



AAI NEWSLETTER

The American Association of Immunologists

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Just Off the Press:
The 1922 Catalogue.
Gladly Sent to Physicians.

Adrenalin The Emergency Remedy

TWENTY years ago the chemical formula for Adrenalin was worked out by our research chemists. That discovery alone assured the renaissance of endocrinology—this time as a serious scientific study.

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JUNE/JULY 2016



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North American Anti-Snake-Bite Serum offers protection against the bites of the Rattlesnake, Crotalus, and Moccasin.

Words & Pictures

Ads in The JI: The First 50 Years

Diphtheria Antitoxin Then and Now

When the Mulford Laboratories made the first antitoxin that was produced commercially in this country, in 1894, the doses were necessarily very large and bulky, and one ounce glass stoppered vials were used as containers.



Early form of Antitoxin Container

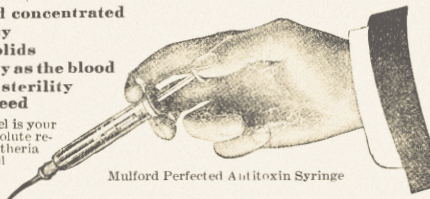
NOW, as a result of research and long experience, we are able to produce refined and concentrated antitoxin, testing as high as 3000 units and more per Cc. Furthermore, rigid check tests for potency and sterility guarantee the strength and purity of the product.

The Mulford Laboratories were the first to introduce a piston syringe container for antitoxin, and the present perfected syringe gives you a most convenient sterile container, ready for immediate use.

Mulford Diphtheria Antitoxin

Purified and concentrated
High potency
Low total solids
Same density as the blood
Dosage and sterility guaranteed

The Mulford label is your guarantee of absolute reliability on Diphtheria Antitoxin and all other Biological Products.

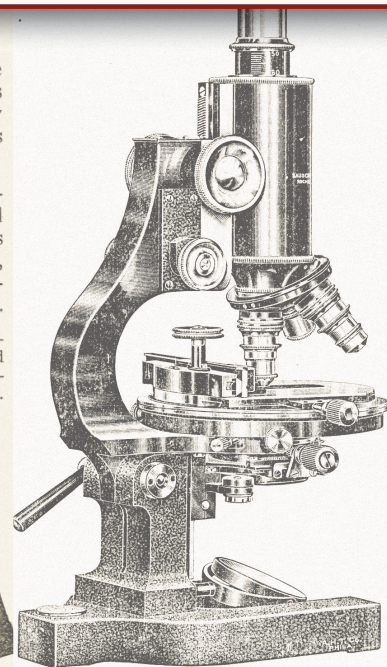


Mulford Perfected Antitoxin Syringe

Ask for new booklet on Diphtheria.



MULFORD LABORATORIES, INC., PHILADELPHIA, U.S.A.



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With our large 300 to 400 Compound scopes—we offer a service based upon shipment at fact which has proved value to laboratories, increasing an unexpected for increased equip-

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2016 Introductory Course in Immunology

July 9–14, 2016 • Long Beach Convention Center, Long Beach, California

Director: Juan Carlos Zúñiga-Pflücker, Ph.D.

University of Toronto and Sunnybrook Research Institute

Don't miss the most comprehensive introduction to immunology available!

This intensive two-part course, taught by world-renowned immunologists, provides a comprehensive overview of the basics of immunology. This course is for students new to the discipline or those seeking more information to complement general biology or science training. **Part I (July 9–11)** is a detailed introduction to the basic principles of immunology and is suitable for students with a general biology background. **Part II (July 12–14)** is a clinically oriented lecture series focusing on specialty areas.

Parts I and II may be taken independently at the discretion of the student.

Faculty

Juan Carlos Zúñiga-Pflücker, *University of Toronto and Sunnybrook Research Institute*
Introduction to the Immune System

Lewis L. Lanier, *University of California, San Francisco*
Innate Immunity: Introduction to the Cells

Deborah A. Fraser, *California State University Long Beach*
Complement

Helen S. Goodridge, *Cedars-Sinai Medical Center*
Innate Immunity: Introduction to Pattern Recognition and Intracellular Signaling

Wendy L. Havran, *The Scripps Research Institute*
Introduction to Adaptive Immunity

Nilabh Shastri, *University of California, Berkeley*
Antigen Processing and Presentation

Juan Carlos Zúñiga-Pflücker, *University of Toronto and Sunnybrook Research Institute*
MHC Restriction and Thymic Selection

David Nemazee, *The Scripps Research Institute*
B Cell Development and Maturation

Shannon J. Turley, *Genentech, Inc.*
Dendritic Cells: The Bridge Between Innate and Adaptive Immunity

Michael Croft, *La Jolla Institute for Allergy and Immunology*
Effector T Cell Differentiation and Response

Shane Crotty, *La Jolla Institute for Allergy and Immunology*
B Cell Activation and Humoral Immunity

Arthur Weiss, *University of California, San Francisco*
Signaling in the Immune System

Wenjun Ouyang, *Amgen*
Cytokines

Stephen M. Hedrick, *University of California, San Diego*
Host-Pathogen Co-evolution in Human Beings: the Red Queen and the Grim Reaper

David C. Parker, *Oregon Health and Science University*
T and B Cell Tolerance

Matthias G. von Herrath, *La Jolla Institute for Allergy and Immunology*
Autoimmunity

Olivia M. Martinez, *Stanford University School of Medicine*
Transplantation

Peter B. Ernst, *University of California, San Diego*
Mucosal Immunology

Marion Pepper, *University of Washington*
Type 2 Immunity

Linda A. Sherman, *The Scripps Research Institute*
Tumor Immunology

Robert L. Modlin, *University of California, Los Angeles David Geffen School of Medicine*
Immunity to Bacterial Pathogens

