.

It was no big deal at the time, Kimble says, because “stem cell” was not the buzzword it would become in 1998 with the culturing of human embryonic stem cells (hESCs) by Jamie Thomson at Wisconsin. The term itself had been around for a century, she explains, but the DTC led to a new understanding of how cell–cell interactions control stem cell fate and tissue induction. “One of the most beautiful things about the DTC is that it is such a remarkably well-defined stem cell niche,” says Kimble. “It's a single cell. You can't get better defined than that. Now we know about other stem cell niches, and they turn out to be much more complicated. A great thing about worms is that they have the uncanny ability to condense a major problem into a very simple and tractable form.”

Setting up her own lab at Wisconsin in 1983, Kimble launched a wide-ranging assault on the central molecular and genetic controls of germ cell fates: How does a stem niche regulate the delicate balance of self-renewal and differentiation, which in germline tissue is central to all sexual reproduction? Step by step, Kimble's lab identified the key players regulating GSCs, discovering how the DTC uses the

Notch signaling pathway to control self-renewal and how FOG (feminization of the germline) proteins work inside germ cells to control differentiation into sperm or egg.

Next she identified a regulatory element in the 3' untranslated region of the *fem-3* mRNA and, finally in 1997, the *fem-3* binding factor (FBF). In *Drosophila*, FBF had a homolog, *Pumilio*, showing that FBF was conserved outside *C. elegans*. With the tongue-twisting name of “*Pumilio/fem-3* mRNA binding factors” squeezed into the acronym PUF, two PUF homologous genes, *Pum1* and *Pum2*, were identified in mice. This was a big deal. With the jump to flies and then mammals, the DTC niche and its control of GSCs was no longer just a worm oddity, some irrelevant quirk of a lowly invertebrate's evolutionary history.

Reported in a 1997 *Nature* paper, the FBF breakthrough was the first scientific collaboration between Kimble and her husband, RNA biochemist Marvin Wickens, also at Wisconsin. The Wickens lab was developing a three-hybrid yeast screening system just as the Kimble lab was despairing of ever finding the right *C. elegans* mutants to identify the regulator of the *fem-3* 3' untranslated region. Wickens offered to target the *C. elegans* *fem-3* regulatory protein in the three-hybrid system's first experimental run. Finding FBF was a major success for them both. “Discovery of FBF was good for our science,” says Kimble, “but also great for the marriage.”

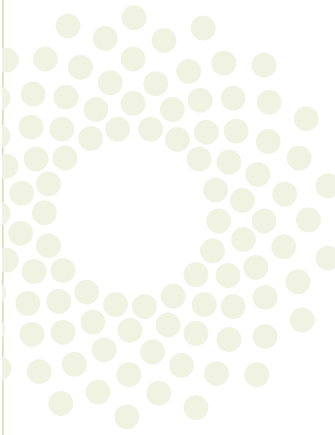
The Germ Cell's Double Decision

By adolescence, most of us think we understand sexual reproduction, but Kimble's ongoing studies into *C. elegans* germ cells are poised to undermine a common assumption. In Kimble's view, germ cells must navigate two critical developmental decisions to ensure both renewal as a diploid stem cell and differentiation into the appropriate haploid gamete—a cell cycle choice of mitosis versus meiosis plus a sexual choice of differentiation into sperm versus oocyte. However, the tradition in the germ cell field has been that these two decisions are one and the same.

“Judith and her lab have spent a great deal of time examining the relationship between these two decisions. It turns out to be a very



Judith Kimble



hard matter to resolve,” says David C. Page, who pioneered the study of mammalian germ cells at the Whitehead Institute. “I work in mammals and Judith works in invertebrates, but we work on the same kinds of questions, like what is a male? Or what is a female? Where do eggs and sperm come from? How does sexual reproduction really work? It turns out that it works in very similar ways in all animals, including *C. elegans* and mammals,” says Page. “So whenever we meet, we always have a lot to talk about.”

