

2005 REPORT OF THE EXECUTIVE DIRECTOR

For the Year Ending 30 June 2005

FY2005 was a year of tremendous accomplishment for the Society highlighted by a dynamic annual meeting and student research conference, robust programs, administrative process improvement, and well-merited recognition of our award-winning *American Scientist* magazine. All of these achievements are attributable to the strong leadership of our Board of Directors, chapter leaders, and committee volunteers, supported by a talented and dedicated administrative and editorial staff.

The Annual Meeting hosted in Montréal featured scientific presentations, workshops on chapter activities, and the governance functions of the Assembly of Delegates. There were 461 participants in attendance. The science sessions were highlighted by the remarks of our distinguished award winners. David Suzuki presented a rousing John P. McGovern lecture. Nobel laureate Murray Gell-Mann gave the William Procter Prize lecture and Jason Nieh was recognized with the Young Investigator Award. Honorary member Dennis Overbye presented a science and society workshop entitled "A Conversation with Dennis Overbye." Another highlight was "Breakfast Chemistry" with noted science communicators Joe Schwarcz and Ariel Fenster of McGill University. The activities of the Student Research Conference were attended by 167 young scholars. Many presented their work in the poster sessions and all attended the workshops on science and society. The post-conference survey of attendees confirmed that the meeting was one of the most productive and enjoyable in recent memory.

Many chapters have leveraged the networking and educational opportunities of the Annual Meeting and Student Research Conference to establish outstanding programs at the local level. Chapter activities include seminars on "Women in Research," public discussions as topical as "Stem Cells and Stem Cell Research," student research conferences, teacher award programs, grantwriting workshops, a series of science cafés coordinated with the PBS show *NOVA scienceNOW*, and a plethora of other programs. Each advances the mission of the Society

"to enhance the health of the research enterprise, foster integrity in science and engineering, and promote the public understanding of science for the purpose of improving the human condition."

Some programs of the Society are managed centrally but still strongly reflect the interdisciplinary and chapter-based nature of Sigma Xi. One such program is the United Nations Scientific Expert Group (UNSEG) on Climate Change and Sustainable Development. The Society serves as a convener for the project, which will present to the United Nations actionable recommendations on how the world should mitigate and adapt to climate change. The Advisory Council of the UNSEG is composed of Sigma Xi members Peter Raven (Chair), Rosina Bierbaum (Vice-chair), John Holdren, Mike MacCracken, and Jae Edmonds. Members of the expert group include Nobel laureate and Sigma Xi member Mario Molina. In December 2004 the UNSEG held its first session at the Sigma Xi Center in Research Triangle Park, North Carolina, and in March 2005 the second session was hosted by the Third World Academy of Sciences at the Abdus Salam International Centre for Theoretical Physics in Trieste, Italy. The report will be presented to the United Nations Section on Sustainable Development in May 2006.

Another centrally facilitated project is the Sigma Xi Postdoc Survey which benchmarked best practices in postdoc programs. An article highlighting some results of the survey was published as a special supplement to the May-June issue of *American Scientist* magazine entitled "Doctors Without Orders." The results show that improved structure and greater interaction between postdocs and mentors are low- or no-cost solutions to improve the postdoc experience. The project has received broad acclaim and been the focus of numerous articles in prestigious publications such as the *Chronicle of Higher Education*.

The Society's support for education has also focused on the development of the next generation of research scientists and engineers. Sigma Xi is a national sponsor for Sally Ride Science's TOYchallenge using funds from the Leroy Record bequest. TOYchallenge seeks to create interest in

2005 REPORT OF THE EXECUTIVE DIRECTOR

engineering vocations among middle school girls and boys by engaging them in toy and game development with a science/engineering theme. Sigma Xi members have served as judges for regional competitions, and Board members Ray Lutz and Rick Meyer have served as advisors to a documentary on TOYchallenge. The Eastern nationals were hosted at the Sigma Xi Center in May 2005, with hundreds of participants, coaches and parents present to hear opening remarks from President-elect Lynn Margulis and presentations by Sigma Xi member Kathy Sullivan, the first American woman astronaut to walk in space.

Other traditional Sigma Xi programs have advanced the health of the research enterprise. In FY2005, Grants-in-Aid of Research (GIAR) totaling \$259,047 were awarded to student researchers. Additionally, subsidies totaling \$25,000 were approved by the Committee on Lectureships to help support chapter visits by distinguished lecturers for FY2006. The 2005 Assembly of Delegates will deliberate on a dues increase to adjust the GIAR assessment from \$2 to \$4 per full dues-paying member. This would be the first increase to the GIAR assessment in over two decades and will allow us to increase both the number and dollar amount of grants to deserving students. In FY2005, we funded 290 of 2509 applications.