Steven M. Varga, *University of Iowa*
Immunity to Viruses

Martin Prlic, *Fred Hutchinson Cancer Research Center*
Immunologic Memory

Nicole Frahm, *Fred Hutchinson Cancer Research Center*
Vaccination

Jennifer M. Puck, *University of California, San Francisco*
Genetic Approaches to Immune-Mediated Diseases

Andrew C. Chan, *Genentech, Inc.*
Bench to Bedside to Bench: Current Issues in Immunology

For complete course details and registration, visit: www.aai.org/Education/Courses

For assistance, contact (301) 634-7178 or meetings@aai.org. Overseas applicants are advised to apply early for visas; for details, visit www.aai.org/Education/Courses/Visa.html.



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www.aai.org/

About/Departments-Staff

2016 AAI Election Results

AAI congratulates the following members on their election for terms commencing July 1, 2016, and extends a sincere thanks to all candidates in this year's balloting. Twenty-six percent of the AAI voting membership participated in this election and we thank them for investing in their profession and in the mission of AAI.

COUNCIL

President (2016-2017)

Arlene H. Sharpe, M.D., Ph.D. (AAI '96)

George Fabyan Professor of Comparative Pathology, Department of Microbiology and Immunobiology - Harvard Medical School and Brigham and Women's Hospital

Vice-President (2016-2017)

Wayne M. Yokoyama, M.D. (AAI '84)

HHMI Investigator; Sam J. and Audrey Loew Levin Professor of Medicine; Professor of Pathology and Immunology - Washington University School of Medicine

Councillor (2016-2020)

Gary A. Koretzky, M.D., Ph.D. (AAI '92)

Dean - Weill Cornell Graduate School; Vice Dean for Research and Frank H.T. Rhodes Distinguished Professor in Cardiovascular Biology and Genetics - Weill Cornell Medicine

COMMITTEES

Awards Committee (2016-2019)

Cynthia J. Guidos, Ph.D. (AAI '91)

Senior Scientist, Program in Developmental and Stem Cell Biology - Hospital for Sick Children Research Institute, Toronto

Finance Committee (2016-2019)

Frances E. Lund, Ph.D. (AAI '90)

Charles H. McCauley Professor and Chair, Department of Microbiology - University of Alabama at Birmingham

Nominating Committee (2016-2017)

Kate A. Fitzgerald, Ph.D. (AAI '06) - Chair

Professor of Medicine; Director, Program in Innate Immunity; Worcester Foundation Chair in Biomedical Sciences - University of Massachusetts Medical School

Albert S. Bendelac, M.D., Ph.D. (AAI '95)

A. N. Pritzker Professor, Department of Pathology - University of Chicago

Michael C. Carroll, Ph.D. (AAI '86)

Professor, Department of Pediatrics - Harvard Medical School; Senior Investigator, Program in Cellular and Molecular Medicine - Boston Children's Hospital

Akiko Iwasaki, Ph.D. (AAI '00)

HHMI Investigator, Professor, Department of Immunobiology and Department of Molecular, Cellular, and Developmental Biology, Yale School of Medicine

Andrey S. Shaw, M.D. (AAI '91)

Senior Staff Scientist - Genentech

Program Committee (2016-2019)

Julie Magarian Blander, Ph.D. (AAI '09)

Associate Professor, Department of Medicine and Department of Microbiology; Director of the Graduate Multidisciplinary Training Area in Immunology - Graduate School of Biomedical Sciences, Immunology Institute, and The Tisch Cancer Institute, Icahn School of Medicine at Mount Sinai

Dorian B. McGavern, Ph.D. (AAI '05)

Senior Investigator, National Institute of Neurological Disorders and Stroke - National Institutes of Health

Publications Committee (2016-2020)

Gwendalyn J. Randolph, Ph.D. (AAI '01)

Professor and Division of Immunobiology Chief, Department of Pathology and Immunology - Washington University School of Medicine

FOCUS ON PUBLIC AFFAIRS

AAI Public Policy Fellows Visit Capitol Hill

The 2015–2016 AAI Public Policy Fellows traveled to Washington, D.C., in March to participate in the fifth annual AAI Public Policy Fellows Program Capitol Hill Day. The nine AAI fellows who were able to attend were joined by AAI Committee on Public Affairs Chair Clifford Harding, M.D., Ph.D.; AAI Advocacy Programs Subcommittee Chair Lisa Borghesi, Ph.D.; and AAI Director of Public Policy and Government Affairs Lauren Gross, J.D., visiting 21 Senate and House offices.

As is the practice each year, the AAI fellows participated in a working dinner the night before Capitol Hill Day. National Institute of Allergy and Infectious Diseases (NIAID) Principal Deputy Director Hugh Auchincloss, M.D. (AAI '83), was the guest speaker for the fifth consecutive year. Auchincloss provided a behind-the-scenes perspective on NIH and NIAID and led a lively discussion with the fellows. A second presentation was given by Gross, who focused on preparing the fellows for their visits to Capitol Hill.



Each of the AAI fellows visited two or three offices of his or her own congressional delegation, as well as those of other fellows. During their visits, the fellows expressed gratitude for the \$2 billion increase that Congress provided to NIH for fiscal year (FY) 2016 but noted that NIH needs predictable and sustained funding increases to restore years of lost purchasing power and to enable the agency to support more of today's extraordinary biomedical research opportunities. The fellows urged legislators to support a funding level of at least \$35 billion for NIH in FY 2017.