In 2007, they collaborated on a review article for *Science*. “Working on that with Judith really influenced my thinking, especially about the making of eggs and sperm, the cells we call germ cells,” says Page. “What I started to realize about 20 years ago is that at the heart of sexual reproduction are the germ cells, as distinct from the various parts of the body devoted to their propagation, what we call the mortal parts of the reproductive tract. I realized that I wanted to study the immortal parts of the reproductive tract, that is, the germ cells.” The somatic parts of the reproductive tract evolve much more rapidly and are much less conserved among different animals. “It is the germ cell line that literally connects all these organisms, one to another, through the expanse of evolutionary time. It is the unbroken chain of cells that links all animals to each other.”

Kimble’s work on the more tractable *C. elegans* system has been a huge influence on the entire germ cell field, says Page. “I’ve benefited enormously from talking to Judith and other colleagues working in fly or frogs or fish, using methods that weren’t possible in mammals to study sexual differentiation and the holy of holies, the inner sanctum, the germ cells.”

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Affecting the Neighbors

Kimble’s work, from the DTC onward, has always been a big deal, says Nobel laureate Christiane Nüsslein-Volhard, whatever her longtime friend Kimble might say. Nüsslein-

Volhard, who now works on zebrafish as director of the Max Planck Institute for Developmental Biology in Tübingen, Germany, won renown and her Nobel for discovering with Eric Wieschaus the first developmental genes in the *Drosophila* embryo. Kimble’s work on *C. elegans* was no less important, says Nüsslein-Volhard. “When Judith discovered the distal tip cell and its signaling, this was a big, big discovery at the time. It was one of the very first demonstrations of a cell that created a microenvironment for the germ cells. It was the neighbors who are affected and not the cell itself.”

Nüsslein-Volhard remembers their first meeting at a Gordon Conference in 1981—two young woman scientists with two attention-grabbing papers. “Judith had just made her discovery of the distal tip cell and I had mine of the segmentation genes, so I was very excited to hear her. We practiced our talks together. I listened to hers and then she listened to mine.” They’ve been friends ever since.

“Judith is younger than me,” Nüsslein-Volhard continues, “but there are not that many women in her age group [who are at such a prominent level]. She’s one of the few women who can stand up and give her opinion at that level, so that makes her a wonderful role model. She’s a wise woman and she has many outside interests. She can talk about other things than science [like music], and I

like that.”

What Nüsslein-Volhard doesn’t like is Kimble’s current hectic schedule. “She’s very professional and much better organized than I am, but I wish I could see her more often.” Kimble’s problem? In Nüsslein-Volhard’s opinion, her friend is the victim of her own skills and energy. “She’s an excellent member on committees, so, of course, everybody wants her on their committee—so she’s overcommitted.” (Among those commitments, Kimble served as a member of the ASCB Council in 1994–1996 and has agreed to become chair of the ASCB’s International Affairs Committee in 2013.) Kimble’s high-profile work on germ cells keeps her in high demand at international seminars and meetings. “Everybody knows her,” says Nüsslein-Volhard.

Germ Cell Reunion

This is no exaggeration in germ cell biology, according to Robert Blelloch, an MD–PhD

“One of the most beautiful things about the DTC is that it is a remarkably well-defined stem cell niche,” says Kimble. “It’s a single cell. You can’t get better defined than that.”

who trained in the Kimble lab at Wisconsin. Bbleloch, who now has his own stem cell lab at the University of California, San Francisco, credits Kimble with transforming his medical career, his scientific interests, and his world geography. “We used to tease her that when you went to a germ cell meeting,” Bbleloch explains, “it was really a Judith Kimble reunion.”

