AAI
The American Association of Immunologists
NEWSLETTER
SEPTEMBER/OCTOBER 2012

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AAI President's Message—Gail A. Bishop

Amid the Challenges Confronting Scientists, the Joy and Promise of Discovery Are a Call to Action

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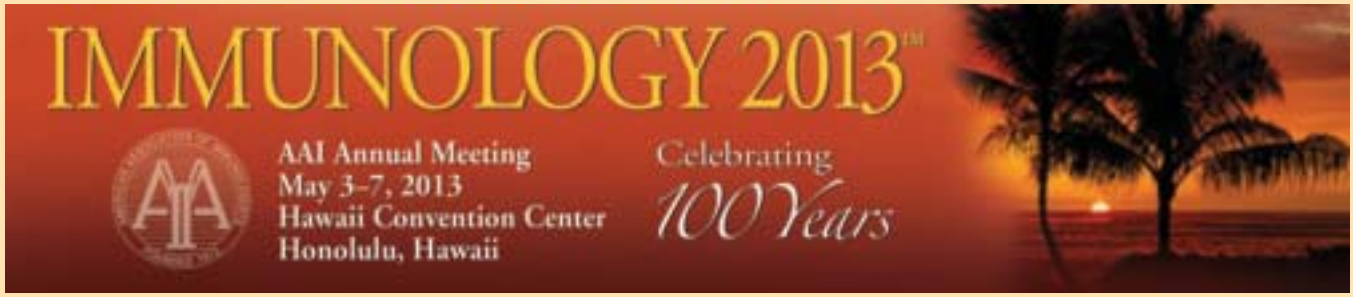

Call for 2013 Award Nominations

Deadline: November 1, 2012

Nominations are invited for the following AAI Career Awards. These awards honor immunologists of extraordinary scientific achievement and promise.

AAI Members! Don't miss the opportunity to nominate a worthy colleague for awards that are among the leading professional honors presented annually to immunologists!

AAI Excellence in Mentoring Award

This award recognizes a senior scientist who has significantly influenced the professional development and careers of a new generation. AAI honors the award recipient's contributions to the profession through outstanding mentoring. The award includes a plaque, meeting registration, and travel support to the AAI annual meeting. This award is presented at an Awards Presentation Program at the AAI annual meeting.

AAI-Steinman Award for Human Immunology Research

This award recognizes an individual who has made significant contributions to the understanding of immune processes underlying human disease pathogenesis, prevention, or therapy. The award recipient will receive a $5,000 cash award, meeting registration, and travel support to the AAI annual meeting. The recipient will present his or her research in an award lecture.

AAI-Life Technologies Meritorious Career Award

This award recognizes a mid-career scientist for outstanding research contributions to the field of immunology. The award recipient will receive a $10,000 cash award, meeting registration, and travel support to the AAI annual meeting for presentation of his or her research in an award lecture preceded by the award presentation. This award is generously supported through a grant from Life Technologies Corporation.

AAI-BD Biosciences Investigator Award

This award recognizes an early-career investigator who has made outstanding contributions to the field of immunology. The awardee will receive a $5,000 cash prize, meeting registration, and travel support to the AAI annual meeting for presentation of his or her research in an award lecture preceded by the award presentation. This award is generously supported through a grant from BD Biosciences.

For complete AAI Career Award nomination details, as well as information on applying for AAI Travel Awards and Grants, visit **www.AAI.org/Awards**.

The 2013 AAI Awards will be presented in conjunction with

IMMUNOLOGY 2013™ • The Centennial Celebration of AAI (1913–2013)

May 3–7, 2013 • Honolulu, Hawaii

Questions? Contact AAI at **301-634-7178** or **awards@aai.org**

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Gail A. Bishop, Ph.D.

AAI President, July 2012–June 2013
Holden Professor of Cancer Biology
Departments of Microbiology and Internal Medicine
University of Iowa

Gail A. Bishop

It is my great pleasure and honor to serve the community of immunologists as AAI president in this, the 100th anniversary year of The American Association of Immunologists (AAI). Many of us have "grown up" as scientists in AAI, publishing our work in *The Journal of Immunology* (*The JI*) and presenting our newest results at the annual AAI meeting. AAI has a long and highly successful history of promoting immunology and advancing the careers of its many members. Highlights of that history will be on view at the upcoming 2013 AAI meeting. AAI now enjoys the work and insights of its own staff historian, John Emrich, who will provide us with a valuable perspective on the development of the field of immunology, its leaders, and its innovators.

But what does AAI do for you today? Why should you join AAI or renew your membership? For most of us, research dollars are in shrinking supply, and for many, household dollars are constrained as well. So why spend precious funds on AAI membership? My many years of association with various aspects of AAI have greatly impressed me with the caliber of our society. This can be credited in large part to the dedication, resourcefulness, and creativity shown by AAI Executive Director Michele Hogan and the AAI staff. They all work incredibly hard to promote immunology and collaborate with us to address the challenges we face.

Foremost among these is undoubtedly the difficult research funding situation. It was sobering to reread the president's messages of my distinguished and able predecessors, from whom I've learned a great deal. In 2003, Laurie Glimcher warned of possible "smaller increases" in the NIH budget, which Suzy Swain (2004–05) warned "may even decline," while Lewis Lanier (2006–07) and Art Weiss (2008–09) expressed concern that success rates for investigator-initiated grants might drop as low as 12–14 percent! Paul Allen (2005–06) predicted the possibility that "big science" could become more dominant in NIH-funded projects at the expense of investigator-initiated projects. All this and more has come to pass, and we now face a crisis in research support that impacts all aspects of the scientific community. Promising and important research projects are being lost in large numbers. The new generation of scientists—so important for the success of future advances in research and its translation to better health—is considering other occupations. There are clearly no simple answers to these challenges. As your president, I would like to promote several areas where we can work together, with the help of AAI, to preserve opportunity for scientific progress—today and in the future—even in the face of difficult times.

Advocacy

The first is for each of us to take the initiative to advocate for the importance of immunology research. In recent years, some of the legislators on Capitol Hill who are most passionate about biomedical research have retired or been defeated in elections by opponents with little interest in research. Some in Congress even have a fundamental hostility toward science and openly ridicule funded, peer-reviewed research because they don't understand the project titles. There are, however, still many in Congress, on both sides of the aisle, who value the NIH and health-related research. We should keep in mind that every member of Congress has had friends and family members who have suffered from diseases in which the immune system

plays a role. We as scientists have often underestimated the critical need to explain—clearly and often—the value and long-term importance of our research to our legislators and other nonscientists. Our fellow voters need to know why their tax dollars should be used to support scientific research, and our elected representatives especially need to hear, in concise and understandable language, how our research benefits our nation. While each of us bears the ultimate responsibility to advocate for biomedical research, AAI facilitates our efforts and the AAI Committee on Public Affairs (CPA) takes every opportunity to advocate on our behalf. AAI Director of Public Policy and Government Affairs Lauren Gross, who advises this committee, is eager to work with any of you to arrange a visit to your congressional representatives when you are in Washington, D.C. In just an extra half-day of your time, Lauren will arrange all the logistics, accompany you, introduce you in a manner that makes you sound invincible, and prime you on how to best deliver your message (and what not to say). Both the health benefits and jobs created by research programs positively benefit not only our quality of life, but also both local and national economies—a message we need to deliver effectively, and often.

Future Biomedical Workforce

The second area on which I wish to focus effort is the training of the future biomedical scientific workforce. A thought-provoking report by the NIH Biomedical Research Workforce Working Group has recently been released (see http://acd.od.nih.gov/Biomedical_research_wgreport.pdf or acd.od.nih.gov/bwf.htm > Biomedical Research Workforce Report). The recommendations in this document provide a springboard for potential new initiatives through which we can promote the career interests of current and future trainees. AAI already provides valuable advice and opportunities for young immunologists to explore and prepare for a variety of careers, including options other than traditional academic research. The AAI annual meeting, the largest annual immunology meeting on the globe, offers many opportunities for young immunologists to present their work and interact with colleagues, both professionally and socially. A session on careers in the biotechnology industry at the 2012 AAI meeting in Boston was subscribed to capacity. And a new AAI fellowship in public policy (see http://aai.org/Public_Affairs/PPFP/index.html or aai.org > Public Affairs > Fellowship) is off to a highly successful start. I look forward to working with AAI staff over the coming year to strengthen and enhance career development for the next generation of immunologists.

Scientific Citizenship

A third important objective for me is to enhance the participation of my fellow immunologists in both scientific citizenship and dialogue, including national committees that bring forward new ideas to improve the scientific community, service in the scientific review process, and effective sharing of ideas to improve the impact of our efforts in scientific research. The current funding climate has increased our stress and workloads. But if we allow all that grant-writing to isolate us from fellow scientists, or disappointment in unfunded applications to embitter us, we lose much more than research dollars, we lose the collegiality, broader sense of purpose, and "big-picture" perspective that is so essential to driving scientific progress. We all want the best possible reviewers for our grant applications and manuscripts: colleagues who are knowledgeable, unbiased, and thoughtful. We must thus be such reviewers ourselves, agree to do our share, and do it well. *The JI*, the most-cited publication of peer-reviewed immunology papers, is proactive in constantly updating and improving the quality of its peer-review process. Under the highly capable management of Editor-in-Chief Jeremy Boss and AAI Publication Director Kaylene Kenyon, *The JI* has restrained "supplementary material creep," and Jerry instructs his scientific editors to evaluate each review to ensure that requested revisions are truly important to support the central conclusions of the work presented.

We must also be active in sharing our views, ideas, and suggestions (not just our complaints) regarding peer review and research regulatory policies with the federal officials who make them. The AAI Council and CPA have both been active in this area, and I will work with these groups and AAI staff to solicit your views and most effectively represent you. To ensure the future of our profession, we must also identify the areas about which each of us is most passionate, such as education and training, national science policy, publication of scientific findings, diversity in the scientific community—and then take action to contribute our talents and efforts. It is too easy to think, "I'll do this when I'm not so busy"—such a time will never come. None of us can do it all, but we can each do something. And we can work through AAI to enhance and amplify our efforts.

An undergraduate research opportunity in the laboratory of the late Dr. Mortimer Bortin, who performed one of the first successful bone marrow transplants and pursued research on graft-versus-host disease, introduced me to a fascination with immunology that never ended. Despite the many troubles of our times, I strive to remember that we are still privileged to pursue a life focused upon inquiry and discovery. I look forward to working both with and for you in the coming year.

Gail A. Bishop, Ph.D., AAI '84, a member of the AAI Council since her election in 2007, is the 96th president of AAI, leading the association during the July 2012–June 2013 term.

Bishop is a professor in the Department of Microbiology at the University of Iowa College of Medicine, where she directs the interdisciplinary graduate program in immunology and is associate director for basic science research at the university's Holden Comprehensive Cancer Center. She holds a secondary appointment in the Department of Internal Medicine (Division of Immunology) and is a faculty member of the interdisciplinary graduate programs in immunology and molecular biology.

Bishop and her lab colleagues study molecular mechanisms of lymphocyte activation, focusing particularly on the TNF receptor superfamily (TNFRSF) molecules and the TRAF (TNFR associated factor) cytoplasmic adaptor molecules to better understand how normal immunity, autoimmunity, and malignancy are regulated. The lab has examined how the TNFRSF member CD40 regulates signaling to B lymphocytes and how the Epstein-Barr virus-encoded viral mimic of CD40, latent membrane protein 1 (LMP1), signals through the same TRAF molecules as CD40 but in very distinct ways. These studies will promote understanding of the mechanistic basis of LMP1 involvement in B cell lymphoma and autoimmunity. Many studies of specific TRAF activity, especially of the relatively understudied molecule TRAF3, are also underway. Additionally, Bishop investigates how different TNFRSF molecules interact with one another to regulate lymphocyte activation and apoptosis and how innate and adaptive receptor signals interact to affect B cell activation. The long-term goal of many of these studies is their application to better adjuvant design for the future development of safe, effective vaccines.

Prior to her election to AAI Council, Bishop served as a member of the AAI Finance Committee and the AAI Committee on Public Affairs and as AAI representative to the FASEB Science Policy Committee. She also held section and associate editor appointments with *The Journal of Immunology* and has served on the faculty of the AAI Introductory Course in Immunology.

In 2009 Dr. Bishop was awarded the Iowa Technology Association's "Woman of Innovation" award for academic research innovation and leadership. Her additional career honors and appointments include: chair, NIH Tumors, Tolerance and Transplantation study section; member, NIH Experimental Immunology study section; member, Microbiology and Immunology review panel, American Heart Association; Cell Biology and Signal Transduction grant review panel, National Science Foundation; U.S. representative to six-member international immunology grant review panel serving Singapore government; chair and Leadership Award recipient, Autumn Immunology Conference; invited commencement speaker, U. of Iowa Graduate College; U. of Iowa Graduate College Outstanding Mentor Award; Donald D. Dorfman Research Award for best cancer-related scientific paper, Holden Cancer Center; U. of Iowa College of Medicine Distinguished Professor of Microbiology (endowed Professorship); Carver Foundation Fellowship, U. of Iowa; National Arthritis Foundation Investigator Award; Damon Runyon-Walter Winchel Cancer Fund Postdoctoral Fellowship; Lineberger Cancer Research Center Postdoctoral Fellowship, University of North Carolina, Chapel Hill; Horace H. Rackham Predoctoral Fellowship, University of Michigan; NIH Predoctoral Trainee, University of Michigan; NIH Predoctoral Trainee, University of Wisconsin; Winter Research Laboratory Undergraduate Fellowship; Milwaukee Jaycees Scholarship Award; and Milwaukee Transport Company Scholarship Award.

Bishop received her B.A. (biology) from St. Olaf College, M.S. (oncology) from the University of Wisconsin, and her Ph.D. (cellular and molecular biology) from the University of Michigan, where she was mentored by Joseph Glorioso and Stanley Schwartz. She trained as a postdoctoral fellow with Geoffrey Haughton and later with Jeffrey Frelinger at the University of North Carolina, Chapel Hill, where she was subsequently appointed research assistant professor.