Pictured (L-R): Lisa Borghesi, Nicole Perry Lieberman, Senator Patty Murray (D-WA), Meghan Marré, and Jessica Werner



Pictured (L-R): Jean Nepomuscene Manirarora, Hugh Auchincloss, and Jason Gigley



Pictured (L-R): Nicole Perry Lieberman; William Cunningham, staffer for Senator Cory Booker (D-NJ); Nichol Holodick; Joshua Vieth; and Cliff Harding



Pictured (L-R): Jason Gigley, David Larson, Senator Mazie Hirono (D-HI), and Nicole Perry Lieberman



Pictured (L-R): Lisa Borghesi; Sara Mabry, staffer for Senator Bob Casey (D-PA); Erica Stone; Tullia Bruno; and Meghan Marré

Senate Committees Approve \$2 Billion Funding Increase for NIH for FY 2017

On June 9, the Senate Appropriations Committee approved a bill by a vote of 29-1 that includes a \$2 billion increase for NIH for fiscal year (FY) 2017, which would bring the total NIH budget to approximately \$34.3 billion. The bill, drafted by Senate Labor, Health and Human Services, Education, and Related Agencies (Labor-HHS) Appropriations Subcommittee Chair Roy Blunt (R-MO) and Ranking Member Patty Murray (D-WA), and approved by that subcommittee on June 7, is the first bipartisan Senate Labor-HHS appropriations bill to emerge in seven years. Though \$34.3 billion is slightly below the AAI funding recommendation for NIH of “at least \$35 billion,” AAI is very pleased by this substantial increase, particularly because it builds on the \$2 billion increase received in FY 2016.

This funding boost for NIH is especially notable because the subcommittee was provided with a smaller total allocation (\$161.9 billion) for FY 2017, \$270 million below last year’s allocation, making an increased allocation to NIH less likely. At press time, details regarding which agencies and programs were cut in order to provide increases for NIH and other priorities were not available. However, a bill summary (<http://www.appropriations.senate.gov/news/majority/fy2017-labor-hhs-and-education-appropriations-bill-cleared-for-senate-consideration>) provided by the Senate Appropriations Committee does include some details regarding how the NIH increase would be allocated:

- \$300 million for the Precision Medicine Initiative, an increase of \$100 million;
- \$1.39 billion for Alzheimer’s disease research, an increase of \$400 million;
- \$250 million, an increase of \$100 million, for the BRAIN Initiative to map the human brain;
- \$333.4 million, an increase of \$12.5 million, for the Institutional Development Award;
- \$463 million, an increase of \$50 million, to Combat Antibiotic Resistant Bacteria;
- \$12.6 million for the Gabriella Miller Kids First Research Act;

- Increases to every Institute and Center to continue investments in innovative research that will advance fundamental knowledge and speed the development of new therapies, diagnostics, and preventive measures to improve the health of all Americans.

The House Labor-HHS Appropriations Subcommittee is expected to consider its funding bill for FY 2017 in late June.

AAI Submits Testimony to Key Congressional Subcommittees

AAI recently submitted testimony to the Senate and House Appropriations Subcommittees on Labor, Health and Human Services, Education, and Related Agencies. Speaking on behalf of AAI, Committee on Public Affairs (CPA) Chair Clifford Harding, M.D., Ph.D., recommended “an appropriation of at least \$35 billion for NIH for FY 2017 to fund new and ongoing research, stabilize and strengthen the biomedical research enterprise, and encourage the world’s most talented scientists, trainees, and students to pursue biomedical research careers in the United States.”

The AAI testimony (see http://aai.org/Public_Affairs/Action_Center/AAI_Capitol_Hill.html) highlights several recent immunological advances, including new immunotherapies that treat “hard-to-treat cancers, like non-small cell lung cancer.” It also describes the threat of emerging infectious diseases like Ebola virus and Zika virus and states that “[i]t is essential, therefore, that NIH continually fund basic research on pathogens and the host response to pathogens, as well as potential medical interventions, in order to be able to prevent and respond to both current and future epidemics.”

In addition to expressing deep gratitude to both subcommittees and Congress for providing a \$2 billion funding boost for NIH for FY 2016, Harding cautioned that “NIH’s purchasing power remains more than 19 percent below what it was in FY 2003” and urged that more be done to restore the NIH budget.

Senate HELP Committee Considers Bills to Increase Funding for NIH, Relax Government Travel Restrictions

The Senate Health, Education, Labor, and Pensions (HELP) Committee has held three markups to debate, amend, and vote on nineteen bills that could become part of its broader “innovation” package, a companion

measure to the 21st Century Cures Act that was passed by the House last fall. Some key issues remain unresolved, however, including the use of mandatory funding to supplement the discretionary funding that supports NIH. In response to Democratic committee members, who have warned that they will block full Senate consideration of the bill if it does not include new mandatory funding for NIH and FDA, HELP Committee Chair Lamar Alexander (R-TN) is working with Ranking Member Patty Murray (D-WA) to include one-time, mandatory funding for a few specific NIH programs, including the National Cancer Moonshot and the Precision Medicine Initiative. Alexander has said that he will not attempt to bring the bill to the Senate floor if there is no agreement on mandatory funding.

If a bill is passed by the Senate, members from both chambers will then work together to draft compromise legislation.

Two of the more relevant bills brought before the Senate HELP Committee during its three recent markups are described in more detail below.

National Biomedical Research Act

The National Biomedical Research Act was introduced by Senator Elizabeth Warren (D-MA) in early March and is cosponsored by the other nine HELP Committee Democrats. Warren and her Democratic committee colleagues are fighting to ensure that supplemental mandatory funding for NIH is included in the Senate innovation bill, just as it was in the House’s 21st Century Cures bill.