A true Judith Kimble reunion would cover a lot of geography. Former students and postdocs would fly from around the planet, but Kimble herself has also been on the move. She was born in Providence, RI, but grew up in Durham, NC, after her father, a noted experimental psychologist, was recruited to Duke. It was the era of the Civil Rights struggle, and with her family’s Midwestern roots and freethinking intellectual background, she didn’t fit in, Kimble recalls. Soon after turning 17, Kimble had had enough of the South and took off for the University of California, Berkeley. Her self-possession and her parents’ confidence amaze her today. “Now that I have a kid of my own, I can’t believe that my parents just let me go off to Berkeley like that.” Her son, Zachary Kimble Wickens, now 24, has also gone off to California, as a graduate student in organic chemistry at the California Institute of Technology. He leaves behind his mystified parents who remember him in high school, dismissing hard science as really boring.

Berkeley in the 1960s was anything but boring. Nominally a premed student, Kimble worked in theater, studied archaeology, and even dropped out for a while. When she returned to school, her interest in science was reignited by a cell biology course taught by Dan Mazia. By her senior year, she was taking mostly graduate courses, working at the bench, and teaching as an undergraduate TA. But she was tired of Berkeley. Through a visiting professor from Denmark, she arranged a job in Copenhagen, only to learn that Danish labor laws made hiring her as a lab technician impossible. Instead, aged 22 with only an undergraduate degree, Kimble was appointed to the University of Copenhagen medical school faculty to teach histology and do research involving electron microscopy (EM) of the fetal brain.

Living in Copenhagen was a transformative experience, Kimble recalls, but that encounter with medical school convinced her that being a physician was not her thing. Cell biology was a much more interesting pursuit. Arriving at Colorado in 1973, Kimble declined a place in the laboratory of Keith Porter, the father of EM (and a founder of ASCB). “I wasn’t terribly

interested in the cytoskeleton or in continuing with EM,” she recalls. “I told Dr. Porter that I wanted to spend my first semester reading the literature and thinking.”

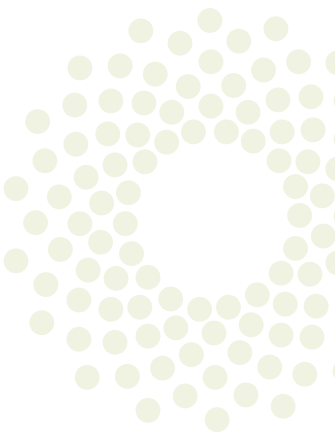
Meanwhile, David Hirsh had joined the department, fresh from a postdoc at the MRC with Sydney Brenner, the scientific father of *C. elegans*. Hirsh showed her the petri dishes, the kettles for brewing agar, and the differential interference contrast microscope that allowed humans to enter the four-dimensional world of *C. elegans* cells during development.

Ice in the Cloakroom

Her postdoc years in Cambridge were crucial to her career and personal life. She not only met her future husband and collaborator, Wickens, at MRC but also took advantage of a new technique, devised by MRC scientist John White, of using a laser to kill single cells during development. Those ablation experiments led to her discovery of the DTC. But Kimble also soaked up the MRC’s heady intellectual atmosphere—inventive, eccentric, brilliant, brutally frank, and at times clueless. “The [MRC] ice machine was in the men’s room, or what they called the Men’s Cloakroom,” Kimble recalls. “I just went in to get what I needed. After about six months, they moved the machine.”

Going into the Men’s Cloakroom was no big deal, she recalls. “I wasn’t a ‘woman scientist.’ I was just a ‘scientist’ and totally focused on my experiments.” In that fierce spirit, she fit right into the MRC ethos. “They were always very tough about the science. People were not at all reticent about telling you that your ideas were crappy. As long as you didn’t take it personally, it was great.”

MRC could also be remarkably egalitarian. In the seedy staff canteen, the greenest grad student nursing a cup of tea would look up to find Nobel laureate Max Perutz plunking himself down in the next seat with his trademark lunchtime banana and traveling cushion. “Max didn’t have the strongest stomach and never went anywhere without his cushion,” she recalls. All the famous names of that era—Francis Crick, Sydney Brenner, John Sulston, Fred Sanger, Aaron Klug, César Milstein, John Gurdon, John White, Martin Chalfie, and of course Kimble herself were to be found in the MRC tearoom at all hours. Brenner, Sulston, and Robert Horvitz, who had returned to the United States before Kimble’s arrival in Cambridge, would share the 2002 “worm” Nobel Prize in Physiology or Medicine.