She joined the U. of Iowa College of Medicine faculty in 1989 as an assistant professor in the Department of Microbiology, later adding a parallel appointment in the Department of Internal Medicine, Division of Rheumatology. In 1994, she was appointed associate professor and has served as a full professor since 1998. She was appointed as endowed College of Medicine Distinguished Professor of Microbiology in 2001 and Holden Chair of Cancer Biology in 2004.

She has served since 1990 as a member of the university's Medical Scientist Training Program faculty and as a research health science specialist at the Iowa City VA Health Care System. Since 1993, she has served as a member of the university's interdisciplinary graduate programs in immunology and in molecular biology and has directed the immunology graduate program since 1998. She has held her appointment as associate director for basic science research at the Holden Comprehensive Cancer Center since 2004.

NIH Working Groups Report on Biomedical Research Workforce, Workforce Diversity

The Advisory Committee to the NIH Director (ACD) recently received long-awaited recommendations from two of its Working Groups: the Working Group on the Biomedical Research Workforce and the Working Group on Diversity in the Biomedical Research Workforce. Although both working groups urge NIH to seek more data before formulating final recommendations, key interim suggestions include raising stipend levels for NIH postdoctoral researchers, capping the number of years a graduate student can be supported by NIH, and establishing/enhancing mechanisms for encouraging diversity in the workforce.

Biomedical Research Workforce

The Working Group on the Biomedical Research Workforce was established in December 2010 with a dual charge to "develop a model for a sustainable and diverse U.S. biomedical research workforce that can inform decisions about training of the optimal number of people" and to recommend actions that NIH should take to support a sustainable biomedical research infrastructure.

After nearly a year and a half of deliberations, including significant input from the biomedical research community (see sidebar, right, for a summary of AAI comments), the Working Group determined that it still lacked sufficient data for fulfilling its primary charter for building a strong model for a sustainable workforce. The Working Group's first recommendation, therefore, was for NIH to implement a significant data collection effort, including the establishment of a unit within the Office of the Director to coordinate data collection activities.

The Working Group did find it had collected enough data to make some specific recommendations on how to make biomedical research careers more attractive to the best and brightest students and how to better train students to make sure they are prepared for careers other than academic research careers. For graduate students and postdoctoral fellows, the Working Group proposes to increase the number of those who are supported by training grants and fellowships; the data are said to show that young scientists in such programs fare better than those supported by research project grants and that the peer review associated with these applications enables better monitoring of their training.

AAI Comments to NIH Biomedical Research Workforce Working Group

In response to the NIH "Request for Information (RFI): Input into the Deliberations of the Advisory Committee to the NIH Director (ACD) Working Group on the Future Biomedical Research Workforce," the AAI Committee on Public Affairs (CPA) developed comments, which were submitted to NIH in October 2011. Highlights of the AAI comments include the following: "AAI believes that optimizing the workforce is perhaps the most important single issue that will be addressed by NIH in the near term. At the heart of this issue is the question of whether we are training more scientists than the current and future systems can support.… Whether and how to continue the current system—if it is supportable in the long term—and what could replace it if it is unsupportable, are the crucial questions for the Working Group to address. …Although AAI believes that increased funding for biomedical research would help to ease some of the pressure created by the current system, we believe that even a substantial increase in funding would not fully solve these workforce problems. As such, AAI believes that changing the way our workforce is structured, and providing appropriate training of that workforce, will make the system more efficient, predictable, reliable and productive, and is essential to ensuring that the best scientists are attracted to, pursue, and thrive in scientific careers."

For graduate students, the Working Group also proposes capping at six the number of years they can be supported by NIH funds. For postdoctoral researchers, the Working Group proposes, among other things, increasing the stipend level to $42,000 from the current level of $39,264 at entry and doubling the number of Early Independence Awards to 20 to allow more young researchers to forego their postdoctoral fellowships and move directly to independent research positions.

The Working Group on the Biomedical Research Workforce was co-chaired by Shirley Tilghman, Ph.D., president of Princeton University; and Sally Rockey, Ph.D., deputy director for extramural research at the NIH.

Diversity

The ACD also heard a presentation from the Working Group on Diversity in the Biomedical Research Workforce. This Working Group was formed in August 2011, in part because of the Ginther et al. study published in *Nature* which found that even after controlling for factors including educational background, training, and publication record, black applicants are still about 10 percentage points less likely than whites to receive NIH funding. The Working Group was charged with exploring causes for differential success rates between racial/ethnic groups and tasked with recommending strategies to improve the retention of underrepresented minorities (URMs) through critical stages in the pipeline.

At the June 14 ACD meeting, the Working Group outlined the 13 recommendations included in its draft report. The recommendations were developed following a solicitation for community input, including a Request for Information released in February (see sidebar, right, for a summary of AAI comments). Like the Workforce Working Group, the Diversity Working Group found that enhanced data collection is needed to track outcomes and proposed assigning "a unique identifier to every NIH-supported trainee, fellow, and career development recipient, including those supported on research project grants."

The Working Group also believes increased institutional support is necessary to strengthen diversity. Its report calls for a "bold, well-funded, multi-year, incentive-based, competitive grant process to support infrastructure development in those comparatively under-resourced institutions with a documented track record of producing and supporting URM scientists." The Working Group also calls on NIH to appoint a Chief Diversity Officer and create an NIH Office of Diversity.

The Working Group on Diversity was co-chaired by Reed Tuckson, M.D., executive vice president and chief of medical affairs for the UnitedHealth Group; John Ruffin, Ph.D., director of the National Institute on Minority Health and Health Disparities at NIH; and Lawrence Tabak, D.D.S., Ph.D., principal deputy director of the NIH.

All of the recommendations presented to the ACD are being reviewed by NIH Director Francis Collins, M.D., Ph.D., and will likely be subject to additional input from stakeholders.

AAI Comments to NIH Working Group on Diversity in Biomedical Research

In January 2012, AAI submitted comments to the NIH ACD Working Group on Diversity in the Biomedical Research Workforce in response to its Request for Information (RFI) seeking input to "help inform the development of recommendations to present to the ACD and the NIH Director on actions the NIH can take to increase the diversity of the biomedical research workforce." Working with the AAI Minority Affairs Committee and its chair, Prosper Boyaka, Ph.D., AAI '98, the CPA developed comments which advised NIH that, "although AAI realizes that it is impossible to undo any past damage that may have resulted from bias, AAI urges that any Working Group recommendations 1) rapidly remediate any unfair treatment of African American scientists with regard to grant funding, and 2) ensure, going forward, that appropriate measures and policies are in place for equal treatment of all scientists on the basis of merit."

National Research Council Encourages Federal Government to Pay the "Full" Cost of Research

The National Research Council, part of The National Academies, released a report in mid-June entitled Research Universities and the Future of America: Ten Breakthrough Actions Vital to Our Nation's Prosperity and Security. The report was developed in response to a 2009 request from Congress to assess the health and competitiveness of research universities in the U.S.

Among other things, the authors propose that the federal government should strive to cover the full cost of research at universities, including both direct and indirect costs. They state that this proposal would not limit research or require significant federal investment because "federal coverage of a higher portion of indirect costs would, at the margins, shift part of federal research funding from direct to indirect costs." The report acknowledges that this recommendation would be opposed by some who are concerned about shifting costs from direct to indirect cost categories in this fiscal environment, citing a letter sent to them by the Federation of American Societies for Experimental Biology (FASEB).

Other recommendations in the 228-page report include:

- ensuring sufficient federal investment in basic research and graduate education;
- providing public research universities with greater autonomy and restored appropriations from state governments;
- incentivizing business to develop partnerships with universities, including making the research and development tax credit permanent; and
- reducing or eliminating regulations that increase administrative costs

AAI Submits Comments on Proposed Modifications to the NIH Biosketch

AAI recently submitted comments to NIH advising against the proposed addition of a narrative section for including more biographical information in grant applications. The "Personal Statement" section already gives researchers an opportunity to highlight their most important contributions to science, AAI said. AAI did urge, however, that NIH eliminate the suggested limit on publications one may list, now at 15, as long as the NIH Biographical Sketch (Biosketch) does not exceed four pages.

The AAI comments were submitted in response to the NIH Request for Information (RFI): Input on Proposed Modifications of the Biographical Sketch Used in NIH Grant Applications. The RFI was issued by a newly-formed NIH Working Group tasked with addressing concerns that have been raised about the Biosketch. Specifically, the Working Group issued the RFI to determine whether adding a narrative section to highlight a researcher's scientific contributions would enhance the Biosketch.

To read the full comments submitted by AAI, please visit www.aai.org > Public Affairs > Letters and Comments.

NCATS Seeking CTSA Applications for FY 2013

The National Center for Advancing Translational Sciences (NCATS) at NIH is soliciting applications for Institutional Clinical and Translational Science Awards (CTSA). NCATS plans to provide about $110 million in FY 2013 to fund as many as 18 new CTSAs.

According to NIH, "the CTSA program...supports a national consortium of medical research institutions that work together to improve the way clinical and translational research is conducted nationwide to enhance its efficiency and quality. Its goals are to accelerate the process of translating laboratory discoveries into treatments for patients, to engage communities in clinical research efforts, and to train a new generation of clinical and translational researchers" (www.ncats.nih.gov/research/cts/ctsa/ctsa.html).

NCATS hosted a webinar on July 23 to answer questions about the CTSA funding announcement. To view the presentation from the NCATS webinar visit: www.ncats.nih.gov > News & Events > Past Events.

Interested applicants must submit a letter of intent by December 10, 2012, and an application by January 8, 2013.

Legislation Could Limit Federal Spending on Travel and Conferences

Two recently passed bills include provisions that could significantly reduce federal spending on conferences and limit travel for government employees. Both bills contain language that, if enacted, would prevent a government agency from expending funds "on more than a single conference sponsored by an organization during any fiscal year, unless the agency is the primary sponsor and organizer of the conference."

The provision of concern was included in The Digital Accountability and Transparency Act (DATA Act), which was passed by the House of Representatives on April 25, 2012. The bill language also restricts agency employee travel to international conferences, allowing no more than 50 federal employees to travel abroad unless the Secretary of State deems it to be in the national interest. These same restrictions were included in the 21st Century Postal Service Act, which passed the Senate on April 25, 2012.

The congressional effort to limit federal spending on conference and travel comes several months after the U.S. Department of Health and Human Services (HHS) issued a new policy that limits the ability of federal workers, including scientists, to attend privately sponsored scientific meetings and conferences and is viewed as a response to misused conference funds by the federal General Services Administration.

AAI is concerned about how these restrictions could affect scientific meetings and conferences, including those hosted by AAI. AAI elaborated on its concerns in its FY 2013 testimony to the House and Senate Labor, Health and Human Services, Education, and Related Agencies Appropriations Subcommittee: "Government scientists are valued members of our organization and contribute significantly to scientific advancement in the field. It is as important to AAI to have them attend our meetings as it is for them to attend. Dialogue and information exchange among scientists from government, academia, industry and private institutes is absolutely essential, and any barriers to the participation of government scientists undermines the best interests of science." (To view the full testimony visit www.aai.org >Public Affairs > Legislative Action Center > Congressional Testimony.)

Neither the DATA Act (as previously reported in the CPA NewsBrief, the DATA Act requires those who receive federal funds to report quarterly on the receipt and use of those funds to a new Federal Accountability and Spending Transparency Board) nor the 21st Century Postal Service Act has passed both houses of Congress, and the bills' prospects of becoming law are uncertain.

New NIH Resources Available on the Web

NIH recently launched a new series of web pages which highlight the impact of NIH funding. The new pages, accessible via nih.gov/about/impact/index.htm, describe the impact of NIH research on our health and on our local and national economy.

AAI Public Affairs ONLINE

Visit us to

- Learn about NIH funding
- Keep current on key policy issues
- Discover how you can help AAI in its advocacy initiatives

Go to **www.aai.org** and click on **Public Affairs**.

AAI Welcomes New Councillor Wayne Yokoyama

On July 1, **Wayne M. Yokoyama, M.D., AAI '84**, began the term of AAI Council service to which members elected him earlier this year.

Wayne M. Yokoyama

Yokoyama is a Howard Hughes Medical Institute (HHMI) investigator, professor of medicine, professor of pathology and immunology, and Sam J. Levin and Audrey Loew Levin Chair for Research on Arthritis at Washington University School of Medicine (WUSM).

Yokoyama is renowned for bringing the study of natural killer (NK) cells into the mainstream of immunology through the discovery of NK cell inhibitory receptors. This discovery revealed a mechanism by which NK cells could distinguish between target cells to be killed (which lack MHC I expression) and cells to be spared (cells which express MHC I). Yokoyama has proceeded to identify and characterize many NK cell receptors and their ligands and investigate how NK cells act to protect the host against infections and malignancies. Yokoyama's research has also identified the process of NK cell "licensing," through which these cells become functionally competent. In addition, the Yokoyama lab studies NK cell responses to tumors, rheumatoid arthritis, vasculitis, and infections with murine cytomegalovirus and cowpox virus. These studies have the ultimate goal of using the understanding of NK cell activity to develop effective NK cell-directed therapeutic interventions.

His extensive past service to AAI has included terms as chair of the AAI Awards Committee and as a member of the AAI Nominating Committee, the AAI Program Committee, and the AAI Clinical Immunology Committee. He has served multiple times as an AAI Advanced Course in Immunology faculty member and as an associate editor and ad hoc reviewer for *The Journal of Immunology* (*The JI*). In 2006, *The JI* selected Yokoyama's 1992 research paper—Karlhofer, F.M., Ribaudo, R.K., and Yokoyama, W.M. MHC class I alloantigen specificity of Ly-49+ IL-2-activated natural killer cells. *Nature* 1992; 358:66-70—for inclusion in its "Pillars in Immunology" series.