The bill would create a new \$5 billion per year Biomedical Innovation Fund to supplement regular discretionary appropriations for both NIH and FDA; funds would be allocated in proportion to the size of the agencies. The Fund could only be utilized in a given fiscal year if regular NIH and FDA appropriations are greater than the amount provided in the previous year.

Biomedical Innovation Fund dollars would have to be used to support the following initiatives, activities, and other priorities:

- The National Cancer Moonshot
- The Precision Medicine Initiative
- The Brain Research through Advancing Innovation Neurotechnologies (BRAIN) Initiative
- Disruptive innovation (“breakthrough research on diseases with unmet medical needs or for which current treatments are limited, inadequate, or burdensome”)

- Addressing burdensome diseases
- Early career scientists
- Improving diversity
- Regulatory science
- Developing and reviewing new medical products

The National Biomedical Research Act was offered as an amendment, and then withdrawn, at the March 9 and April 6 HELP Committee markups, due to a lack of Republican support for the bill. Alexander has pledged to continue working with Warren and others on the issue of mandatory funding.

FDA and NIH Workforce Authorities Modernization Act

On April 6, the Senate HELP Committee passed by voice vote a bill authored by Alexander and Murray that would “attract top talent during this exciting time in science” at NIH and FDA. Among its provisions, the bill contains language that would make it easier for some government scientists to attend scientific meetings and conferences: scientific meetings attended by Department of Health and Human Services employees (including those at NIH, FDA, and the Centers for Disease Control and Prevention) “shall no longer be considered conferences for the purposes of complying with Federal reporting requirements contained in annual appropriations Acts.” Further, scientific meetings would no longer be considered conferences for the purposes of complying with any other travel restrictions contained in annual appropriations bills or in the Office of Management and Budget (OMB) Memorandum M-12-12, a document that has led to significant travel restrictions in recent years.

The bill also aims to alleviate administrative burden by exempting from the Paperwork Reduction Act all NIH research that relies on data collection from individuals. Under current law, agencies must receive clearance from OMB before requesting most types of information from the public.

NIH Reiterates Commitment to Basic Research

Science recently published a letter to the editor from NIH Director Francis Collins, M.D., Ph.D., and 39 other NIH leaders reaffirming NIH’s commitment to basic scientific research and announcing a change to its application instructions (see <http://science.sciencemag.org/content/351/6280/1405.1.full>). The

letter states that NIH has revised its application instructions “so that the Public Health Relevance statement reflects the NIH mission and ... [a] commitment to support a robust, diverse research portfolio, including the pursuit of basic biological knowledge.”

NIH Deputy Director for Extramural Research Michael Lauer, M.D., shared some additional details in a recent blog post (see <https://nexus.od.nih.gov/all/2016/03/25/nihs-commitment-to-basic-science/>). According to Lauer, the Public Health Relevance statement instructions have been changed to clarify that applicants must describe how their research “may have short-term or long-term contributions to human health.”

Lauer’s blog post also features a chart to demonstrate that NIH has maintained a commitment to using at least one-half of its annual budget to support basic research. The *Science* letter does, however, state that NIH is “particularly concerned that misperceptions about NIH’s priorities and interests may be causing investigators to submit fewer basic research applications.” The Collins et al. letter cites a 2014 analysis conducted by the National Institute of Neurological Disorders and Stroke (NINDS) that shows a significant decline in the number of basic research applications submitted to NINDS between 1997 and 2012.

National Cancer Moonshot Rollout Continues

Blue Ribbon Panel Includes Seven AAI Members

The NCI has made several recent announcements regarding the National Cancer Moonshot initiative, including the establishment of a Blue Ribbon Panel of experts and a call for cancer research ideas from the scientific community. The Moonshot initiative, which was officially launched on January 15, 2016, is led by Vice President Joe Biden, who also chairs the White House Cancer Moonshot Task Force that will focus on optimizing federal investments, providing incentives, patient engagement, and collaborating with non-government entities.

The NCI Blue Ribbon Panel is comprised of experts who “will inform the scientific direction and goals at NCI of Vice President Joe Biden’s National Cancer Moonshot Initiative.” The panel includes seven AAI members: Co-chair Elizabeth Jaffe, M.D. (AAI ’97); Co-chair Dinah Singer, Ph.D. (AAI ’86);

FOCUS ON PUBLIC AFFAIRS *(Continued)*

James Allison, Ph.D. (AAI '78); Jeffrey Bluestone, Ph.D. (AAI '82); Mikael Dolsten, M.D., Ph.D. (AAI '96); Laurie Glimcher, M.D. (AAI '83); and Augusto Ochoa, M.D. (AAI '02).

NCI is also in the process of collecting research ideas for the Moonshot initiative from the scientific community. The ideas can be submitted in one of eight categories, including "Cancer Immunology and Prevention," "Enhanced Data Sharing," and "Other Exceptional Opportunities." Those who would like to submit research ideas may do so by July 1 through the National Cancer Moonshot initiative website (see <http://www.cancer.gov/research/key-initiatives/moonshot-cancer-initiative>).