“The [MRC] ice machine was in the men’s room, or what they called the Men’s Cloakroom,” Kimble recalls. “I just went in to get what I needed. After about six months, they moved the machine.”

Chalfie went on to win the 2006 Nobel Prize in Chemistry for his seminal work using green fluorescent protein to look into the cells of worms, including the DTC. “It was quite remarkable,” Kimble recalls, “to sit next to these guys and interact with them every day.”

Beyond the people, Kimble remembers the excitement—mixed with long periods of tedium and frustration—of tracking cell divisions during *C. elegans* development. “Eyeballing” was not a metaphor but actual data collection. “The early work on cell lineage was extraordinarily hands-on,” she says. “You drew what you saw.

It was beautiful watching a whole organ system develop from a few cells. It got convoluted only in the last stages.”

Kimble persevered through 12- to 14-hour tracking sessions. “You couldn’t mark the cells. This was before the development of fluorescent markers, and there were no transgenic animals. You just watched. I could keep track of about 30 cells at a time. After a while you could see them as patterns that burned themselves into your brain.”

The patterns became a big deal. ■

—John Fleischman

Interesting Uses of The Cell: An Image Library-CCDB

The Cell: An Image Library-CCDB (www.cellimagelibrary.org) continues to evolve. Some interesting new or anticipated uses for images in The Cell include the following:

- Andrew J. Ewald, assistant professor in the Departments of Cell Biology and Oncology at the Center for Cell Dynamics of the Johns Hopkins Medical Institute, has for the second time submitted images (in this case videos) to be presented at The Cell to supplement an article that will be published elsewhere. This example highlights an important role for The Cell.
- Raquel Abalo, a lecturer in pharmacology and nutrition at Universidad Rey Juan Carlos, requested permission to use images in an activity for the next Night of the Researchers, which will be celebrated in Europe on September 28. Called “See Health, See Disease, See Science,” the activity is all about imaging and is open to anyone more than 10 years old. Two sessions will discuss all imaging modalities, from histology through magnetic resonance, of interest for health and science. Organizers also intend to include the images in a small album that will be raffled to the attendees.
- Cathy Clabby, an editor working with the E.O. Wilson Biodiversity Foundation, requested permission to use some images from The Cell in a digital high school biology textbook called *Life on Earth* that is to be published through the foundation’s nonprofit subsidiary Wilson Digital, Inc.
- Jessica Nash, an instructional technology specialist from the Liberty County Board of Education in Hinesville, GA, requested permission to use some images from The Cell in e-books that teachers have created for student use.
- At the recent Microscopy and Microanalysis 2012 meeting in Phoenix, AZ, Ben Kopek used electron microscopy images from The Cell. He used images of mitochondria referenced by CIL number to compare with his new

technique for combining single-molecule superresolution with three-dimensional scanning electron microscopy.

Images from The Cell have also been used for several publications:

- *The Scientist* recently published two images from The Cell, both in The Nutshell section:
Dunning H (July 23, 2012). Surprising sperm diversity: the first genetic comparison of one man’s individual sperm cells uncovers unique genetic shuffling representative of a much bigger population. <http://the-scientist.com/2012/07/23/surprising-sperm-diversity>.
Akst J (July 26, 2012). Cancer drug flushes out HIV: an approved cancer therapeutic makes hiding HIV susceptible to antiviral therapy. <http://the-scientist.com/2012/07/26/cancer-drug-flushes-out-hiv>.
- A conference paper at the 2012 Institute of Electrical and Electronics Engineers International Symposium on Biomedical Imaging used an image from The Cell: Delgado-Gonzalo R, Chenouard N, Unser M (2012). Fast parametric snakes for 3D microscopy. 2012 9th IEEE International Symposium on Biomedical Imaging (ISBI), 852–855.