His additional career honors include: elected member, National Academy of Sciences; Lee C. Howley Sr. Prize for Research in Arthritis, National Arthritis Foundation; elected member, American Academy of Arts and Sciences; elected fellow, American Association for the Advancement of Science; elected fellow, American Academy of Microbiology; past president, Society for Natural Immunity; Meritorious Extension of Research in Time (MERIT) Award, NIAID, NIH; Novartis Prize for Basic Research in Immunology (awarded triennially at the International Congress of Immunology); elected member, Association of American Physicians; elected member, American Society for Clinical Investigation; Henry Christian Memorial Award for Excellence in Research, American Federation for Clinical Research (outstanding immunology/rheumatology research abstract); Carl and Gerty Cori Faculty Achievement Award, Washington University; WUSM student-selected Distinguished Service Teaching Awards (3); elected faculty, Alpha Omega Alpha medical student honor society; Distinguished Alumni Award for Achievement, University of Iowa College of Medicine; Scholar of the Rosalind Russell Medical Research Center for Arthritis; Senior Staff Fellowship, NIAID, NIH; Medical Staff Fellowship, NIAID, NIH; Individual NIH National Research Service Award (NRSA); Veteran's Administration Associate Investigator Award; Arthritis Foundation Postdoctoral Fellowship; and Hawaii State Medical School Scholarship.

Yokoyama's professional appointments (current and prior) include service on multiple grant review panels, including with the NIH Center for Scientific Review, NIH Director's Pioneer Awards, and various NIH institutes (NIAID, including Advisory Council; NCI; NIAMS), as well as with the National Science Foundation, U.S. Department of Veterans Affairs, HHMI Investigator Competition, Arthritis Foundation, The Wellcome Trust, National Cancer Institute of Canada, Israel Science Foundation, Medical Research Council (UK), Science and Technology Center (Ukraine), Swiss National Science Foundation, Biotechnology and Biological Sciences Research Council (UK), Ireland-Northern Ireland Co-operation Health Research Board, Ministere de la Recherche (France), Deutsche Forschungsgemeinschaft (Germany), Croatia-Israel Joint Research Program, Agency for Science, Technology, and Research's (A*STAR) Biomedical Research Council (Singapore), and Czech Science Foundation. Journals for which Yokoyama currently provides editorial service include *Annual Review of Immunology* (co-editor), *International Immunology*, *Immunogenetics*, *Immunity*, *Immunology and Cell Biology*, *Cellular Immunology*, *Regional Immunology*, *European Journal of Immunogenetics*,

Autoimmunity, Viral Immunology, Immunology Today, Nature Immunology, New England Journal of Medicine, Genes and Immunity, Nature Reviews Immunology, and *BioMed Central Biology Image Library.* He has held past such appointments with, among others, *Current Opinion in Immunology, Annual Review of Immunology, Journal of Clinical Immunology, Immunology and Cell Biology, PLoS Pathogens,* and *PLoS Genetics.*

A biology graduate of the University of Rochester (New York), where he served as a student researcher in the laboratory of Parker Staples, Yokoyama received his M.D. from the University of Hawaii, where he served as a student researcher in the laboratory of Eugene Lance at the Cancer Center of Hawaii. Yokoyama completed postdoctoral training appointments as an intern (internal medicine), resident (internal medicine), and clinical fellow (rheumatology), all at the University of Iowa Hospitals (UIH) in Iowa City. He undertook additional postdoctoral training as a research fellow in the laboratory of Robert Ashman at UIH and subsequently in the Ethan Shevach lab at the Laboratory of Immunology, NIAID, NIH.

Yokoyama was appointed an assistant professor in residence at the University of California San Francisco, School of Medicine in 1989. In 1992, he joined the Department of Medicine faculty of the Mount Sinai Medical Center as an associate professor, holding concurrent appointments as associate professor at the Brookdale Center for Molecular Biology, Mount Sinai School of Medicine (MSSM) and as a doctoral faculty member in the biomedical sciences Ph.D. program at the Graduate School and University Center of The City University of New York. He later held additional MSSM appointments as associate HHMI investigator and associate professor in the MSSM Department of Microbiology before joining the WUSM faculty as rheumatology division chief in the Department of Medicine in 1995. Yokoyama has been an HHMI investigator since 1997.

Wayne M. Yokoyama's 2012 AAI Candidate's Statement

In his candidate's statement for the AAI election earlier this year (reprinted below), Wayne Yokoyama cited the unprecedented promise of immunology at a time of distinct challenges to research funding, and the crucial role of AAI in sustaining immunology's remarkable impact while ensuring its vibrant future.

To paraphrase Charles Dickens, "...it is the best of times, it is the worst of times...it is the season of Light, it is the season of Darkness." Nothing better describes the current state of affairs in biomedical research—and especially immunology.

Best of times...season of Light; exciting new findings abound. The Human Genome Project and other advances brought us new technologies and approaches to study complex immunological phenomena in humans and our favorite animal models. Immune-based therapies have reached the clinic. All immunologists can take great pride in helping in this process in every step of the way from basic immunology to proof of concept pre-clinical studies and on to clinical trials. In these best of times, we should be able to re-double our efforts to further help illuminate approaches to cure—or at least halt—the progression of devastating immunological diseases such as rheumatoid arthritis.

Worst of times...season of Darkness; storm clouds are upon us that are blocking our visions of pursuing exciting new ideas that could lead to potential breakthroughs in understanding and novel therapies. The budgetary constraints on federal (primarily NIH) and private agency funding are sapping our collective strength. This is no more evident than in our trainees as they ponder whether a biomedical career is even a viable option for them. We must do what we can to encourage them to see that the future is actually very bright and help them secure promising careers. In these worst of times, we also need to constantly remind ourselves and others that society needs us more than ever because, despite astounding medical advances, the world still faces disheartening diseases. We need to use our newest scientific clues to find the causes and cures of perplexing immunological diseases, as well as other disorders for which an immunological basis is now suspected. We need to do a better job in vaccination to prevent illness. I believe that together we have the ability to do this in the very near future, given the proper support and intellectual capital.

Therefore, it is my distinct honor to run for election as your AAI Councillor, particularly during the current state of affairs. Through its many activities, I believe AAI plays a vital role in representing immunologists' interests in all their endeavors. I was lucky to be exposed to immunology over 40 years ago (!) and to witness firsthand how much our discipline has grown in strength since then, due in no small part to help from AAI. If I am elected as your Councillor, I will seek to continue and expand the AAI legacy of representing and assisting all of you—whether you work in basic, translational, or clinical research or in education, patient care, or administration. As an experienced and active basic scientist, mentor, teacher, physician, and administrator myself, I will dedicate myself to exploring all possible ways to enhance the activities of AAI. We have so much more to do to exploit recent new discoveries, enhance research funding, increase diversity, and foster training of the next generation of immunologists. By tackling the challenges of the worst of times, AAI can—and should—continue to help us all achieve much more than what seems possible right now so that we can all enjoy the best of times.

Members in the News

Jeffrey Ravetch Is Recipient of Gairdner, Sanofi-Pasteur Honors

Jeffrey V. Ravetch

Jeffrey V. Ravetch, M.D., Ph.D., AAI '99, honored earlier this year with Canada's highest scientific award, was recently named a 2012 Sanofi Institut Pasteur Award recipient. Together, the awards recognize his work identifying the components that cause immune system cells to respond to specific antibodies.

Ravetch is the Theresa and Eugene M. Lang Professor and head of the Leonard Wagner Laboratory of Molecular Genetics and Immunology at Rockefeller University.

In March, Ravetch received the Canada Gairdner International Award, which recognizes the achievements of medical researchers whose work contributes significantly to improving the quality of human life. Canada's highest scientific honor, the Gairdner award is considered among the top 10 most prestigious international prizes in science and carries a $100,000 prize from the Gairdner Foundation.

Ravetch's Gairdner recognition cited his work demonstrating how the immune system can be both protective and harmful. Specifically, it reflected his studies exploring how antibodies in the immune system trigger different health outcomes by binding to Fc receptor (FcR) molecules and changing their protective activity. The FcR system allows antibodies that are produced by the body to defend against toxins, bacteria, and viruses. Ravetch's discoveries on the functions of antibodies pave the way toward developing therapies for autoimmune diseases like lupus and arthritis, as well as cancer and infectious diseases.

This summer, Ravetch was selected to receive the Sanofi-Institut Pasteur Award, which recognizes researchers for studies advancing understanding of the life sciences. For discovering mechanisms by which antibodies carry out their diverse biological functions, Ravetch was among four scientists to be honored with the award, created this year by Sanofi and the Institut Pasteur to encourage scientific excellence in the service of health. Prizes support research projects in four areas: tropical and neglected diseases, innovative vaccines, new approaches to drug resistance, and therapeutic approaches to senescence: immunobiology, neurobiology, and regenerative medicine. The award carries for each recipient a prize of 120,000 euros, or about $147,000.

Ravetch's award recognizes his work in furthering our understanding of how antibodies function and leading to the improvement and the generation of therapeutic molecules. Ravetch dissects the cellular and molecular mechanisms that govern the generation of antibody specificity and the translation of that specificity into cellular responses. By identifying the genetic components that cause immune system cells to respond to specific antibodies, he seeks to gain a better understanding of how a functioning immune system protects organisms from invaders and how a dysfunctional immune system attacks the body's own tissues.

During his career, Ravetch has been widely recognized for the innovation and impact of his research. His work led to the cloning and mapping of the first malarial parasite chromosome and to the cloning of the first FcR genes in 1986. Since this initial cloning, his lab has led the field in the study of FcRs, determining how they mediate antibody-triggered inflammation and proving them to play a variety of essential roles in the immune response. Both activating and inhibitory FcRs are expressed on cell surfaces, and Ravetch's lab investigates the interplay between these receptors and the ways their involvement in innate and adaptive immunity might be exploited therapeutically. Work from Ravetch's lab has revealed the importance of inhibitory FcRs in the maintenance of tolerance and of activating FcRs in inflammatory processes involved in the development of systemic autoimmunity. He also determined the mechanism by which intravenous immunoglobulin causes immunosuppression and is working on applying the use of FcRs to the development of improved dendritic cell-targeting vaccination strategies.

An AAI Distinguished Lecturer in 2011, Ravetch was the recipient of the AAI-Huang Foundation Meritorious Career Award (now AAI-Life Technologies Meritorious Career Award) in 2005. He is a past member of the AAI Committee on Public Affairs and has been a major symposium speaker on multiple occasions at the AAI annual meeting.

Ravetch's additional career honors and appointments include: member, American Academy of Arts and Sciences, American Association for the Advancement of Science, and the National Academy of Sciences/Institute of Medicine (IOM); William Coley Award, Cancer Research Institute; Lee C. Howley, Sr., Prize for Arthritis Research; Burroughs Wellcome Fund Award in Molecular Parasitology; Grabar Lecture, French Society of Immunology; R.E. Dyer Lecture,

NIH; Ecker Lecturer, Case Western Reserve University; NIH MERIT Award; advisory editor, *The Journal of Experimental Medicine*; transmitting editor, *International Immunology*; member, various study section panels; member, NIH Task Force on Immunology and Aging; IOM Committee on Malaria Vaccines; and founder and organizer (with D. Wirth and L. van der Ploeg), Annual Woods Hole Molecular Parasitology Meeting.

A graduate of Yale University, Ravetch earned his Ph.D. from the Rockefeller University, where he studied under Norton Zinder and Peter Model, and his M.D. from Cornell University Medical College. He completed postdoctoral training with Philip Leder at NICHD, NIH, and later held appointments with the Memorial Sloan-Kettering Cancer Center, Cornell University Medical College, and Jefferson Medical College and Jefferson Cancer Institute. He became a guest investigator at Rockefeller's Laboratory of Cellular Physiology and Immunology in 1984, was appointed a Rockefeller professor in 1996, and has held the Lang Professor appointment since 1997.

Ignacio Sanz Named Georgia Research Alliance Scholar

Ignacio Sanz

Ignacio Sanz, M.D., AAI '07, joined Emory University earlier this year as its 13th Georgia Research Alliance Eminent Scholar. An expert in autoimmune B cell diseases with a special focus on systemic lupus erythematosus, Sanz assumed the helm of Emory's Lowance Center for Human Immunology and holds appointments as a professor of medicine and pediatrics at the Emory School of Medicine and director of its Division of Rheumatology.

Sanz joined Emory after 15 years at the University of Rochester School of Medicine and Dentistry, where he served as professor of medicine, microbiology, and immunology; chief, Allergy, Immunology, and Rheumatology Division; director, Rochester Autoimmunity Center of Excellence; director, Rochester Center for Biodefense of Immunocompromised Populations; director, University of Rochester Center for Translational Immunology and Infectious Diseases; and chair of the Integrated Disease Program in Immunology and Infectious Diseases.

Sanz investigates human B cell development and function, particularly addressing the regulation of self-reactive B cells and plasma cells in autoimmune disease. His lab has focused primarily on systemic lupus erythematosus but also studies Sjögren's syndrome, rheumatoid arthritis, and type I diabetes. To more effectively examine these diseases, the lab has developed a comprehensive toolkit for the study of human immune responses in a large variety of situations. The lab has used these tools to identify B cell subpopulations and different B cell fingerprints for different diseases, the analysis of which may have significant diagnostic and predictive value. By studying the function of these finely discriminated human B cell subsets and their homeostasis in healthy subjects and in autoimmune diseases, Sanz is working to identify useful biomarkers and develop effective anti-B cell therapies.