A recent article published in *The New England Journal of Medicine* written by NCI Acting Director Douglas Lowy, M.D., and NIH Director Francis Collins, M.D., Ph.D., explains the scientific justification for the Moonshot initiative (see <http://www.nejm.org/doi/full/10.1056/NEJMp1600894>). A critical piece of their justification focuses on the

promise of immunotherapy: "[m]eanwhile, after a decades-long struggle, strategies for spurring the immune system to attack cancer cells have begun to achieve dramatic successes. Some such immunotherapies, including checkpoint inhibitors and chimeric antigen receptor T-cell therapies, have been shown to induce remissions or even cures in people with treatment-resistant forms of melanoma, leukemia, and lymphoma, as well as late-stage mesothelioma and ovarian, lung, kidney, and triple-negative breast cancers. However, many solid tumors fail to respond well to these approaches, and initially positive responses are not always sustained. There is still much work to do."

To fund the launch, NCI redirected \$195 million in cancer research funding to the Moonshot in FY 2016; for FY 2017, President Obama has requested an additional \$755 million to ramp up the initiative.

AAI Career Advisory Board

Starting your first lab? Facing new and puzzling issues? If so, you probably wish to turn to a more senior scientist for guidance—but perhaps not one at your own institution. The AAI Career Advisory Board (CAB) is tailored specifically for you.

The CAB is a referral service to match early faculty who submit requests for guidance on specific career issues with more senior PIs having experience and insight in those areas, excluding members of your own faculty. You may also specify individuals not to be contacted on your behalf.

Eligibility: Although the CAB is sponsored by the Committee on the Status of Women, it is open to all early-faculty AAI members, both men and women.

Advisors: A pool of senior scientists—men and women—are volunteering to be "on call." Topics include recruiting, handling personnel issues, timing for first grant submissions, building networks, teaching, balancing family and work, serving on NIH study sections, and more.



Visit www.aai.org/CAB.html to submit a request.

Members in the News

Diane Griffin Named Finland Awardee, Elected to AAP



Diane Griffin

Diane E. Griffin, M.D., Ph.D., AAI '75, has been honored as the 2016 recipient of the Maxwell Finland Award for Scientific Achievement. The Finland Award, presented annually by the National Foundation for Infectious Diseases, honors scientists who have made outstanding contributions to the understanding of infectious diseases and public health.

In addition, Griffin was recently elected to the American Association of Physicians (AAP). Election to the AAP denotes excellence in the pursuit of medical knowledge and advancement through experimentation and discovery of basic and clinical science and their application to clinical medicine.

Griffin is a university distinguished service professor in the W. Harry Feinstone Department of Molecular Microbiology and Immunology at the Johns Hopkins Bloomberg School of Public Health and professor of medicine and neurology at the Johns Hopkins University (JHU) School of Medicine.

Griffin has contributed a vast body of work to the understanding of host immune responses to viral infection. Her early studies examining antibody control of Sindbis virus, a neurotropic alphavirus that causes encephalitis in mice, launched a lifelong career researching immune responses to neuroinvasive viruses, including measles, Sindbis, and influenza.

Griffin's research has touched on nearly every aspect of the viral immune response, from identifying B cell and T cell viral epitopes to cataloging host genetic susceptibility factors that alter antiviral immunity. The understanding of the different facets of viral immunity has bolstered one of her ongoing research efforts to develop a more efficacious measles vaccine. With the use of a variety of vaccine design platforms and delivery methods, Griffin's lab has worked to discern the vaccine components required to induce long-term immunity to measles in children under nine months of age. This represents an important initiative that could benefit millions of children without access to regular medical care in developing countries.

Griffin's studies examining measles infection in developing countries led her to study the interplay between HIV and measles virus coinfection. Her lab discovered that coinfection with the measles virus suppresses HIV viral

replication (yet vaccination of HIV-infected children with the measles vaccine failed to induce lasting immunity).

Griffin's current work includes defining immune responses to measles infection and vaccination in greater detail, while also studying the neuropathology and neurological complications associated with neurotropic virus infection. Griffin's expertise in neuroinvasive viruses has positioned her to provide guidance for Zika virus research priorities, including as a member of the Global Virus Network's Zika Task Force.

Griffin is a member of the Institute of Medicine (IOM) and serves on the IOM Council; she is a member of the National Academy of Sciences (for which she currently serves as vice president) and of the American Academy of Microbiology, where she has served as a Board of Governors member. Her additional career honors awards include: FASEB Excellence in Science Award; Gilman Scholar, JHU; Wallace Sterling Lifetime Alumni Achievement Award, Stanford University; Rudolf Virchow Medal, University of Wurzburg; International Society for NeuroVirology Pioneer Award; Maryland Women's Hall of Fame; fellow, American Academy for the Advancement of Science; Javits Neuroscience Investigator Award, National Institute of Neurological Disorders and Stroke, National Institutes of Health (NIH); and Alumni Achievement Award, Augustana College. She has presented numerous named and invited scientific lectures at institutions and meetings throughout the United States and overseas.

Griffin has served on multiple NIH study sections and review panels, as well as numerous scientific advisory panels for institutions, including: U.S. Food and Drug Administration; IOM; National Foundation for Infectious Diseases; National Research Council; National Multiple Sclerosis Society; National Board of Medical Examiners; The Institute for Genomic Research; Koshland Museum; Howard Hughes Medical Institute (HHMI); Burroughs Wellcome Fund; De Duve Institute (Belgium); Alberta (Canada) Heritage Foundation for Medical Research; Sanofi Pasteur Global Infectious Disease External Advisory Board; Center for Studying of Emerging Disease (Israel); Institute of Molecular Biology (Taiwan); U.S.-Japan Cooperative Medical Science Program; Israeli Vaccine Research Initiative; Global Virus Network; World Health Organization; Aktiv-Dry; MedImmune; Merck; Novartis Vaccines and Diagnostics; and Wyeth/Elan/Pfizer.