Join us on LinkedIn for more conversation on everything microscopy related at www.linkedin.com/groups?about=&gid=3733425.

Please help us spread the word and share with your colleagues what a great resource The Cell: An Image Library-CCDB is.

Have you used The Cell in interesting ways or in an article? Are you interested in submitting images or collaborating with The Cell? Please let us know by sending an email to David Orloff at dorloff@ncmir.ucsd.edu. All documented usage helps support our efforts to obtain continued funding. ■

—David Orloff, Director, Image Library

ASCB Honors MBL Physiology Course

ASCB has honored the Marine Biological Laboratory (MBL) on the 120th anniversary of its Physiology Course. The ASCB recognized the tremendous impact the course has had on developing the classical and modern eras of cell biology. With the support of four donors, ASCB created a bronze plaque that was presented to MBL Director Gary Borisy to commemorate the occasion. The Physiology Course is one of the oldest continually running biology courses in the world and has produced some of the world's leading scientists for decades. Many ASCB presidents have directed the course over the years. ■

—Cheryl Lehr, Executive Assistant/Office Manager



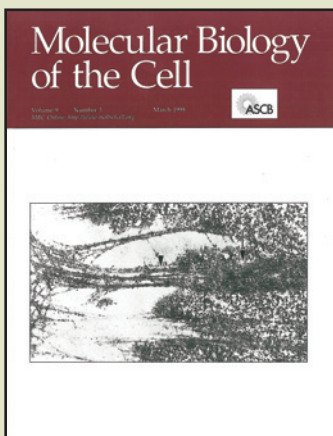
Credit: Tom Kleindinst

Students at the MBL Physiology Course look on as (left to right) ASCB President Ron Vale and ASCB members Clare Waterman and Dyche Mullins present the ASCB's plaque to MBL Director Gary Borisy.

An MBoC 20th Anniversary Favorite

In celebration of the first 20 years of Molecular Biology of the Cell (MBoC), members of the Editorial Board, members of the ASCB Council, and others comment on their favorite MBoC papers from the past two decades.

Here **Catherine L. Jackson**, Institut Jacques Monod, comments on:



Gaynor EC, Chen C-Y, Emr. SD, Graham TR (1998). ARF is required for maintenance of yeast Golgi and endosome structure and function. Mol. Biol. Cell 9:653–670

This paper was not only ahead of its time when first published, but is still in this category today. The logic and the simple rules governing membrane trafficking in eukaryotic cells have yet to be fully elucidated. This study by Gaynor *et al.* is one of the first and most comprehensive demonstrations that ARF proteins, in particular Arf1, have a crucial function in this fundamental process. It provides a full picture, from kinetic analysis of multiple cargoes traveling through secretory and endosomal systems, to fluorescence visualization of multiple markers, to electron microscopy revealing membrane structures at high resolution. Despite enormous progress in the intervening years, there are still many unanswered questions regarding Arf function, and there are clues still to be found in this paper.

This and other MBoC 20th Anniversary Favorites will appear in the journal throughout 2012. ■

GRANTS & OPPORTUNITIES

A list of current grant and other opportunities can be found at www.ascb.org/GandO.html. The following items were added since the last issue of the *Newsletter*:

Early Independence Awards. The National Institutes of Health Director's Early Independence Award Program supports exceptional investigators who wish to pursue independent research directly after completion of their terminal doctoral/research degree or clinical residency, thereby forgoing the traditional postdoctoral training period. Letters of intent due: December 30, 2012. Applications due: January 30, 2013. <http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-12-018.html>.