Currently a member of the AAI Clinical Immunology Committee, Sanz has served as an associate and ad hoc editor for *The Journal of Immunology* and is a past major symposium speaker at the AAI annual meeting. He holds editorial board appointments with *Discovery Medicine*, *Frontiers in B Cell Biology*, and *Clinical and Translational Immunology* and is a past associate editor for the *Journal of Clinical Rheumatology*. He has served as an ad hoc reviewer for *Nature Immunology*, *International Immunology*, *Trends in Immunology*, *Journal of Immunological Methods*, *Clinical and Experimental Immunology*, *Blood*, and numerous other journals. His additional career honors and appointments include: Distinguished Faculty Award, Emory University; Virginia P. Engelischoff Research Award, National Arthritis Foundation; and member, NIH study section and other review and advisory panels, including for NIAID, NIDDK, NIAMS, the National Arthritis Foundation, American College of Rheumatology, Alliance for Lupus Research, Lupus Research Institute, Immune Tolerance Network, Autoimmunity Centers of Excellence, and Biodefense of Special Populations Network.

A biology graduate of Colegio San Agustin in Santander, Spain, Sanz completed his medical degree at the University of Santander Medical School and his internal medicine residency at the National Center for Biomedical Investigation-Hospital Puerta de Hierro, Madrid. He completed an immunology fellowship at the University of Texas Southwestern Medical School in Dallas and was a fellow in rheumatology at the University of Texas Health Science Center in San Antonio. He joined the latter institution as an assistant professor of medicine and cellular and structural biology and became an associate professor there in 1995. One year later, he joined the faculty of the University of Rochester, where he was appointed a full professor in 2005.

Kevin Tracey Named to Long Island Technology Hall of Fame

Kevin J. Tracey, M.D., AAI '07, president of the Feinstein Institute for Medical Research in Manhasset, New York, and president and professor of the Feinstein-affiliated Elmezzi Graduate School of Molecular Medicine, was recently inducted into the Long Island Technology Hall of Fame (LITHF).

Kevin J. Tracey

Tracey's selection was based on his personal accomplishments and those of his fellow researchers at the Feinstein Institute, who collaborate with clinician colleagues from throughout the North Shore-Long Island Jewish (LIJ) Health System in pursuit of new discoveries and therapeutic and diagnostic targets to improve medical practice. Nominated from corporate, research, and academic institutions, as well as by colleagues, peers, or other personal associates, LITHF inductees are selected based on intellectual acumen, lifetime achievement, overall impact on the advancement of science and technology, national prominence, contributions to Long Island's economic development, and commitment to the Long Island community.

A neurosurgeon by training, Tracey is a leading figure in inflammation research with a primary focus on the neural circuits that control the immune system. He and his colleagues discovered that the brain directly controls inflammation, which has altered the way that people think about how the body protects itself from infection and injury. He found that the vagus nerve utilizes a neural circuit, coined the "inflammatory reflex," to keep the immune system in check through the actions of acetylcholine, which turns off cytokine release from monocytes and other immune cells. He is also credited with discovery of the direct inflammatory activity of tumor necrosis factor-alpha TNF and the therapeutic potential of monoclonal anti-TNF antibodies, as well as the cytokine activity of high-mobility group box 1 (HMGB1) and the therapeutic potential of targeting this mediator at the intersection of sterile and infectious inflammation. Work by Tracey and his collaborators has led to the development of experimental therapeutics for treating arthritis and other inflammatory disorders.

Tracey is a past President's Symposium speaker at the AAI annual meeting and has been cited by the Institute for Scientific Information as a Highly Cited Researcher in Immunology, placing him in the top 0.5 percent of all publishing scientists. Tracey currently serves as editor-in-chief of *Molecular Medicine* and advisory editor for *The Journal of Experimental Medicine*. His additional career honors and appointments include: Kohler Award, German Society of Anesthesiology; DeWitt Stetten, Jr., Lecture, NIH; Mathilda and Terence Kennedy Visiting Professorship, Imperial College, London; Joel J. Roslyn Commemorative Lecture, Society of University Surgeons; Annual Clinical Science Lecturer, Karolinska Institute; Sir David Cuthbertson Lecture, European Society of Parenteral and Enteral Nutrition; additional lectureships, including at Harvard University, Yale University, Rockefeller University, Scripps Institute, Boston University, Ohio State University Medical Center, University of Pittsburgh, UT Southwestern Medical School, Surgical Infection Society of South Carolina, and Children's National Medical Center; co-chair, 1st Nobel Conference on the Inflammatory Reflex, Karolinska Institute; co-chair, 1st HMGB1 Cytokine World Congress, Saltsjobaden, Sweden; honorary doctorate, Karolinska Institute; Faculty Fellowship, American College of Surgeons; and Sidney Cooperband Award and Mitsubishi Research Award, Boston University School of Medicine. Tracey is an elected member of the American Society of Clinical Investigation, American Association of Physicians, Society of University Surgeons, and New York Academy of Sciences. He is also a member of the American Association for the Advancement of Science, American Association of Neurological Surgeons, Congress of Neurological Surgeons, International Cytokine Society, and International Society for NeuroImmunoModulation.

Tracey's critically acclaimed book, *Fatal Sequence: The Killer Within* (Dana Press, Washington, D.C., 2005), recounts the series of remarkable events, including his life-changing involvement in the hospital course of a young patient with sepsis, that have shaped his research.

A chemistry graduate of Boston College, Tracey received his M.D. from Boston University. He trained as a neurosurgeon at the New York Hospital/Cornell University Medical Center from 1983 to 1992, during which time he served as a guest investigator at the Rockefeller University. In 1992, Tracey joined the Feinstein Institute as director of its biomedical science laboratory and simultaneously embarked on a neurosurgery practice. In 2001, he was appointed founding program director for Feinstein's NIH-funded and National Center for Research Resources-designated General Clinical Research Center. Tracey has served as director of the Feinstein Institute since 2005.

Byron H. Waksman, M.D., AAI '50

AAI President July 1970–June 1971

1919–2012

AAI thanks Ms. Nan Waksman Schanbacher, daughter of Dr. Byron H. Waksman, for kindly providing this tribute and the recent, color photo at right.

Byron H. Waksman

Byron H. Waksman, a distinguished immunologist who was a pioneer in the field of neuroimmunology, died on Sunday, June 17, 2012, in Lexington, Massachusetts. Waksman joined the American Association of Immunologists (AAI) in 1950, and his service to the association spanned the remainder of the century.

Byron Waksman was elected to the AAI Council in 1965 and served in that capacity until 1970, when he was elected to the office of president, which he held for the 1970–71 term. He served on many AAI committees including the Program Committee (1977–82), Awards Committee (1990–93), Advisory-Search Committee for Limitation of Abstracts (1969–70), and the First International Congress of Immunology Organizing Committee (1970–72). His service to AAI also included efforts on behalf of *The Journal of Immunology*, where he served multiple terms as associate editor (1960–66), as well as two terms on the editorial board (1966–74). The AAI extends sincere condolences to the family of Dr. Waksman on their loss.

Waksman's many colleagues, former students, and friends around the world cite his superlative teaching and the open, cooperative, and international atmosphere in his labs as his greatest legacy. AAI member David Scott, professor of medicine and vice chair for research for the Uniformed Services University of Health Sciences, remembers Waksman as "a great mentor, scholar and a true renaissance man. Indeed, a walk in the woods with Byron was an education. Most importantly, Byron was like a father to me and to most of us in guiding our life paths." Waksman was also a close associate and friend of the Marine Biological Laboratory (MBL) in Woods Hole for nearly eight decades. His many contributions to the MBL community included the founding of the Pathogenesis of Neuroimmunologic Diseases course in 1990 and his founding and directing the Science Journalism Program in 1985. As president of the Waksman Foundation for Microbiology, he provided consistent support to several MBL programs, including the Microbial Diversity summer course, the Science Journalism Program, and the Living in the Microbial World teacher workshops.

Image courtesy of the Center for Biological Sciences Archives, University of Maryland, Baltimore County

Byron Waksman was born in 1919 in New York City. His family summered in Woods Hole, where his father, Selman (1952 Nobel Laureate in Physiology or Medicine), had a marine microbiology lab at Woods Hole Oceanographic Institution. As a youth, Byron attended the Children's School of Science and also volunteered at the MBL Supply Department (now the Marine Resources Center), where he was responsible for delivering starfish and other marine animals to MBL researchers.

After receiving his B.A. from Swarthmore College in 1940, Byron attended the University of Pennsylvania, where he completed his M.D. in 1943. Following his graduation, he was drafted into the army and served as part of the post-war reconstruction government in France and Germany. Upon returning to the United States, he carried out post-doctoral research at the Mayo Clinic and the Columbia University College of Physicians and Surgeons. His long academic career included appointments at both Harvard Medical School/Massachusetts General Hospital and at Yale School of Medicine. He began his research career investigating experimental allergic encephalomyelitis, an animal model for multiple sclerosis, and similar inflammatory diseases of the nervous system, which he termed "auto-immune" diseases. From studying the immunopathologic process, Waksman and his students proceeded to demonstrate the role of the thymus in both immune responses and tissue-specific tolerance. They are also credited with discovering several of the first and most important cytokines and contributed to early work on circulating lymphocytes (later known as T cells).

After retiring from academia, Waksman became vice president for research programs and medicine at the National Multiple Sclerosis Society, where he streamlined the granting process and worked hard to improve communication, among the board, patients and their families, and the media. One of his greatest achievements was the creation of a series of yearly workshops that

Continued on next page

brought together physicians and scientists involved with multiple sclerosis, from basic research to clinical treatments. The workshops and their published summaries successfully promoted cooperative work and substantially moved the field of multiple sclerosis research and treatment forward.

Following his "second retirement" from the National Multiple Sclerosis Society, Waksman taught middle school students at the Salk School of Science in New York, an experience that convinced him of the urgent need to improve science education at the pre-college level. As he stated, "The public understanding of science is crucial to the long-term health of the research enterprise on which our medical knowledge rests."

Waksman's father founded the Waksman Foundation for Microbiology in 1951 using patent royalties from the isolation of streptomycin, the first antibiotic for the treatment of tuberculosis. Byron Waksman directed the family foundation for more than 30 years. Here, too, he focused on improving scientific communication, both among scientists themselves and with the general public. After initiating the MBL Science Journalism Program, he created a similar international journalism program, the European Initiative for Communicators of Science, at the Max Plank Institute in Munich. He also launched a decade-long K–12 science education initiative focused on training classroom teachers to use hands-on microbiology exercises; the pilot workshop was held at the MBL in 1997.

Waksman travelled widely over the course of his career, attending scientific conferences and visiting France, Britain, Brazil, Venezuela, and Germany as an investigator or teacher. From 1961 onward, he served almost continuously on advisory panels of various government agencies, the World Health Organization, and the Rockefeller Foundation. He also served on editorial boards of a number of scientific journals in the field of immunology. In addition to AAI, he was a member of many other societies in his field. Waksman published more than 350 papers and articles in leading scientific journals on subjects in his areas of interest in immunology and science communication.

Byron Waksman is survived by his wife, Joyce; a son, Peter; a daughter, Nan Schanbacher; and five grandchildren. Memorial services took place during the summer in Woods Hole and in Lexington, Massachusetts.

Fionula Mary Brennan, Ph.D., AAI '12
1957–2012

Fionula M. Brennan

Professor Fionula M. Brennan, Ph.D., whose research over two decades focused on cytokine regulation in chronic inflammatory disease, died on June 15, 2012, in London, United Kingdom (UK).

Spent primarily at the UK's Kennedy Institute of Rheumatology, Brennan's research career was notable for findings indicating the importance of TNF as a potential therapeutic target in rheumatoid arthritis (RA), which led to the first trials of anti-TNF antibodies in RA in man. More recently, her studies of how T cells in the synovial joint drive chronic inflammation indicated that the cells resemble "by-stander"—activated T cells (not antigen-driven), and studies on a surrogate model for these RA synovial T cells have indicated the cell surface molecules important for contact-dependent activation of macrophages.

Professor Brennan's survivors include her husband, Paul, children Ciarán and Bridget, parents Josie and Ted Brennan, siblings Kevin and Maureen, various in-laws, and her many friends and colleagues.

The following tribute was authored by AAI member Marc Feldmann, Ph.D., AAI '75, and Ravinder Maini, MB, BChir, long-time collaborators with Professor Brennan at the Kennedy Institute. AAI gratefully acknowledges the submission.

Fionula Brennan was born in Melbourne, Australia, of Irish parents, who returned to the United Kingdom (UK) when she was six years old.

She undertook her undergraduate degree in immunology and completed her Ph.D. at the University of Bristol with mentors Chris Elson and Chris Morrison. Her thesis was entitled: "Use of defined-sized antigen-antibody complexes to examine the handling of complexes by the mononuclear phagocyte system."

After her Ph.D., she took up a lecturer position in the Department of Physiology at the University of Zimbabwe from March to August 1983. The balance of Professor Brennan's research career was spent almost entirely at the Kennedy Institute of Rheumatology, beginning in 1984 when she was appointed lecturer in immunology at Charing Cross and Westminster Medical School, based in the Kennedy Institute at Bute Gardens. There, she continued to pursue her interest in immune complex mediated pathology by studying MRL/lpr lupus mice in Ravinder ("Tiny") Maini's group and organizing

the undergraduate immunology course for medical students.

She was a very effective teacher, but Tiny recognized her clear bent for research and her ability to collaborate with clinicians and suggested she join Marc Feldmann, AAI '75, at the newly founded Sunley Research Centre associated with the Charing Cross and Westminster Medical School campus. Feldmann and Maini had won a project grant from the Arthritis Research Campaign, the UK medical research charity, to study the role of cytokines in rheumatoid arthritis, and Fionula was appointed as a fellow to pursue this new area of research. The aim of the group was to understand the immunology of rheumatoid arthritis, focusing on using diseased joint tissue, removed at operation or occasional biopsy.

Her first project on that topic was a popular one, T cell receptor analysis to explore the clonality of the T cells in the diseased joints. Researchers had expected that diseased tissue would have oligoclonal T cells representing "pathogenic clones," and some papers labored to convey that conclusion despite unclear data. Her capacity to go against the prevailing scientific wisdom was a feature of her work, which surfaced with her discovery of "cytokine-activated T cells" in rheumatoid joints in 2001–02.