Griffin is a past president of the American Society for Microbiology, the Association of Medical School Microbiology and Immunology Chairs, and the American Society for Virology. She is the former editor of the *Journal of Virology*, and her current and past editorial appointments include service for *Proceedings of the National Academy of Sciences USA*, *Archives of Virology*, *Current Opinion in*

Members in the News *(continued)*

Virology, Intervirology, Journal of NeuroVirology, mBio, Microbial Pathogenesis, Science, Virology, and Virus Research. She is a past editor of *Fields Virology*, a primary reference book for virology.

A graduate of Augustana College, Griffin received her M.D. and Ph.D. degrees from Stanford University, where she also completed her medical internship and residency. After undertaking additional postdoctoral training as a virology fellow at the JHU School of Medicine, she joined its faculty as an assistant professor in 1973. Griffin was appointed an associate professor in 1979 and a full professor in 1986; from 1975 to 1982, she served as an HHMI investigator. She served as department chair (1994–2014) and is a past director of the Johns Hopkins Malaria Research Institute.

Warren Leonard, Carl Nathan Elected to American Academy of Arts and Sciences

Warren J. Leonard, M.D., AAI '86, and **Carl F. Nathan, M.D., AAI '76**, have been elected as members of the American Academy of Arts and Sciences (AAAS) for their achievements in select AAAS section categories: Medical Sciences, Clinical Medicine, and Public Health (Leonard) and Cellular & Developmental Biology, Microbiology, and Immunology (Nathan).

Election to AAAS recognizes the intellectual leadership and expertise members bring to AAAS studies and publications across wide-ranging disciplines and professions that include mathematics, physical and biological sciences, medicine, social sciences and humanities, business, government, public affairs, and the arts.



Warren Leonard

Warren J. Leonard, M.D., AAI '86

NIH Distinguished Investigator; Chief, Laboratory of Molecular Immunology; and Director, Immunology Center, National Heart, Lung, and Blood Institute (NHLBI), National Institutes of Health (NIH)

Dr. Leonard's research focuses on understanding the biology, molecular mechanisms, and regulation

of cytokines, particularly interleukins (ILs), that signal through the common gamma chain and on determining how cytokines affect immune function. He has made numerous contributions to the field of cytokine biology, delineating

the methods by which cytokines signal and influence the nature of effector and tolerogenic immune responses. His early groundbreaking studies as a fellow involved cloning the human IL-2 receptor (IL-2R). This led to his lab's discovery that the IL-2R gamma chain, or common gamma chain, is shared amongst several cytokines. His lab was the first to clone the IL-21R and has since shown its importance in several disease models, including cancer and autoimmune diseases, such as lupus, uveitis, and type 1 diabetes. Leonard's research has also advanced the understanding of primary immunodeficiencies, demonstrating that underlying IL-2R gamma mutations are linked to X-linked severe combined immunodeficiency and that other immunodeficiencies are caused by gene mutations in Janus-activated kinase 3 (JAK3) and IL-7R. His current studies focus on the complex interplay between cytokines and immune cells during normal and pathogenic immune responses and also on advanced large-scale analyses—such as next-generation sequencing—to investigate sources of unidentified immunodeficiencies.

Leonard was the 2003 recipient of the AAI-Huang Foundation Meritorious Career Award. He has served as a major symposium chair at the AAI annual meeting, as an associate editor for *The Journal of Immunology*, and as AAI representative to the FASEB Summer Research Conferences Committee. Leonard has held a variety of review panel appointments, including: NHLBI Genomics Core Oversight Committee; councilor, NIH Assembly of Scientists; ad hoc member, project grant study sections, National Institute of Diabetes and Digestive and Kidney Diseases and National Institute of Allergy and Infectious Diseases (NIAID), NIH; contributing member, Faculty of 1000; NIH Senior Leadership Program; multiple board, officer, and committee appointments, Foundation for Advanced Education in the Sciences; publications chair, International Cytokine Society; Advisory Committee member, U.S. Food and Drug Administration (FDA); and co-organizer, inaugural meeting of the International Cytokine and Interferon Society (ICIS). He holds editorial board appointments with *International Immunology*, *Immunity*, and *Cytokine* and has held past such appointments with the *Journal of Biomedical Science*, *Journal of Biological Chemistry*, *Lymphokine and Cytokine Research*, *Archives of Biochemistry and Biophysics*, *The New Biologist*, and *Molecular Immunology*.

A member of the National Academy of Sciences and the Institute of Medicine (renamed National Academy of Medicine, 2015), Leonard recently received the NHLBI Orloff Innovations Award (twice) and the Federal Laboratory Consortium for Technology Transfer Mid-Atlantic Regional Award. His additional career honors include: NHLBI Outstanding Translational Science Award; Honorary Lifetime Membership Award, ICIS; keynote speaker, Federation of European Biochemical Societies 2nd Special

Meeting on JAK/STAT Signaling: Model Systems and Beyond, Nottingham, UK; NHLBI Orloff Science Award (multiple); visiting professor, Australasian Society for Immunology; NIH Director's Award; NHLBI Mentoring Award; NIH Award of Merit (multiple); keynote speaker, Brazilian Society for Immunology/Brazilian Clinical Immunology meeting; keynote speaker, 28th Annual Mid-Atlantic Immunobiology Meeting; Outstanding Service Award, FDA Center for Biologics Evaluation and Research; fellow, American Association for the Advancement of Science; member, American Association of Physicians; Outstanding Investigator Award, American Federation for Clinical Research Foundation; Pfizer Visiting Professor of Rheumatology and Immunology, Duke University School of Medicine; Special Recognition Award, U.S. Public Health Service; lecture in honor of Multipurpose Arthritis Center dedication, University of Michigan; member, American Society for Clinical Investigation; and Award to Trainees in Clinical Research, American Federation for Clinical Research.