Genetic and Genomic Analysis of *Xenopus*. The National Institutes of Health invite applications designed to exploit and enhance the power of *Xenopus* as a vertebrate model for biomedical research. Applications may propose to develop new tools or genetic, genomic, or proteomic resources of high priority to the *Xenopus* research community to advance the detection and characterization of genes, pathways, and phenotypes of interest in development, organogenesis, and in cell biological processes such as cell division, signaling, and migration. Applications due: October 1, 2012; September 30, 2013; September 30, 2014. www.grants.nih.gov/grants/guide/pa-files/PA-12-250.html.

Institutional Research and Academic Career Development Award (IRACDA) Program. The National Institute of General Medical Sciences invites applications for funding under the IRACDA Program, which promotes consortia between research-intensive institutions (RII) and partner institutions that have an historical mission and a demonstrated commitment to training, encouraging, and assisting students from groups underrepresented in the U.S. biomedical and behavioral research enterprise. The IRACDA program provides support for a traditional mentored postdoctoral research experience at an RII combined with an opportunity to develop academic skills, including teaching, through workshops and through mentored teaching assignments of postdoctoral fellows at a partner institution. Expiration date: September 25, 2012. www.grants.nih.gov/grants/guide/pa-files/PA-12-245.html.

Research to Understand and Inform Interventions that Promote the Research Careers of Students in Biomedical and Behavioral Sciences. The National Institute of General Medical Sciences (NIGMS) solicits applications that propose research designed to test assumptions and hypotheses regarding social and behavioral factors with the aim of advising and guiding the design of potential interventions to increase interest, motivation, and preparedness for careers in biomedical and behavioral research. NIGMS is particularly interested in those interventions that are designed to increase the number of students from backgrounds underrepresented in biomedical research entering careers in these disciplines. Letters of intent due: September 24, 2012. Applications due: October 24, 2012. www.grants.nih.gov/grants/guide/rfa-files/RFA-GM-13-009.html.

Support for Conferences and Scientific Meetings. The National Institutes of Health invites eligible organizations to apply for funds under the Research Conference Grant (R13) and Research Conference Cooperative Agreement (U13) programs, which support high-quality conferences that are relevant to the public health and to the scientific mission of the participating Institutes and Centers. Expiration date: September 8, 2014. <http://grants.nih.gov/grants/guide/pa-files/PA-12-212.html>.

Transformative Research Awards (R01). The National Institutes of Health (NIH) Director's Transformative Research Awards complement NIH's traditional, investigator-initiated grant programs by supporting individual scientists or groups of scientists proposing groundbreaking, exceptionally innovative, original and/or unconventional research with the potential to create new scientific paradigms, establish entirely new and improved clinical approaches, or develop transformative technologies. Little or no preliminary data are expected. Projects must clearly demonstrate the potential to produce a major impact in a broad area of biomedical or behavioral research. Expiration date: September 22, 2012. www.grants.nih.gov/grants/guide/rfa-files/RFA-RM-12-017.html. ■

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MBoC Publishes Perspective on We Are Research Initiative

The September 1, 2012, issue of *Molecular Biology of the Cell (MBoC)* features a Perspective by Lawrence S.B. Goldstein on the ASCB's "We Are Research" initiative, which takes place October 1–5. Do you believe that federal support and investment in biomedical research is vital to the health and economic welfare of the United States? The goal of We Are Research is to mobilize practicing junior and senior scientists, including graduate students, postdocs, and other lab members, to take that vital message to their elected officials and to their neighbors.

View the September 1, 2012, issue of *MBoC* at www.molbiolcell.org/content/23/17.toc. For more information about We Are Research, visit www.ascb.org/wearesearch.html. ■

MEETINGS Calendar

A complete list of upcoming meetings can be found at <http://ascb.org/othermeetings.php>. The following meeting was added since the last issue of the *Newsletter*:

November 29–30, 2012. Leipzig, Germany

Seventh Fraunhofer Life Science Symposium Leipzig 2012 with the Seventh Annual Congress of the German Society for Stem Cell Research. www.fs-leipzig.com.