Fionula's most significant scientific contributions came from 1988. The first postdoc to work on cytokine expression in rheumatoid joints was a New Zealander, Glen Buchan, who worked on miniaturizing the cytokine mRNA assays available at the time to permit use on very scarce human disease tissue. He was successful, prompting the appearance of papers documenting that cytokine mRNA encoding cytokines for which cDNAs had been identified and cloned was expressed in the joints, implying that cytokines were actively being produced in the diseased joint tissue. Surprisingly, in light of the recognition that proinflammatory cytokines are normally transiently produced, all rheumatoid tissue expressed essentially all cytokines that could be assayed.

Fionula Brennan was pivotal in unraveling what was occurring. Culturing the mixed cell population from joints revealed that cytokines in joints, such as IL-1, were produced long term at the protein level in addition to the mRNA level. This enabled her to ask the pivotal question: what maintains long-term cytokine expression? Adding neutralizing antisera to potential triggers revealed that anti-TNF inhibited the production of IL-1, thought by many to be the "cause" of rheumatoid arthritis. This was another unexpected result, which opened up the path to understanding that there was a TNF-dependent cytokine cascade that controlled other cytokines and coordinated local inflammation.

That was the first clue that TNF might be a therapeutic target, launching our epic journey in a proof-of-concept study in an experimental model of rheumatoid arthritis and first-in-man clinical trials of TNF blockade. These culminated in successful phase-three studies, academic-led in collaboration with industry, for the treatment of an autoimmune disease.

Having uncovered the importance of TNF over-production, Fionula devoted the remainder of her research career to understanding this process. The first key finding was to demonstrate that TNF production, chiefly from macrophages in the synovium, depended on T cells. This was at a time when the failure of anti-CD4 monoclonal antibody therapy in RA patients, and the low incidence of T cell cytokines, had led some to challenge the relevance of T cells to rheumatoid arthritis.

Exploring how these T cells activated macrophages to produce TNF revealed the peculiarity of synovial T cells and their similarity to T cells activated by a cocktail of cytokines. The function of these cells was very difficult to study.

Fionula's last project was seeking to understand why regulatory T cells (Tregs), apparently present in sufficient numbers in joints, nevertheless fail to affect the disease process. She found that pathogenic T cells in joints were not controlled by Tregs, which are normally able to control T cells activated by stimulating the T cell receptor. This challenges the view that transfusing Tregs expanded in vitro might be a good therapeutic approach.

Fionula Brennan was a very warm person and deeply caring about others, especially her younger colleagues, and so was the obvious choice to be our Director of Postgraduate Studies, supervising the training of Ph.D. students. It was a task she performed brilliantly as the Kennedy Institute joined Imperial College Faculty of Medicine in 2000. All the students completed their programs successfully, all on time. It is not universally known that Ph.D. studies in the UK are time limited, to four years.

Fionula Brennan developed a very agressive form of breast cancer, and faced her treatment with amazing fortitude and grace, without a trace of self-pity. She was devoted to her work and students to the very end, helping her last Ph.D. student plan his thesis effectively.

Her contributions as a scientist and mentor will not be forgotten; nor will her skills in organization and leadership. A notable example of the latter was her central

Continued on next page

role in maintaining the necessary supply of joint tissue for research in the wake of the Alder Hey debacle involving the misuse of human tissue and the resulting imposition of sweeping bureaucratic controls to ensure it could not be repeated. As with her contributions to immunology, the essential nature of Professor Brennan's leadership to the Kennedy Institute's research cannot be overestimated.

Norman L. Letvin, M.D., AAI '82

1949–2012

Norman Letvin, M.D., an AAI member since 1982 and a past associate editor for The Journal of Immunology*, died earlier this year in Boston of pancreatic cancer. The following tribute, authored by Petey E. Menz, was published by the* Harvard Crimson *on June 13, 2012, and is re-printed here with the kind permission of that publication.*

Norman L. Letvin

Harvard Medical School professor Norman L. Letvin, Harvard '71, who was renowned as one of the scientific community's leaders in the quest to develop an AIDS vaccine, was remembered after his death last month for not only his groundbreaking research but also his welcoming demeanor, musical gifts, and devotion to family.

Letvin, a pioneer in the use of non-human primates in AIDS vaccine research, died of pancreatic cancer on May 28 at Brigham and Women's Hospital. He was 62.

After graduating summa cum laude from Harvard, Letvin earned his M.D. from Harvard Medical School in 1975. While completing post-graduate training at the University of Pennsylvania, Letvin married Marion Stein '71, a fellow doctor. The two returned to Boston, where Letvin completed his senior residency at Massachusetts General Hospital.

In the early 1980s, Letvin discovered simian immunodeficiency virus, a virus similar to HIV that causes an AIDS-like illness in monkeys. That momentous finding led to a workable way for scientists to test HIV vaccines.

From 1994 until his death, he served as chief of the Division of Viral Pathogenesis at Beth Israel Deaconess Medical Center. He also edited the AIDS section of *Science* for 13 years.

Those who knew Letvin remembered his stunning intuition as a scientist.

"I think he just had a natural talent for asking the right questions in science," his wife Marion said. "He knew how to set up experiments in a way that whatever the results were, the data would be useful."

Though his laboratory at Beth Israel Deaconess was at the forefront of vital AIDS research, Letvin did not foster a tense working environment, colleagues recalled.

"His door was always open. He made everyone feel that he was extremely approachable," said Wendy W. Yeh, a Medical School professor who worked in Letvin's lab.

According to Igor J. Koralnik, another colleague, a popular joke in the laboratory was that even though Letvin did not own a cell phone, he remained in touch with everybody through his open-door policy.

"You'd pop in and he'd be very busy correcting papers or grants, but he would always be open—you'd never have to make appointments," Koralnik remembered.

Letvin's stringent editing of papers written by his lab team came to be known as "Letvinization" by the staff. Medical School professor Sampa Santra recalled that Letvin would ask his team to submit triple-spaced papers with wide margins to leave room for his extensive comments.

"He was clearly a very good writer," said Mohammed Asmal '95, a Medical School instructor. "And when it came time to write papers or grants, it was great to have timely feedback from him. He had a wonderful way of just being able to sit down and read through everyone's grants and papers, which was no small feat because his lab had so many people."

Andrew J. McMichael, a professor at Oxford University who collaborated on AIDS research with Letvin, recalled the sense of humor that he brought to his lab.

"That always helped meetings along—it helped when things were difficult and when things were going well, as well," McMichael said.

Letvin's brilliance was not confined to the realm of science. He was first clarinetist at his high school and at Interlochen Arts Camp, which he attended for three years, according to Marion. Though his musical prowess garnered him acceptances at Juilliard and the Curtis Institute of Music, he chose to attend Harvard, where he won the Harvard Concerto Contest in 1969 and played in the Harvard-Radcliffe Orchestra, whose alumni organization he later led.

While he was in medical school, he served as a music tutor in Eliot House.

His passion for music continued throughout his life.

"When the alarm went off in the morning, it didn't matter where it was in the music—he would name it after listening to a bar and he'd turn it off," his wife remembered. "Then I'd turn it on again to see if he was right, and he always was."

According to Koralnik, Letvin was discreet about his performances because he didn't want his colleagues to feel obliged to listen to him.

When co-workers did see him play, however, they were amazed by his skill.

"He would be a totally transformed person onstage," Santra said. "You wouldn't believe he did anything other than music."

A fan of high art of all sorts, Letvin also enjoyed attending Ontario's Stratford Shakespeare Festival annually.

"He was a voracious reader and he read very quickly," Marion Letvin said. "He was an insomniac, so he'd be up all night reading. He was known for recommending books to people."

Letvin was also known for his care for his wife and children.

"They were a very, very closely knit family," McMichael said. "He drew strength and support from them and gave them tremendous support. He was a family man, and I feel that it was a very important part of his character."

According to his daughter Elizabeth M. Letvin, Harvard '13, he achieved a healthy balance between his work and his family life.

"My siblings and I were all very lucky, and we all know it," she said.

Letvin is survived by his wife and children, Andrea, Rebecca, Adam, and Elizabeth, three of whom attended Harvard College.

A private funeral service was held on May 29, and a memorial service will take place in the fall. Donations can be made to the Harvard-Radcliffe Orchestra or Interlochen Arts Camp.

Robert D. Stout, Ph.D., AAI '76

1945–2012

Robert (Bob) Stout, Ph.D., passed away on May 25, 2012, at the University of Washington Medical Center Hospital in Seattle. At the time of his death he was a professor of microbiology and immunology at the University of Louisville School of Medicine.

Robert D. Stout

Bob, a member of the AAI since 1976, was a dedicated and creative scientist, and an outstanding teacher and mentor. He was born in Detroit, Michigan, on August 20, 1945. He received a bachelor's degree in zoology and chemistry from the University of Michigan, where he continued as a doctoral student in the laboratory of Arthur G. Johnson and was awarded a Ph.D. in 1970. Pursuing a career path that focused on immunological research, Bob was a postdoctoral fellow at Harvard University Medical School under the mentorship of Albert Coons. Later, he joined the laboratory of Len and Lee Herzenberg at Stanford University, where he was provided the opportunity to be among the first researchers to pioneer the use of flow cytometry as an analytical tool. Following his postdoctoral years, Bob was a member of the faculty of Brandeis University and East Tennessee State University's Quillen College of Medicine before joining the faculty of the University of Louisville in 1999, where he served as chair of the Department of Microbiology and Immunology through November 2011.

Bob's research efforts focused on the regulation of macrophage function and resulted in key early publications characterizing the role of CD40 as a mediator of contact-dependent T cell activation of macrophage inflammatory activity. He made significant discoveries regarding the plasticity of macrophage function. Well before its current popularity and acceptance, Bob promoted the concept that macrophage behavior can be altered by signals in the tissue microenvironment and that the diversity of macrophage function is not due to a multiplicity of subsets with fixed function. His work has relevance to autoimmune disease, aging, and cancer.

Bob also had a strong record of service to his profession, including as a councilor for the Society for Leukocyte Biology, as a member of various peer review boards, and as a reviewer for numerous journals, including dedicated service to *The Journal of Immunology*. He was commended for his efforts in building the Department of Microbiology and Immunology at the University of Louisville, which he accomplished in part by the recruitment and support of an excellent group of faculty of which he was very proud. Bob considered teaching and mentoring of students one of the most rewarding and enjoyable aspects of his professional life. Former students have commented on the strong positive influence Bob's role as teacher and mentor had in their lives. In turn, Bob believed that his interactions with students enriched his life and he was honored to play a role in their education and careers.

Continued on next page

Bob was a humble, gentle, and generous person with a wonderful smile and a unique sense of humor that put people at ease. He loved to work in his bountiful garden, and in his healthier days he enjoyed running and walking in his rural Kentucky neighborhood. Bob was diagnosed with myelofibrosis in 2007. He was exceptionally brave in his long and hard battle against this disease, which transitioned to acute myeloid leukemia in January 2012. Throughout it all, he maintained his sense of humor and his positive attitude.

Bob is survived by his wife of 29 years, Jill Suttles, AAI '86, also a professor of microbiology and immunology at the University of Louisville, who shared his love of science and was his long-time close collaborator in work as well as in life. Bob is also survived by his much-loved sister, Gayle Hunter, and her husband Jay, of Ellicott City, Maryland, as well as a large group of loving nieces and nephews whom he admired. Bob will be greatly missed by his family, friends, former students, and colleagues.

AAI Honors Memory of Ralph Steinman: Award to Carry His Name

The AAI Council is pleased to announce that the AAI Award for Human Immunology Research will be renamed in honor of deceased AAI member Ralph Marvin Steinman, M.D., (1943–2011). The award will now be named the AAI-Steinman Award for Human Immunology Research. In 2004, in his capacity as a scientific advisor with the Dana Foundation, Steinman, AAI '75, brokered that organization's joint sponsorship of this award with AAI "to recognize individuals who discover immune processes pertinent to human disease pathogenesis, prevention, and therapy." The Dana Foundation supported this award until 2009.

Among his many honors and awards, Ralph Steinman was granted the Nobel Prize in Physiology or Medicine in 2011 for his discovery of the dendritic cell and its role in adaptive immunity. In that year, the Nobel Assembly named three immunologists to share the prizes. Bruce A. Beutler, AAI '06, and Jules A. Hoffman were also named for their discoveries concerning the activation of innate immunity.

"It is most appropriate that this award should carry Dr. Steinman's name in recognition of his role in its genesis and also in honor of his extraordinary career and distinction as an immunologist," says AAI President Gail Bishop. "His discovery of dendritic cells opened an entirely new field of research. His death just moments before the announcement of his being awarded the Nobel grieved us all. In tribute to him, we place his name on the award he helped us found to honor researchers of great distinction in this field. "

The first awardee, Fred Rosen, M.D., AAI '64, Harvard Medical School, was honored in 2005 for his "seminal contributions to the understanding of adaptive and innate human immunology through recognition and astute analysis of inherited diseases."

The recipient of the AAI-Steinman Award for Human Immunology Research receives a $5,000 cash award and travel support to attend the AAI annual meeting, where the recipient delivers a plenary lecture presenting his or her work. For more information, visit www.aai.org/Awards/Career/index.html.