A mathematics graduate (*magna cum laude*) of Princeton University, Leonard received his M.D. from Stanford University. After completing his medical internship at George Washington University Hospital and residency at Barnes Hospital in St. Louis, Missouri, he held successive appointments as a research associate at Washington University School of Medicine in St. Louis; senior staff fellow in the Metabolism Branch of the National Cancer Institute (NCI), NIH; and senior staff fellow in the Cell Biology and Metabolism Branch, Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), NIH. In 1987, he was appointed assistant clinical professor of medicine at the Uniformed Services University of the Health Sciences and medical officer (research) with tenure in the Cell Biology and Metabolism Branch at NICHD. He held subsequent medical officer appointments in the Section on Pulmonary and Molecular Immunology, Office of the Director, Intramural Research Program, NHLBI, and in the Laboratory of Molecular Immunology, NHLBI. Leonard has served as chief of the Laboratory of Molecular Immunology since 1994 and as NHLBI Immunology Center director since 2004. He was appointed an NIH senior investigator in 2007 and an NIH distinguished investigator in 2008; he also serves as an adjunct professor of pathology and laboratory medicine at the University of Pennsylvania.



Carl Nathan

**Carl F. Nathan, M.D.,
AAI '76**

*Professor and Department of
Microbiology and Immunology
Chair, Weill Cornell Medical
College, Cornell University*

Dr. Nathan's lab explores how macrophages kill, how killing is regulated, and why killing is not always effective. A medical-biologic perspective guides the lab's effort to understand inflammation and host defense at genetic and biochemical

levels, testing key hypotheses of experimental interventions in cell culture, mice, and sometimes clinical trials. His work—over four decades—on cytokines, the respiratory burst, and inducible nitric oxide synthase, has evolved into current projects involving macrophage interactions with *Mycobacterium tuberculosis* (Mtb), which includes studies of the enzymes of Mtb that help the organism resist sterilization by the immune system. Nathan's lab continues to study the immunological and biochemical basis of Mtb's persistence, as well as searching for novel antimicrobial drugs effective against Mtb.

Nathan is a past associate editor for *The Journal of Immunology*. He serves on the editorial board of *Molecular Medicine* and as an editor for the *Journal of Experimental Medicine*; he has held past editorial board appointments for *Proceedings of the National Academy of Sciences USA*, *Science Signaling*, *Shock*, *Molecular Medicine*, *Nitric Oxide Biology and Chemistry*, *Cytokine and Growth Factor Reviews*, *Arthritis and Rheumatism*, *Blood*, *Journal of Clinical Investigation*, *Journal of Immunological Methods*, *Cellular Immunology*, and *Journal of Experimental Medicine*.

A member of the National Academy of Sciences and the Institute of Medicine (renamed National Academy of Medicine, 2015), Nathan has received additional career honors, including: fellow, American Academy of Microbiology; Ellison Medical Foundation Senior Scholar in Global Infectious Diseases; Robert Koch Prize; Leukemia Society of America Scholar; Irma T. Hirsch Trust Research Career Award; Rita Allen Foundation Scholar; Society for Leukocyte Biology Maria T. Bonazinga Award; and Surgical Infection Society Altmeier Lecturer.

Nathan has served on multiple NIH study sections (including Surgery, Anesthesiology, and Trauma; Opportunistic Infections; Centers for AIDS Research; Pathology) and NIH review panels [including Centers and Regional Centers Biodefense Grants; NIAID Director's Advisory Panel on Counterbioterrorism; Center for Scientific Review Study

Members in the News *(continued)*

Sections Boundary Team; NHLBI tuberculosis (TB)/AIDS Request for Application (RFA) Advisory Workshop; National Institute of General Medical Sciences National Advisory Council; NIAID Board of Scientific Counselors; NCI Tumor Immunology Committee (chair) and Immunotherapy Committee; NCI and NIAID site-visit committees]. Nathan's additional advisory panel appointments include service on behalf of the Cancer Research Institute; Leap Therapeutics; Global Alliance for TB Drug Development; Pfizer; Lurie Prize (Foundation for NIH); The Royal Society; European Union Framework Seven Program on TB Drug Discovery; Food Allergy Initiative; Tres Cantos Open Lab Foundation; World Health Organization Advisory Committee on Immunology of Tuberculosis; Health Impact Fund; Memorial Sloan-Kettering Cancer Center; Lilly TB Drug Discovery Initiative; FasterCures (Milken Institute); GlaxoSmithKline; Genome Canada; Society for Leukocyte Biology; BIO Ventures for Global Health; Sandler Program in Asthma Research; Rita Allen Foundation; Health Care Ventures; Arginox, Inc.; Critical Care Therapeutics; Millennium Pharmaceuticals; Aventis-Millennium Pharmaceuticals Joint Venture for Inflammation Research; Cambridge University Wellcome Trust Centre for the Study of Molecular Mechanisms in Disease; Burke Institute Dementia Research Service; US-Japan Immunology Board; Gordon

Research Conferences Council; Cancer Research Institute; Merck Research Laboratories; American Society for Clinical Investigation; Reticuloendothelial Society; and National Cancer Cytology Center.