ASCB Annual Meetings

December 15–19, 2012. San Francisco

December 14–18, 2013. New Orleans

December 6–10, 2014. Philadelphia

December 12–16, 2015. San Diego

December 3–7, 2016. San Francisco

Members in the News



Credit: Shelley Kuznetz



Credit: National Institutes of Health

Nihal Altan-Bonnet, of Rutgers University, who first became an ASCB member in 1995, and **Justin Taraska**, of the National Heart, Lung and Blood Institute, National Institutes of Health, who first became a member in 2002, were recipients of the 2011 Presidential Early Career Award for Scientists and Engineers.



Alexander Varshavsky, of California Institute of Technology, an ASCB member since 1991, has received the following awards in 2012: the King Faisal International Prize for Science; the BBVA Foundation Frontiers of Knowledge Award in the Biomedicine category, and the Otto Warburg Medal of the German Society for Biochemistry and Molecular Biology.

In MEMORIAM

Barry Bean

Barry Bean, who first joined the ASCB in 1976 and was Professor of Biological Sciences at Lehigh University, died June 25, 2012. Bean received his PhD from Rockefeller University in 1970 and was a postdoc in India and at Rockefeller. Over 25 years, Bean helped expand Lehigh's cell and molecular biology curriculum and research commitment. In his own research, Bean explored human sperm cell surface proteins, their roles in infertility, and their possible use as targets for a male contraceptive.

The ASCB expresses its condolences to his family, friends, and colleagues. ■

ASCB 2012 Member Gifts

The ASCB is grateful to the following donors* whose contributions support Society activities:

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*As of August 23, 2012. Please note that both Half-Century donations and other Member Gifts have been merged into one list.

ASCB Member Comments

We welcome your comments and suggestions at ascbinfo@ascb.org ■

With the Annual Meeting coming up in December, Labby thought that this column, originally published in September 2009, would be of interest.



The Art of Asking Questions at Meetings

Dear Labby,

Last year you discussed the nuances of poster presenting. As this year's ASCB Annual Meeting approaches, I would like your advice on how to get the opportunity to ask a question at a Minisymposium as well as what makes a good question altogether. I am a first-year graduate student and have asked questions occasionally at seminars but never at a big meeting. I am especially concerned about asking something obvious, or worse. Are there some general guidelines you can suggest?

—Questioning Questions

Dear Questioning Questions,

The first step is to arrive early and scope out the room. Sit near the front (the first row works nicely) and on the aisle, very near a floor microphone. (Sit near the aisle too if it appears that runners will bear microphones.) As the talk ends, go to a floor mike (or raise your hand) while the applause is under way (or even when an acknowledgment slide is showing). Don't worry. No one will consider this overly aggressive.

Plan to be VERY brief and VERY focused. Avoid platitudes (no one cares whether or not you thought it was a great talk, and there are very few "great talks" in any case, only about one per decade). Leave clarification issues to a one-on-one with the speaker. In general, don't inquire about whether certain follow-up experiments have been done or are under way; most likely they have been and it is a bit demeaning to imply the speaker hasn't thought of them (and also labels you as somewhat naïve).

Very, very few questions asked at a meeting are simply a sober solicitation of information. Rather, they carry a dialectic element. It is the essence of science that we spar, joust, and make our thoughts and ourselves known. (At the faculty level, we are called professors because, presumably, we have something to profess.) Thus, the best questions are those that raise a point that is reasonably (or very) original. Obviously, this requires considerable knowledge of the subject and a mind that thinks outside the box. (The philosopher John Stuart Mill said "Genius is the ability to perceive analogies.") Even if you are rather sure you have such a point to offer, phrase it as "I wonder if it could be that ...?" rather than "Have you considered the possibility...?"

A general category of questions seeks to reconcile a talk with previous work not mentioned, and here a succinct format is best, such as: "How do these results relate to those published last year by Firststrike and colleagues?" Your phrasing can raise the temperature, or keep it cool. Thus, "Your results don't fit with..." is less skillful than "How then can we integrate your results with...?" The latter, in turn, is a bit sharper than "I'm trying to think if there may be a way to reconcile your findings with those of Firststrike et al."