Ralph M. Steinman

Past Awardees:

2012
John P. Atkinson, M.D., Washington University School of Medicine

2011
Ellis L. Reinherz, M.D., Dana-Farber Cancer Institute, Harvard Medical School

2010
Raif S. Geha, M.D., Children's Hospital Boston, Harvard Medical School

2009
Jacques Banchereau, Ph.D., Baylor Institute for Immunology Research

2008
James P. Allison, Ph.D., HHMI, Memorial Sloan-Kettering Cancer Center

2007
Thomas A. Waldmann, M.D., Center for Cancer Research, National Cancer Institute, National Institutes of Health

2006
Max D. Cooper, M.D., University of Alabama, Birmingham, School of Medicine

2005
Fred Rosen, M.D., Harvard Medical School

AAI Education Program for High School Teachers Receives Kudos

Josep Bassaganya-Riera, AAI '02, professor of immunology and director of the Nutritional Immunology and Molecular Medicine Laboratory (NIMML) at Virginia Tech, praises the AAI High School Teachers Summer Research Program. Following his summer service as a mentor for high school teacher Stephen Biscotte, Bassaganya-Riera lauded the program for helping to build stronger bridges between the immunology research community and science teachers. Bassaganya-Riera's remarks appear in a press statement released by his institution, Bioinformatics Institute of Virginia Tech.

Josep Bassaganya-Riera

Biscotte, one of eight teachers to participate in the 2012–2013 program, is a science teacher at Cave Spring High School, Roanoke, Virginia. As a participant, he attended the 2012 AAI Introductory Course in Immunology and then spent a month in the laboratory with Bassaganya-Riera. While there, Biscotte was involved in the development of computational models of immunological processes. He also had the opportunity to contribute to important host response studies.

Stephen Biscotte

Biscotte says the experience will aid him in enhancing his science curriculum at Cave Spring, introducing practical modeling exercises into the classroom experience. NIMML quotes Biscotte as saying that his experience there has allowed him to experience first-hand how mechanistic discoveries are turned into improving human health.

"We're grateful to Virginia Tech for recognizing the importance of this program, and we are particularly grateful to Dr. Bassaganya-Riera for his generosity in mentoring Biscotte this summer," says Clinton Mathias, assistant professor at Western New England University and director of the AAI High School Teachers Program. "This summer program provides an opportunity not only for the high school teacher to learn about immunology but also to bring the excitement of discovery into the classroom. We see this as an important step toward raising scientific literacy, as well as helping to cultivate the next generation of investigators."

Members are urged to consider nominating a talented high school teacher for the 2013 summer program. To learn more about this program, visit www.aai.org/Education/Summer_Teachers/index.html.

NEW! AAI Trainee Poster Award

AAI Launches New Award for Trainee Members for IMMUNOLOGY 2013™

Adding to its long-term support for trainees whose abstracts are selected for oral presentation at the AAI annual meeting, AAI will now offer travel awards for poster-only presentations. The awards will recognize trainee members whose first author abstracts are found to be exceptional by the meeting abstract programming chairs. Selection will be based on the originality and significance of the research being presented.

"These awards highlight the exciting science in the poster sessions, which represent the most interactive portion of the meeting," said Mary Litzinger, AAI staff administrator of the awards program.

"AAI has long supported trainees with travel awards for the AAI annual meeting and other immunology conferences, awarding 300–400 grants annually, and we anticipate this new award to add significantly to that number. We're excited to be offering this in time for our centennial meeting in Honolulu next May," Litzinger said.

In an effort to support early-career scientists' opportunities to present their science, AAI has supported trainees' poster-only presentations at a number of other immunology meetings during the past year. IMMUNOLOGY 2013™ will provide the first occasion for the poster-only awards at an AAI annual meeting.

For more information about this award, visit www.aai.org/Awards/Travel/index.html.

Introductory Course Scores Another Success in Philadelphia

The 2012 AAI Introductory Course in Immunology extended the success this course has enjoyed since 2003 at its University of Pennsylvania venue in Philadelphia. Attendees from seven countries outside the United States were among the 184 registrants at the course, held July 14–19 under the direction of Christopher A. Hunter, in his third turn as director or co-director, and Terri Laufer, continuing her role in organizing and leading the course since 2006.

Designed for students new to the discipline of immunology or those seeking more information to complement general biology or science training, the intensive two-part AAI Intro Course is taught by world-renowned immunologists providing a comprehensive overview of the basics of immunology.

The lineup of scientists participating as 2012 course faculty, along with the topics they covered, appears at www.aai.org/Education/Courses/Intro/Schedule.html. Course participants remarked on how informative and entertaining the lecturers were. "All of the presentations were superior in quality," said one attendee. "Now, I just need to revisit them through my course materials and notes until it all sinks in!" Mary Litzinger, AAI manager of educational and career development programs, furthered, "The lecturers truly conveyed the excitement of immunology to the students. From the lectures they heard and the one-on-one discussions they were able to enjoy with speakers, students told me they were inspired by the lecturers' enthusiasm and passion for the field and for teaching."

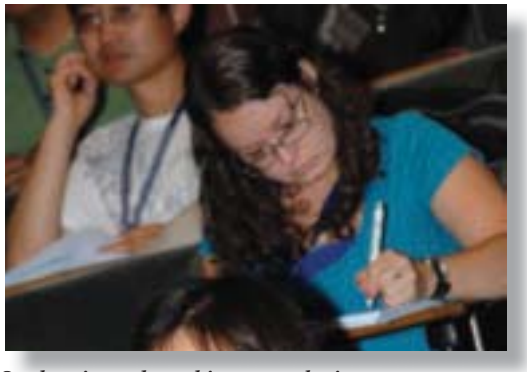
Overseas attendees at this year's course included representatives of Armenia, Belgium, Denmark, Gambia, Kenya, Nigeria, and South Korea. Among them were three IUIS Scholars, recipients of support from AAI and the International Union of Immunological Societies to attend the AAI course.

Two attendees were MARC Scholars, recipients of awards from the NIGMS-funded Minority Access to Research Careers program in support of under-represented minority scientists.

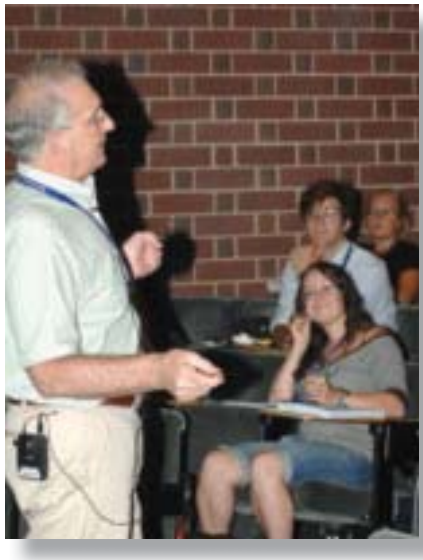
This year's Intro Course attendees also included an AAI Undergraduate Science Faculty Program participant along with five AAI High School Teachers Program participants.

Details on the 2013 AAI Introductory Course in Immunology will be published via the AAI web site in February 2013.

Students engaged in discussion with Laurence Eisenlohr (far right) following his lecture on antigen processing and presentation



Student intently making notes during a course lecture



Michael Cancro poised to throw candy for a correct answer from the crowd during his presentation on B cell homeostasis, activation, and memory formation

AAI Executive Director Michele Hogan (far left) and AAI Manager of Educational and Career Development Programs Mary Litzinger (far right) with participants from the AAI High School Teachers Summer Research Program (L-R) Nichole Kellerman, Judy Birschbach, Heidi Anderson, Stephen Biscotte, Amanda Smith

AAI Executive Director Michele Hogan (second from left) with IUIS awardees (L-R) Armen Sanosyan, Fatoumatta Darboe, Caroline Amolo Ogwang

Course directors Christopher Hunter (far left) and Terri Laufer (far right) with MARC awardees (L-R) Jacqueline Jones-Triche, Cecelia C. Yates-Binder

AAI Manager of Educational and Career Development Programs Mary Litzinger (left) and AAI Executive Director Michele Hogan (right) with AAI Undergraduate Science Faculty Program participant Rong Lucy He

Attendees enjoying a break between sessions

Students attentively following a course presentation

Advanced Course Draws Strong International Participation

The AAI Advanced Course in Immunology drew a near-record 242 registrants from around the United States and 18 foreign countries at its new venue, the Seaport World Trade Center in Boston, July 29–August 3. The Advanced Course was moved to the Boston waterfront this year following five successful years on the campus of the University of Minnesota, Minneapolis.

The 2012 course was co-directed by Leslie J. Berg, University of Massachusetts Medical School professor and AAI past president, and Mary Litzinger, AAI manager of educational and career development programs. This was Berg's first turn at the helm of the Advanced Course, after having been instrumental in founding the AAI Introductory Course in 2002.

The Seaport Hotel and World Trade Center on the scenic Boston waterfront

Wayne Yokoyama (left) answering questions following his lecture on NK cells

Shiv Pillai presenting on B cell development

The AAI Advanced Course in Immunology is an intensive course directed toward advanced trainees and scientists who wish to expand or update their understanding of the field. Leading experts present recent advances in the biology of the immune system and address its role in health and disease.

"This course has a long history of outstanding faculty, and the roster of lecturers at the new venue in Boston again included world-renowned immunologists," said Litzinger. (See www.AAI.org/Education/Courses/Advanced/Schedule.html.)

"Students appreciated the weighty scientific information conveyed during the lectures as well as the lighter moments, including Marc Jenkins's interjection of 'lecture bingo' and certain amusing 'sports' enjoyed in Minnesota, as well as Shiv Pillai's performance of his legendary 'lymphocyte rap.' The spectacular setting on the Boston Harbor was an additional delight," Litzinger said.

International attendees traveled from Armenia, Australia, Belgium, Canada, Denmark, Ethiopia, Germany, Italy, Malaysia, New Zealand, Nigeria, Saudi Arabia, South Africa, South Korea, Spain, Sweden, Uganda, and the United Kingdom to join U.S. scientists for the course. Among the 60 attendees from abroad were three IUIS Scholars, recipients of support from AAI and the International Union of Immunological Societies to attend the AAI course.

Attending also were the following six MARC Scholars, recipients of awards from the NIGMS-funded Minority Access to Research Careers program in support of underrepresented minority scientists:

- Monica Campo-Patino, M.D., M.P.H., University of Washington
- Jorge Luis Medina, University of Texas Health Science Center at San Antonio
- Elane Reyes, Case Western Reserve University
- Marisel Sanchez, Cedars Sinai Medical Center
- Shirdi E. Schmiel, University of Minnesota
- John M. Stewart, Loma Linda University

Details on the 2013 AAI Advanced Course in Immunology will be published via the AAI web site in February 2013.

Course lecturers Wayne Yokoyama (far left) and Marc Jenkins (far right) and AAI Executive Director Michele Hogan (second from left) with IUIS awardees (L-R) Tamrat Abebe Zeleke, Gayane Manukyan, Hannah Ajoge

Course director Leslie Berg (far right) chatting with students at the opening night reception

Students enjoying a lighter moment during Marc Jenkins's presentation on the anatomy of the immune response

Betty Diamond (right) answering a student question following her presentation on autoimmunity

Art Weiss (right) in a one-on-one discussion with an attendee following his lecture on signaling from antigen receptors

Attendees gathered at the opening night reception

Shannon Turley lecturing on dendritic cells

AAI is continuing in 2012 an outreach program begun last year to support early career scientists' opportunities to present their science, as well as to acknowledge the contributions of AAI members who serve as volunteer chairs or coordinators of immunology meetings. AAI provided support to two additional meetings this spring.

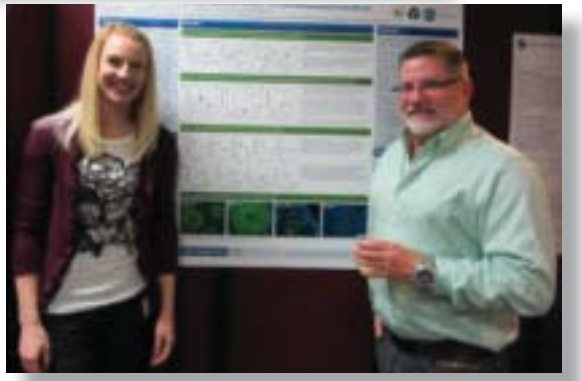
AAI Supports Early Career Investigators at the 16th Annual Woods Hole Immunoparasitology Conference

The Woods Hole Immuno-parasitology Conference (WHIP), held April 22–25, 2012, at the Marine Biological Laboratory in Massachusetts, enjoyed support from AAI for the first time this year in the form of travel awards for ten talented early career investigators participating in the event.

Photo: Tom Kleindinst

Marine Biological Laboratory in Massachusetts

While WHIP features two plenary talks and one honorary lecture, the remaining 65 talks are given by graduate students and post-docs presenting exciting unpublished work covering many topics—among them, the immune response to intestinal helminths, *Schistosoma mansoni*, *Toxoplasma gondii*, *Leishmania* species, African trypanosomes, and malaria. The keynote speakers were Joel Weinstock, AAI '83, and Douglas Golenbock, AAI '11. The Honorary Lecture was given by Ed Pearce.



Ashley Talley and Co-Organizer Tom Wynn

Organizers for this year's meeting, Thomas A. Wynn, AAI '95, National Institutes of Health, and Rachel Lawrence, Royal Veterinary College, University of London, introduced a very popular new feature at the meeting: "rapid-fire" oral sessions. The sessions, short five-minute talks followed by three minutes of discussion, provided poster presenters the opportunity to "advertise" the important features of their posters more actively and persuade people to stop by their posters at a later time for a closer look. Many poster presenters were said to have reported the best response ever to their posters.

AAI provided funding for the 10 AAI Young Investigator Awards given to Erika Crosby, AAI '12, David A. Christian, Michelle Favila, Nebiat Gebreselassie, Natasha Girgis, Kristen Kindrachuk, J. Lilue, Ellen Mueller, Audrey Romano, and Jennifer Bohl Stiltz.

The WHIP conference, attended this year by almost 150 scientists, was founded 16 years ago by Alan Sher, AAI '77, National Institutes of Health; Phillip Scott, AAI '84, University of Pennsylvania School of Veterinary Medicine; and Ed Pearce, Washington University. The conference grew out of a robust eight-week course in parasitology given at Woods Hole.

