

Joan R. Goldberg
Executive Director

Officers

Bruce M. Alberts *President*
Robert D. Goldman *President-Elect*
Mary C. Beckerle *Past President*
Gary E. Ward *Treasurer*
Jean E. Schwarzbauer *Secretary*

Council

Kerry S. Bloom
David R. Burgess
John S. Condeelis
Susan K. Dutcher
D. Scott Emr
Joan R. Goldberg, *ex officio*
Caroline M. Kane
Sandra K. Masur
Barbara J. Meyer
Timothy J. Mitchison
Erin K. O'Shea
Anne J. Ridley
Susan R. Wentz

ASCB Newsletter
is published twelve times per
year by The American Society
for Cell Biology.

Joan R. Goldberg *Editor*
John L. Saville *Production Manager*
Nancy Moulding *Production Assistant*
Kevin Wilson *Public Policy Briefing*
Ed Newman *Advertising Manager*
John Fleischman *Science Writer*
Thea Clarke *Editorial Manager*

**Deadlines for submission of
articles and advertising
materials:**

Issue	Deadline
April	March 1
May	April 1
June	May 1

ASCB Newsletter
ISSN 1060-8982
Volume 30, Number 2
February 2007

© 2007

The American Society for Cell Biology

Postmaster: Send change of address to
ASCB Newsletter
The American Society for Cell Biology
8120 Woodmont Avenue, Suite 750
Bethesda, MD 20814-2762



Peer-Review Processes at the National Institutes of Health

The current funding crisis facing individual biomedical researchers in the U.S. can be attributed to a "perfect storm," according to Elias Zerhouni's presentation to a large assembly of ASCB Annual Meeting attendees in December (see NIH Director article on p. 1). Most notably, the number of different researchers applying to the NIH for research grants increased from about 19,600 in 1998 to 33,100 in 2006. This fact, coupled with recent decreases in the inflation-adjusted resources of the NIH, explains why the paylines in some NIH Institutes are nearing 10 percent. Even the best peer-review system cannot reliably distinguish between a research proposal in the top 10 percent and one in the top 15 percent. Thus, in certain research areas, the careers of outstanding researchers can be terminated through bad luck in a chance selection process—one that resembles a game of Russian roulette.

Restructuring Study Sections

The optimization of a peer-review system always requires constant scrutiny and a constant input of energy and intelligence. In today's funding climate in the United States, this task has become even more critical. I chaired the advisory panel to the NIH that produced the January 2000 report entitled *Recommendations for Change at the NIH's Center for Scientific Review (CSR)*. In this Phase 1 effort, our panel of 16 scientists—including ASCB members David Botstein, Stuart Orkin, and Keith Yamamoto—produced a bold scheme for restructuring the large set of peer-review panels ("study sections") run by the CSR (see <http://cms.csr.nih.gov/NewsandReports/>

ReorganizationActivities Channel). In Phase 2, the former CSR Director, Ellie Ehrenfeld, oversaw an extensive outreach process to establish a large number of new study sections. These were clustered into 23 Initial Review Groups (IRGs), according to the general scheme recommended in the Phase 1 report. In promoting this reorganization, our panel was hoping to prevent both the funding of mediocre science due to entitlements that can develop in a study section, and the confinement of an expanding, exciting area of investigation into a single study section. Most importantly, we recommended an oversight process that would provide for continual monitoring of the quality of review, so that corrective actions can be quickly taken by the CSR.

Evaluating the Reorganization

All of the new study sections have now been operating for at least two years, and it is time to evaluate how the reorganization is functioning. Accordingly, the present CSR director, Tony Scarpa, is to be commended for the series of "Open House" reviews of the various IRGs that will be conducted in 2007. Of particular interest to many ASCB members, the set of so-called Integrated IRGs will be reviewed in August and October; and the set of Biomolecular IRGs (including the Cell Biology IRG) will be reviewed in December (see <http://cms.cmr.nih.gov>). The ASCB plans to participate actively in this process, and we will be soliciting input from members in the coming months.



Bruce Alberts

**... in certain
research areas,
the careers of
outstanding
researchers can be
terminated through
bad luck in a chance
selection process ...**

In the above connection, it seems important to review the logic that led to the present reorganization. As stated in the introduction to our Phase 1 report, the panel's recommendations were guided by three principles:

1. There should be appropriate venues (recommended to be more than one) for the review of all science that is relevant to contemporary health-related research.
2. The research topics encompassed by each IRG should be sufficiently cohesive to allow that IRG's external advisory group of scientists to judge the content of the IRG's entire portfolio.
3. The organization should be flexible enough to adjust to the rapid changes in scientific opportunities expected in the years ahead.

The new IRG structure now implemented was intended to improve the use of NIH resources through two different types of processes:

First, our panel concluded that "The overarching mission of NIH to improve human health will be best served by reviewing clinically relevant science in the context of the basic knowledge on which it is founded, and by reviewing basic science in the context of the human condition that it is designed to improve." In particular, we had noted the tremendous advances in our knowledge relevant to human health from research carried out with non-human organisms such as yeast, worms, flies, fish, and mice, and we hoped that the mixing of basic scientists working on such model organisms with researchers working with human tissues on a single study section would improve the science of both groups.

Second, the new IRG structure was designed to facilitate the continuous oversight of the study sections in each IRG by a group of outstanding scientists on an external advisory group. For each IRG, we envisioned that these scientists would "evaluate the appropriateness of research topics and scope of applications reviewed; the evolution of topics and scope of research; how well newly emerging research areas are being incorporated; the pool of reviewers and, in addition, the performance of SRAs [NIH staff], Chairs and members." The whole system was to be monitored continuously: "To ensure that it is responsive to the rapid changes that energize and renew health-related research, the system should be assessed at

regular intervals. Such examination should be conducted not only at the level of the IRG, via external advisory groups as planned, but globally by the CSR Advisory Committee based on input from applicants, reviewers, and NIH staff."

Contributing to CSR's Evaluation

Obviously, the re-examination of the peer-review process now under way at the CSR is of vital importance not only to ASCB members, but also to many other scientists. Through our Public Policy Committee, we will therefore be investigating the possibility of enhancing ASCB's contributions to this review by pooling our resources with those of other scientific societies that share our motivations and concerns. Meanwhile, those with suggestions for how we might best proceed should email me at president@ascb.org. ■

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

Two New CSR Cell Biology Study Sections Announced

Molecular and Integrative Signal Transduction (MIST) and Cellular Signaling and Regulatory Systems (CSRS) will hold their first meetings in June 2007 for applications received in February and March. To see guidelines and provisional rosters for these new study sections in the Cell Biology Integrated Review Group (IRG), visit <http://cms.csr.nih.gov/PeerReviewMeetings/CSRIRGDescription/CBIRG/>.

**TJADEN
BIOSCIENCES**
Quality Catalogue and Custom Radiochemicals*

Catalogue and Custom
Carbon-14 and Tritium Radiochemicals

319.754.8298
www.tjbios.com