Of course, these are just examples. An overarching rule is that if you have any doubt that your question is interesting or useful (hopefully not mutually exclusive), ask it of the speaker later rather than from the floor. A final matter of etiquette: Ration your questions in a session. Even if your questions are consistently quite good (or good), it is only fair to let others have their turn. Also bear in mind that the odds of a question misfiring (e.g., "The very point you're suggesting about the dynamics was in the slide on the FRAP experiments; the diffusion coefficient for the two conditions was in the inset") increases with the number asked. ■

—Labby

Direct your questions to labby@ascb.org. Authors of questions chosen for publication may indicate whether or not they wish to be identified. Submissions may be edited for space and style.

Postdocs and Students! Apply to Organize ASCB-Funded Local Meetings in 2013

Want valuable experience in organizing a meeting? Interested in helping promote scientific exchange? ASCB is pleased to announce it will again fund young scientists to organize one-day local meetings. Such meetings must involve two or more institutions (within the United States or international), and topics can range from basic science to career development as long as there is clear relevance to the broadly defined field of cell biology. Applicants must be or become members of the ASCB.

The application process is simple. You will need to provide CVs of all organizers, a description of the meeting and sessions, and a proposed budget of up to \$1,500. A larger budget that is suitably justified may be awarded in exceptional cases, depending on the availability of funds.

Application deadlines: Oct. 1, 2012, and April 1, 2013. Meetings may be held anytime within one year of funding approval.

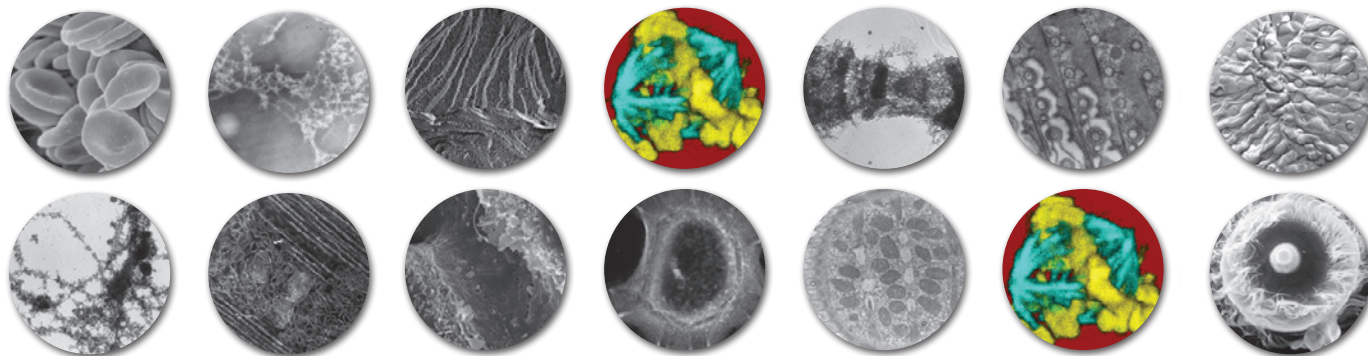
For more information, and to apply, visit www.ascb.org and click on "Meetings," then "Local Meetings." ■

—Thea Clarke

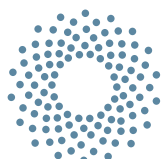
Got Questions?

Labby has answers. ASCB's popular columnist will select career-related questions for publication and thoughtful response in the *ASCB Newsletter*. Confidentiality guaranteed if requested. Write us at labby@ascb.org. ■

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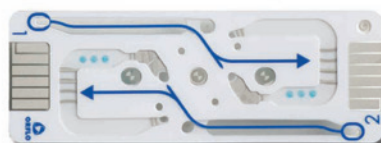


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