AAI Lends Support to the Initial International Graduate Student Immunology Conference; AAI Graduate Student Member is Co-Chair

AAI supported the first-ever International Graduate Student Immunology Conference (IGSIC), April 27–28, 2012. More than 80 Ph.D. students from 10 countries participated in the conference, held at Harvard University and organized primarily by two Harvard graduate students, Sarah Bettigole, AAI '12, and Semir Beyaz, with significant logistical help from Susan Fahlbeck, the Harvard Immunology Program administrator. In addition to fostering collaboration and networking among members of the next generation of immunologists, the conference provided scientists-in-training with an opportunity for public participation in a scientific meeting. "With only graduate students involved, we hoped the more informal setting would encourage active participation as attendees presented and responded to one another's research," said Bettigole.

Shiv Pillai

Sara Bettigole

Semir Beyaz

Attendees at the first annual IGSIC

Intensive fund-raising by the two co-chairs generated support for the event from 11 different donors, including AAI. To minimize costs and increase networking opportunities, many visiting students were housed with local Harvard and Boston University students. Need-based travel grants were offered, enabling students from Japan, France, Germany, Canada, Turkey, the United Kingdom, Sweden, Botswana, and the Netherlands to join with students from the U.S. in attendance. Thanks to the singular generosity of the Jeffrey Modell Foundation, a longtime benefactor of the Harvard Immunology Program, Sheron Dzoro of the University of Botswana was awarded a comprehensive travel grant to attend.

The conference opened Friday morning with remarks by David Cardozo, associate dean of graduate studies, and by Michael Carroll, AAI '86, head of the Harvard Immunology Program. Twenty-five graduate student talks followed over the next two days, featuring students at all stages of their dissertation work. For the keynote talk at the end of the event, Shiv Pillai, AAI '89, mused about his personal journey growing up through science. By reflecting on his experiences and touching only fleetingly upon his own research, Pillai imparted a number of important considerations regarding how and why to launch a career in academic science.

After the keynote speech, Bettigole and Beyaz presented five IGSIC participants with AAI Young Investigator Awards for their oral and poster presentations. Recipients of AAI Young Investigator Awards were Matthew Woodruff, Harvard University; Jonathan Weiss, NYU School of Medicine; Suman Paul, Uniformed Services University of the Health Sciences; Jennifer Cowan, University of Birmingham; and Fatema Chowdury, University of Texas Southwestern Medical Center.

Given the strongly positive reactions of participants this year, the students plan to hold the conference for at least the next two years. Graduate students at the Centre d'Immunologie de Marseille-Luminy (CIML) have volunteered to organize the 2013 IGSIC.

AAI gratefully acknowledges Sarah Bettigole for her assistance in preparing this article.

Meet 2012–2013 AAI Committees and Chairs

AAI recognizes the leadership of the 2012–2013 committee members listed below. The years in which members' current terms expire appear in parentheses. A list of AAI committee members who completed terms in 2012 appears on p. 31.

Awards Committee

Ann Marshak-Rothstein

Ann Marshak-Rothstein, Ph.D. (13), Chair
Professor, Department of Medicine, Section of Rheumatology, University of Massachusetts Medical School

Gary A. Koretzky, M.D., Ph.D. (13)
Professor, Department of Medicine University of Pennsylvania

David W. Scott, Ph.D. (13)
Professor and Vice Chair for Research, Department of Medicine Uniformed Services University of Health Sciences

Shiv Pillai, Ph.D. (14)
Professor, MGH Cancer Center, Harvard Medical School

Yoji Shimizu, Ph.D. (14)
Professor, Department of Laboratory Medicine and Pathology University of Minnesota Medical School

Cheong-Hee Chang, Ph.D. (15)
Professor, Department of Microbiology and Immunology, University of Michigan Medical School

Clinical Immunology Committee

Robert Modlin

Robert L. Modlin, M.D. (13), Chair
Professor, Department of Medicine/Division of Dermatology, David Geffen School of Medicine at UCLA

Robert A. Colbert, M.D., Ph.D. (13)
Senior Investigator, NIH/NIAMS

Charlotte Cunningham-Rundles, M.D., Ph.D. (13)
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Jane H. Buckner, M.D. (14)
Director, Translational Research Program, Benaroya Research Institute

Marcus R. Clark, M.D. (14)
Professor, Department of Medicine and Pathology, University of Chicago

Marsha Wills-Karp, Ph.D. (14)
Professor and Chair, Department of Environmental Health Sciences Johns Hopkins Bloomberg School of Public Health

Gyorgy Abel, M.D., Ph.D. (15)
Director, Immunology and Molecular Diagnostics, Department of Laboratory Medicine, Lahey Clinic

Clara Abraham, M.D. (15)
Associate Professor, Department of Medicine, Yale University

Ignacio Sanz, M.D. (15)
Professor of Medicine and Pediatrics, Emory University School of Medicine

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Assistant Professor, Loma Linda University

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Chief Scientific Officer, Keystone Symposia on Molecular and Cellular Biology

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Director, Interdepartmental Immunobiology Center, Northwestern University Medical School

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Associate Professor, Division of Rheumatology, University of Pennsylvania

Andrea J. Tenner, Ph.D. (15)
Professor, Department of Molecular Biology and Biochemistry
University of California at Irvine

M. Michele Hogan, Ph.D. (*Ex officio*)
Executive Director, The American Association of Immunologists

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Chair, AAI Publications Committee
Senior Investigator, NIH-NICHD

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University of Texas M.D. Anderson Cancer Center

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University of Louisville School of Medicine

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Chandrashekhar Pasare, Ph.D. (15)
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University of Texas Southwestern Medical School

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University of Pittsburgh School of Medicine

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Assistant Professor, University of Maryland School of Medicine

José R. Conejo-García, M.D., Ph.D. (13)
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Cherié L. Butts, Ph.D. (14)
Associate Director, Immunology Research, Biogen Idec

Thandi M. Onami, Ph.D. (14)
Immunologist, Program Officer, HHS/NIH/NIAID/DAIDS/VRP/VCRB

Jonathan A. Deane, Ph.D. (15)
Research Investigator II, GNF/Novartis

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Associate Professor, Oncology Institute, Loyola University

Santiago Partida-Sánchez, Ph.D. (15)
Associate Professor, Department of Pediatrics, Nationwide Children's Hospital

Nominating Committee


Pamela Ohashi

Pamela S. Ohashi, Ph.D. (13), Chair
Senior Scientist/Professor, Ontario Cancer Institute/University of Toronto

Michael Croft, Ph.D. (13)
Professor and Division Head, Immune Regulation
La Jolla Institute for Allergy and Immunology

JoAnne L. Flynn, Ph.D. (13)
Professor, Department of Microbiology and Molecular Genetics, University of Pittsburgh School of Medicine

Richard M. Locksley, M.D. (13)
HHMI, Professor, Department of Medicine, University of California San Francisco School of Medicine

Mark J. Shlomchik, M.D., Ph.D. (13)
Professor of Laboratory Medicine and Immunobiology
Yale School of Medicine

Program Committee


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Leo Lefrançois, Ph.D. (15), Chair
Professor and Chair, Department of Immunology
University of Connecticut Health Center

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Professor, Center for Comparative Medicine
University of California, Davis

Andrea M. Cooper, Ph.D. (13)
Member, Trudeau Institute, Inc.

David Masopust, Ph.D. (13)
Associate Professor, Center for Immunology, University of Minnesota

David L. Wiest, Ph.D. (13)
Professor, Immune Cell Development and Host Defense Program
Fox Chase Cancer Center

Gregory M. Barton, Ph.D. (14)
Associate Professor, Department of Molecular and Cell Biology
Division of Immunology and Pathology, University of California, Berkeley

J. Rodrigo Mora, M.D., Ph.D. (14)
Assistant Professor, Massachusetts General Hospital, Harvard Medical School

Mercedes Rincón, Ph.D. (14)
Professor, Department of Medicine, University of Vermont

Barbara Vilen, Ph.D. (14)
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University of North Carolina at Chapel Hill

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Shane Crotty, Ph.D. (15)
Associate Professor, La Jolla Institute for Allergy and Immunology

Erika L. Pearce, Ph.D. (15)
Assistant Professor, Department of Pathology and Immunology
Washington University School of Medicine

Public Affairs (Committee On)


Elizabeth Kovacs

Elizabeth J. Kovacs, Ph.D. (13), Chair
Professor and Vice-Chair of Research, Department of Surgery, Loyola University Stritch School of Medicine

Avery August, Ph.D. (13)
Professor and Chair, Department of Microbiology and Immunology, Cornell University

Michael F. Princiotta, Ph.D. (13)
Assistant Professor, Department of Microbiology and Immunology SUNY Upstate Medical University

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Lori R. Covey, Ph.D. (14)
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Beth A. Garvy, Ph.D. (14)
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Susanna F. Greer, Ph.D. (15)
Associate Professor and Associate Chair, Department of Biology Georgia State University

Clifford V. Harding, M.D., Ph.D. (15)
Professor and Chair, Department of Pathology Case Western Reserve University

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M. Michele Hogan, Ph.D. (*Ex officio*)
Executive Director, The American Association of Immunologists

Publications Committee


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M. Michele Hogan, Ph.D. (*Ex officio*)
Executive Director, The American Association of Immunologists

Status of Women (Committee On The)


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Scheherazade Sadegh-Nasseri, Ph.D. (13), Chair
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Victoria Love, Ph.D. (14)
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Virginia Shapiro, Ph.D. (15)
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Veterinary Immunology Committee


Simon Barratt-Boyes

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Elizabeth G. Davis, D.V.M., Ph.D. (14)
Associate Professor/Section Head, Kansas State University

Michael P. Murtaugh, Ph.D. (14)
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Tracey L. Papenfuss, D.V.M., Ph.D. (15)
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Thank You

AAI gratefully acknowledges the service of the following committee members who completed terms this year.

Awards Committee

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HHMI Investigator and Professor, Washington University School of Medicine

Anne Davidson, MB, B.S.
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Dean, Drexel University College of Arts and Sciences

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Veterinary Immunology Committee

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Christopher M. Walker, Ph.D.
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GRANT AND AWARD DEADLINES

October 1—Roche Organ Transplantation Research Foundation (ROTRF) Project Grant

Description
The Roche Organ Transplantation Research Foundation (ROTRF) is a legally independent, medical research charity that awards operating grants for research projects in organ transplantation to established members of academic staff at universities, transplant centers, and research institutes. The ROTRF is committed to funding a broad range of transplantation-related research, with the ultimate aim of improving long-term outcomes for people with organ transplants. Our priority is to support clinically oriented research projects, such as observational clinical studies or studies that use human transplant samples for laboratory examinations. To be considered for a grant award, applications should have demonstrable applicability to human organ transplantation.

Prize/Award
Grant awards vary by project.

Eligibility
Investigators working in areas such as antibody-mediated rejection and antibody formation, graft pathology during rejection events, histocompatibility, infectious agents, and disease phenotypes in transplant patients are encouraged to apply. Trustees will also consider funding studies that investigate transplant populations, ethics, organ preservation and allocation, and health care delivery. Furthermore, the ROTRF will welcome research in new emerging technologies that examine the pathogenesis of human disease states in organ transplantation. Only established faculty members of academic staff at universities, transplant centers, and research institutes are eligible as Principal Applicants.

Application
Application may be initiated via submission of a letter of intent to www.rotrf.org/LetterOfIntent/LetterOfIntent.idc. Each applicant may submit only one letter of intent for each funding cycle. Every ROTRF grantee (including co-investigator) may hold only one ROTRF grant at a time. The submission deadline is October 1st of each, even if this date falls on a weekend or on a public holiday. The database will be closed at midnight between the 1st and 2nd of October of each year (applicant's local time).

Details
www.rotrf.org

Contact
+41- 41-377-5335, Fax +41-41-377-5334; admin@rotrf.org

October 1—U.S.-India Bilateral Collaborative Research Grants on Human Immune Phenotyping and Infectious Disease

Description
The purpose of this new opportunity is to provide support to promote U.S.-India collaborative research on human immunophenotyping studies, in the context of infectious disease and vaccine development, and in collaboration with investigators of the NIAID Human Immunology Project Consortium (HIPC). The intent of this program is to foster, stimulate, or expand research describing human immune phenotypes after vaccination or infection by supporting collaborative projects between Indian researchers and current recipients of HIPC (www.immuneprofiling.org) grant funds.

Prize/Award
Based on the scientific merit of the applications as evaluated by peer review in both countries, and on the availability of funds, HIPC may award up to $1,000,000 in FY 2013 in connection with this funding opportunity. The Government of India has agreed to support the Indian investigators.

Eligibility
All projects MUST include at least one HIPC investigator from the U.S. and one investigator from India. In addition, non-HIPC investigators are invited to contact a potential HIPC Project Leader or Indian Project Leader as collaborators on the application; thus, multiple investigators may partner with the HIPC Project Leader or the Indian Project Leader within any one application, and within the budget constraints. Complete eligibility requirements are available at www.immuneprofiling.org/hipc/page/showPage?pg=funding.

Application
While not required, letters of intent to apply to the program are strongly encouraged and are due by October 1, 2012. Applications must be submitted by the principal investigator of an HIPC grant, for a project proposed by an investigator within that HIPC Center. Applications must be submitted through the HIPC website at www.immuneprofiling.org and must be received by 5:00 PM U.S. Eastern

Standard Time on November 1, 2012. Each HIPC Center may submit up to two different applications.

Details
www.immuneprofiling.org/hipc/page/showPage?pg=funding

Contact
Helen Quill, (301) 435-4416; hquill@niaid.nih.gov or Halonna Kelly, (301) 435-4412; keyllyhr@mail.nih.gov

October 9—NIH Director's Pioneer Award Program

Description
This program complements NIH's traditional, investigator-initiated grant programs by supporting individual scientists of exceptional creativity who propose pioneering and possibly transformative approaches to addressing major biomedical or behavioral challenges that have the potential to produce an unusually high impact on a broad area of biomedical or behavioral research. To be considered pioneering, the proposed research must reflect substantially different scientific directions from those already being pursued in the investigator's research program or elsewhere. Awardees must commit the major portion (at least 51%) of their research efforts to the Pioneer Award project.