Another program area of longtime interest to Sigma Xi members is the public understanding of science. Aside from the above-mentioned science café series and the popular "Science in the News" e-newsletters, the program worked in partnership with AAAS to win the bid for the 2008 International Public Communication of Science and Technology (PCST) Conference in Los Angeles, California. During the past fiscal year, discussions have been held between the two organizations to lay the framework for a highly successful meeting. It is anticipated that Sigma Xi chapters and members in the Los Angeles area will play a leading role in executing an enjoyable meeting for the attendees who will come from around the globe to participate in sessions on the theme of science and its interactions with popular culture. It is sure to be a sentinel event.

The above efforts and the exciting activities they produce have gained footing through the work of the staff and meetings of committees held in the new Sigma Xi Center. The facility also serves as a public venue frequently used by organizations with missions that match up with those of the Society. During FY2005, 21 different groups used our facility to host 35 different activities. Each event was an opportunity to inform the public of the mission of Sigma Xi and acquaint them with our proud legacy, while simultaneously accruing non-dues revenue to support the programs of the Society. Additionally, the Center was proud to provide a venue for local chapter activities.

Our award-winning publication, *American Scientist*, had a banner year winning a first place in the Society of National Association Publications (SNAP) awards in the feature article category for Christine R. Harris's "The Evolution of Jealousy." In June we received the welcome news that the magazine was also recognized with an Apex Award for Excellence for the March-April 2004 issue. Additionally, the magazine's high standing in the international arena has been validated with the increasing number of articles appearing in translation — 45 translated articles published in the first five months of 2005.

With our many fine programs and outstanding magazine it would be easy to assume that the Society is without challenges. Unfortunately that is not the case. As in the past two decades, membership declined in FY2005. Declining membership negatively impacts the Society in two important ways. The first is that fewer members means fewer volunteers to effect the mission of the Society. The second is that declining membership results in a smaller fiscal base to support programs. Thankfully, strong leadership from the board, chapters and staff provide reason for optimism. President Francisco Ayala set a particularly distinguished example of leadership by spearheading our efforts to establish new chapters in Mexico and expand membership at his own University of California Irvine Chapter. In FY2005 eight hundred more members were initiated than in the previous year

2005 REPORT OF THE EXECUTIVE DIRECTOR

and new chapters were installed at Berry College and Washington State University Vancouver. In addition, chapter petitions from Universidad Nacional Autónoma de México (UNAM) and Centro de Investigación de Estudios Avanzados del Instituto Politécnico Nacional (CINESTAV) were approved. Installation ceremonies will be scheduled. Other draft petitions for new chapters were received from Mercer College, and four institutions in Mexico – Instituto Nacional de Astrofísica, Óptica, y Electrónica (INAOE); Centro de Investigación Científica y Educación Superior de Ensenada (CICESE); Universidad Autónoma de Baja California (UABC) Ensenada; and Institute of Neurobiology UNAM, Queretaro, Campus Juriquilla, Queretaro, Mexico. Letters of intent were received from Florida International University and the University of Missouri, St. Louis.

With increasing initiations and chapter installations, the biggest challenge to our numbers is readily evident—member retention. This is an issue that every chapter and member must address. It will only be solved with strong programs at the chapter level that reflect the companionship that has always been the hallmark of the Society.

The staff, working with the Board and committees, has promulgated many improvements in administrative processes to cope with the fiscal aspects of the membership challenge. Austerity in budget execution for FY2005 resulted in a small surplus at year-end without compromise to member service or the excellence of our magazine and programs.

The Society's endowment continues to provide an important source of non-dues revenue. In FY2005 we changed fiscal managers from Wachovia to Tanglewood Asset Management and crafted a new investment policy. The wisdom of these moves is reflected in the fact that we have been beating the benchmarks since that change.

Other sources of non-dues revenue include our development activities, which result in gifts to the endowment and advertising revenue from our print magazine and its online version.

During the fiscal year we reorganized these functions. We reconfigured the Directorate of Development and Communications to simply a Directorate of Development and hired an experienced developer, Kristen Greenaway, to lead our efforts. Ms. Greenaway's sole focus will be development but she will receive solid communications support. Communications is now combined into a Directorate of Marketing and Communications which is charged to coordinate communications efforts (print, web, and *American Scientist Online*) and to effect the mission of the *American Scientist* business office. Katie Lord, an experienced marketer and communicator, is that new director. She previously led our *American Scientist Online* business effort. These changes create greater focus on and better staff alignment with key functions, but do not expand the staff size.

Another key activity for FY2005 is our year-long branding process. Through branding we seek to improve the sum total of our members' experience. The next step in our process is to present proposed initiatives to our Committee on Strategic Planning for their review and recommendations to the Board and other committees as appropriate. Already the branding process has created a greater sense of teamwork among the staff and a broader appreciation for the challenges and opportunities we face. We speak of branding as a process but in reality it is more a journey. Three years ago we began with the Committee on Strategic Planning's recommendation that we undertake a branding process and, hence, we will have come full circle when we hand the branding initiatives back to that committee in FY2006. The actions we take to improve the sum total of member experience will be continual and will validate the quality of our services, the importance of companionship, and the relevance of Sigma Xi for its members from initiation through retirement and beyond.

Patrick D. Sculley, D.D.S., M.A.
Executive Director