Prize/Award
Awards will be for $500,000 direct costs each year for five years, plus applicable Facilities and Administrative (F&A) costs to be determined at the time of award. The number of awards is contingent upon NIH appropriations, the submission of a sufficient number of meritorious applications, and the availability of funds. NIH intends to commit approximately $6,000,000 for at least 7 awards in fiscal year 2013.

Eligibility
Any individual(s) with the skills, knowledge, and resources necessary to carry out the proposed research as the Program Director/Principal Investigator (PD/PI) is invited to work with his/her organization to develop an application for support. Individuals from under-represented racial and ethnic groups as well as individuals with disabilities are always encouraged to apply for NIH support. Only single PD/PI applications are allowed. Applications with multiple PD(s)/PI(s) will not be accepted.

Application
Applications must be submitted by October 9, 2012.

Details
http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-12-015.html

Contact
- Application instructions/process info: (301) 435-0714; GrantsInfo@nih.gov
- Scientific/research info: Ravi Basavappa, (301) 594-8190; newinnovator@nih.gov
- Peer review info: Rajiv Kumar, Ph.D., (301) 435-1212; kumarra@csr.nih.gov
- Financial/grants management info: Michael G. Morse, (301) 435-5446; morsem@mail.nih.gov

October 17—Creative and Novel Ideas in HIV Research Program

Description
The Creative and Novel Ideas in HIV Research (CNIHR) grant program offers funding to scientists without prior experience in HIV cure research, as well as those currently conducting HIV research in areas other than cure-related research, in support of innovative approaches with the potential to accelerate the search for an HIV cure.

Prize/Award
Ten to twelve research grants worth up to $ 150,000 per year for one to two years will be awarded at the 7th IAS (International AIDS Society) Conference on HIV Pathogenesis, Treatment and Prevention (IAS 2013) in Kuala Lumpur, Malaysia, from June 30 to July 3, 2013. Awardees may use funds for salary, technical support, laboratory supplies, equipment, or travel to a scientific conference or other training activity for the specific purpose of carrying out their CNIHR project.

Eligibility
Early-stage investigators who have completed their doctoral degrees (e.g., M.D., Ph.D.) or medical residencies within the past 10 years and who have a faculty position at an academic institution or a comparable position at a research institution are eligible.

Application
Applications may be submitted online at www.cnihr.org and must be received by October 17, 2012.

Continued on next page

Details
www.cnihr.org

Contact
researchpromotion@iasociety.org

October 17—NIH Director's New Innovator Award Program

Description
This award supports early-stage investigators of exceptional creativity who propose bold and highly innovative new research approaches that have the potential to produce a major impact on broad, important problems in biomedical and behavioral research.

Prize/Award
Awards will be for up to $300,000 in direct costs each year for five years, plus applicable Facilities and Administrative (F&A) costs to be determined at the time of award. The number of awards is contingent upon NIH appropriations, the submission of a sufficient number of meritorious applications, and the availability of funds. NIH intends to commit approximately $80 million for approximately 33 awards in FY 2013.

Eligibility
Eligible applicants must have received their most recent doctoral degree within the last 10 years, and must be considered a "new investigator" (an investigator who has never received an R01 or and R01-equivalent NIH grant).

Application
Applications must be submitted by October 17, 2012.

Details
http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-12-016.html#_Section_II._Award_1

Contacts
- Application instructions/process info: (301) 435-0714; GrantsInfo@nih.gov
- Scientific/research info: Ravi Basavappa, (301) 594-8190; newinnovator@nih.gov
- Peer review info: Rajiv Kumar, Ph.D., (301) 435-1212; kumarra@csr.nih.gov
- Financial/grants management info: Michael G. Morse, (301) 435-5446; morsem@mail.nih.gov

October 31—Alan T. Waterman Award (National Science Foundation)

Description
The Alan T. Waterman Award is the highest honor awarded by the National Science Foundation. Since 1975, when Congress established the award to honor the agency's first director, the annual award recognizes an outstanding young researcher in any field of science or engineering supported by the National Science Foundation. The award honors investigators who have demonstrated exceptional individual achievement in scientific or engineering research.

Prize/Award
Along with the award medal, the awardee receives a grant of $1,000,000 over a five-year period for scientific research or advanced study in the mathematical, physical, biological, engineering, social, or other sciences at the institution of the recipient's choice.

Eligibility
Candidates must be U.S. citizens or permanent residents, 35 years of age or younger, or not more than seven years beyond receipt of their Ph.D. degree by December 31 of the year in which they are nominated. Candidates should have demonstrated exceptional individual achievements in scientific or engineering research of sufficient quality to place them at the forefront of their peers. Criteria include originality, innovation, and significant impact on their field.

Nomination
Nominations will be accepted through October 31, 2012. Nomination packages consist of a nomination and four letters of reference furnished via online submission. Complete nomination, eligibility, and selection criteria details are available at www.nsf.gov/od/waterman/nsf_watermanaward_2013callfornominations_120625.pdf. Institutions may nominate an unlimited number of individuals. To nominate a candidate, please go to www.fastlane.nsf.gov/honawards/.

Details
www.nsf.gov/od/waterman/waterman.jsp

Contact
Ann Ferrante, (703) 292-4520; ferrante@nsf.gov

November 1—Vannevar Bush Award (National Science Foundation)

Description

The National Science Board of the National Science Foundation invites nominations for the 2013 Vannevar Bush Award. The award honors truly exceptional lifelong leaders in science and technology who have made substantial contributions to the nation's welfare through public service activities in science, technology, and public policy. The award was established in 1980 in the memory of Vannevar Bush, science advisor to President Franklin Roosevelt during World War II, who helped establish federal funding for science and engineering as a national priority during peacetime and was behind the creation of the National Science Foundation.

Prize/Award

Awardees receive the Vannevar Bush Award Medal during a black-tie dinner and ceremony at the U.S. Department of State in Washington, D.C.

Eligibility

Candidates must be U.S. citizens who have demonstrated outstanding leadership and accomplishment in meeting at least two of the following criteria:

- Distinguished himself/herself through public service activities in science and technology
- Pioneered the exploration, charting, and settlement of new frontiers in science, technology, education, and public service
- Demonstrated leadership and creativity that have inspired others to distinguished careers in science and technology
- Contributed to the welfare of the nation and mankind through activities in science and technology
- Demonstrated leadership and creativity that have helped mold the history of advancements in the nation's science, technology, and education

Nomination

Nominations and letters of reference must be received by November 1, 2012, at 11:59 p.m. local time (nominator's local time). Nominations may be submitted online through FastLane at www.fastlane.nsf.gov/honawards or by email or postal mail to Ann Ferrante, National Science Board Office, National Science Foundation, 4201 Wilson Boulevard, Suite 1225, Arlington, VA 22230; aferrant@nsf.gov.

Details

www.nsf.gov/nsb/awards/bush.jsp

Contact

Mayra N. Montrose, Program Manager,
(703) 292-8040; waterman@nsf.gov

Meetings and Events Calendar

Mark Your Calendar for These Important Dates!

2012

September 25–28, 2012
Alternatives to Antibiotics (ATA)
Paris, France
www.alternativestoantibiotics.org

October 3–6, 2012
Biennial Meeting of the European Society for Immunodeficiencies (ESID 2012)
Florence, Italy
www2.kenes.com/esid2012/Pages/Home.aspx

October 4–8, 2012
Transcriptional Regulation: Chromatin and RNA Polymerase II
Snowbird, Utah
www.asbmb.org/ASBMBMeetings/SpecialSymposia/symposia.aspx?mid=24

October 9–11, 2012
La Jolla Immunology Conference
La Jolla, California
www.liai.org

October 11–14, 2012
Post Translational Modifications: Detection and Physiological Role
Tahoe City, California
www.asbmb.org/ASBMBMeetings/SpecialSymposia/symposia.aspx?mid=25

October 12–16, 2012
ASBMR 34th Annual Meeting
Minneapolis, Minnesota
www.asbmr.org

October 21–24, 2012
15th Annual Upstate New York Immunology Conference
Bolton Landing, New York
www.amc.edu/NYIC/index.html

October 28–30, 2012
45th Annual Meeting of the Society for Leukocyte Biology, "Inflammation in Innate Immunity and Adaptive Immune Mechanisms"
Grand Wailea, Maui, Hawaii
www.leukocytebiology.org

November 4–9, 2012
ThymUS 2012 International Conference
Sunny Isles Beach, Florida
www.thymus-conference.org

November 6–10, 2012
American Society of Human Genetics
San Francisco, California
Contact: paulinem@ashg.org

November 11–15, 2012
American Society of Tropical Medicine and Hygiene (ASTMH) 61st Annual Meeting
Atlanta, Georgia
www.astmh.org/Home.htm

November 16–19, 2012
AIC 2012: 41st Annual Autumn Immunology Conference
Chicago, Illinois
http://autumnimmunology.org

November 17–18, 2012
New England Immunology Conference
Woods Hole, Massachusetts
http://neic.uchc.edu

November 28–December 1, 2012
6th Asian Congress of Pediatric Infectious Diseases (ACPID 2012)
Colombo, Sri Lanka
www.acpid2012.org

December 2–4, 2012
2012 CRWAD Meeting: Conference of Research Workers in Animal Diseases/ American Association of Veterinary Immunologists
Chicago, Illinois
www.cvmbs.colostate.edu/mip/crwad/

December 15–19, 2012
2012 American Society for Cell Biology Annual Meeting
San Francisco, California
www.ascb.org

2013

January 13–18, 2013
Immunology of Fungal Infections Gordon Research Conference
Galveston, Texas
www.grc.org/programs.aspx?year=2013&program=fungal

January 20–25, 2013
The 2nd NIF (Network of Immunology Frontiers) Winter School on Advanced Immunology
Singapore Country Club, Singapore
http://ifrec-sign-winterschool.org

January 26–29, 2013
52nd Midwinter Conference of Immunologists
Pacific Grove, California
www.midwconfimmunol.org

February 13–17, 2013
2013 BMT Tandem Meeting
Salt Lake City, Utah
www.cibmtr.org/Meetings/Tandem/index.html

April 5–8, 2013
Canadian Society for Immunology 26th Annual Spring Meeting
TELUS Whistler Conference Centre
Whistler, British Columbia, Canada
www.csi–sci.ca

April 20–24, 2013
Experimental Biology (EB) (APS, ASBMB, ASPET, ASIP, ASN, AAA)
Boston, Massachusetts
Contact: eb@faseb.org

May 3–7, 2013
IMMUNOLOGY 2013™
AAI Annual Meeting
Celebrating 100 Years
Honolulu, Hawaii
www.IMMUNOLOGY2013.org

July 7–10, 2013
14th International TNF Conference
Loews Le Concorde
Quebec City, Quebec, Canada
www.tnf2013.com

July 20–24, 2013
The American Society for Virology 32nd Annual Scientific Meeting
Pennsylvania State University
State College, Pennsylvania
www.asv.org

August 22–27, 2013
15th International Congress of Immunology
Milan, Italy
www.ici2013.org

October 4–8, 2013
ASBMR 35th Annual Meeting
Baltimore, Maryland
www.asbmr.org

October 10–13, 2013
13th International Workshop on Langerhans Cells
Royal Tropical Institute
Amsterdam, The Netherlands
www.lc2013.nl/

2014

February 19–23, 2014
2014 BMT Tandem Meeting
Orlando, Florida
www.cibmtr.org/Meetings/Tandem/index.html

April 26–30, 2014
Experimental Biology (EB) (APS, ASPET, ASIP, ASN, AAA, ASBMB)
San Diego, California
Contact: eb@faseb.org

May 2–6, 2014
IMMUNOLOGY 2014™
AAI Annual Meeting
Pittsburgh, Pennsylvania
www.aai.org/Meetings/Future_Meeting.html

May 17–21, 2014
CYTO 2014 (International Society for Advancement of Cytometry)
Ft. Lauderdale, Florida
Contact: rjaseb@faseb.org

June 21–25, 2014
The American Society for Virology 33rd Annual Scientific Meeting
Colorado State University
Fort Collins, Colorado
www.asv.org

September 12–16, 2014
ASBMR 36th Annual Meeting
Houston, Texas
www.asbmr.org

2015

February 11–15, 2015
2015 BMT Tandem Meeting
San Diego, California
www.cibmtr.org/Meetings/Tandem/index.html

March 28–April 1, 2015
Experimental Biology (EB) (APS, ASPET, ASIP, ASN, AAA, ASBMB)
Boston, Massachusetts
Contact: eb@faseb.org

May 8–12, 2015
IMMUNOLOGY 2015™
AAI Annual Meeting
New Orleans, Louisiana
www.aai.org/Meetings/Future_Meeting.html

July 11–15, 2015
The American Society for Virology 34th Annual Scientific Meeting
The University of Western Ontario
London, Ontario, Canada
www.asv.org

October 9–13, 2015
ASBMR 37th Annual Meeting
Seattle, Washington
www.asbmr.org

Scientific Publishing

Dos and Don'ts
for Authors and Reviewers

Collected articles based upon presentations given at a special session of the AAI Publications Committee at IMMUNOLOGY 2009™ in Seattle, Washington May 10, 2009

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2013

Hawaii Tourism Authority (HTA)/Tor Johnson

IMMUNOLOGY 2013™
May 3–7
Honolulu, Hawaii
AAI Centennial Meeting

2014

IMMUNOLOGY 2014™
May 2–6
Pittsburgh, Pennsylvania

2015

IMMUNOLOGY 2015™
May 8–12
New Orleans, Louisiana