An honors graduate of Harvard University in East Asian history, Nathan received his M.D. (immunology concentration, with honors) from Harvard Medical School. He completed his medical internship and medical residency at Massachusetts General Hospital and later served as a clinical associate in the Immunology Branch at NCI, NIH. He subsequently served as a fellow in medical oncology at Yale-New Haven Hospital before joining the faculty of The Rockefeller University as assistant and, later, associate professor. Nathan joined the Cornell University faculty in 1986 as Stanton Griffis Distinguished Professor of Medicine. He has served as Department of Microbiology and Immunology chair and co-chair of the Graduate Program in Immunology and Microbial Pathogenesis (formerly Graduate Program in Immunology) since 1998 and is also a member of the Graduate Program in Molecular Biology. He previously served as professor, senior associate dean for research, and acting dean at Cornell University Medical College and retains an adjunct professor appointment with The Rockefeller University.

Future AAI Annual Meetings

Mark Your Calendar for the Premier Annual Immunology Event!

2017



IMMUNOLOGY 2017™
May 12–16
Washington, D.C.

2018



IMMUNOLOGY 2018™
May 4–8
Austin, Texas

2019



IMMUNOLOGY 2019™
May 9–13
San Diego, California

Robert B. Nussenblatt, M.D., M.P.H. (AAI '82)

June 10, 1948 – April 17, 2016

National Eye Institute laboratory chief Robert B. Nussenblatt, M.D., M.P.H., an AAI member since 1982, died in April at age 67. The following remembrance appears courtesy of the National Eye Institute, part of NIH.

NEI Remembers Robert “Bob” Nussenblatt (1948-2016)

Robert Nussenblatt, M.D., chief of the Laboratory of Immunology at the National Eye Institute (NEI), died on April 17 at age 67. Dr. Nussenblatt began working at NEI, part of the National Institutes of Health in Bethesda, Maryland, in 1977, and proved himself to be a tireless scientist, research leader, mentor, clinician, and patient advocate.

Dr. Nussenblatt was a world-renowned expert on inflammatory diseases affecting the eye, including uveitis. He literally wrote the book on this subject—*Uveitis: Fundamentals and Clinical Practice*—now in its fourth edition. He authored several other books and more than 600 articles in scientific journals.

Many patients with ocular inflammatory disease endure long-term treatment with medications that have unwanted and sometimes intolerable side effects. Dr. Nussenblatt dedicated his entire career to understanding the mechanisms of uveitis and developing better treatment approaches. He was a pioneer in utilizing immunomodulatory treatment in uveitis. One of his major accomplishments was demonstrating that cyclosporine was effective as a steroid-sparing agent, which has since become the standard of care for non-infectious uveitis. He also led research to test the biologic agent daclizumab as a treatment for uveitis and helped pave the way for its use in treating some types of multiple sclerosis.

His leadership roles at NIH included serving as clinical director and scientific director of NEI. He was also a senior advisor to the deputy director of the NIH Intramural Research Program, associate director



Robert “Bob” Nussenblatt

(clinical director) of the NIH Center for Human Immunology, and acting scientific director of the National Center for Complementary and Alternative Medicine (NCCAM) from 2004-2012.

Dr. Nussenblatt recognized the importance of team science, and pursued it at an international scale. He led the UNITE (Universities and National Institutes Transatlantic Eye Consortium for Human Ocular Immunology) consortium, which partners NEI with sites in the United Kingdom, South China, and Hong Kong in the study of ocular inflammatory diseases. He had honorary degrees from around the world.

Dr. Nussenblatt’s commitment to his patients was remarkable. He always put patients first, never hesitating to drop everything to tend to their needs. He routinely exceeded the expectations of patients and families. He always made time to talk and had an uncanny ability to remember almost anyone he met, even acquaintances he had not seen for decades.

By training other clinicians, Dr. Nussenblatt influenced patient care worldwide. Over the span of 39 years at the NIH, Dr. Nussenblatt mentored more than 67 fellows who are now practicing around the globe. These include Dr. Daniel Martin, ophthalmology chair at the Cleveland Clinic, and ophthalmology chairs at the Walter Reed Medical Center and institutions in Paris, Nepal, and Japan. He received the American Academy of Ophthalmology’s Life Achievement Honor Award in 2011. Additionally, he had spoken at more than 66 invited lectureships around the world. He was recently nominated to become a Distinguished NIH Investigator.

Dr. Nussenblatt is survived by his wife, Rosine Nussenblatt, children Dr. Veronique (Jed Weiner), Valerie (Felipe Collares-Chave), and Eric (Eli Harel) Nussenblatt, and grandchildren Emilie and Raphael. Memorial contributions may be made to the JWB Jewish Chaplains Council.

2015-2016 Deceased Members

AAI extends condolences to the families, friends, and colleagues of the following members whose deaths were recorded since January 1, 2015.

Michael Bennett, M.D., AAI '75
Dallas, TX
(d. 1/25/15)

Thomas F. Huff, Ph.D., AAI '84
Richmond, VA
(d. 2/1/15)

Raja Fayad, M.D., AAI '04
Columbia, SC
(d. 2/5/15)

Lois B. Epstein, M.D., '72
Belvedere Tiburon, CA
(d. 2/6/15)

Thomas L. Koppenhefer, Ph.D., AAI '88
San Antonio, TX
(d. 2/6/15)

J. Donald Capra, M.D., AAI '70
Oklahoma City, OK
(d. 2/28/15)

Paula M. Pitha-Rowe, Ph.D., AAI '01
Baltimore, MD
(d. 3/5/15)

Michael R. Mardiney, Jr., M.D., AAI '71
Baltimore, MD
(d. 3/28/15)

Michael J. Brunda, Ph.D., AAI '78
Nutley, NJ
(d. 5/8/15)

Abram B. Savitsky, Ph.D., V.M.D., AAI '50
Montclair, NJ
(d. 8/2/15)

William E. Paul, M.D., AAI '67
Bethesda, MD
(d. 9/18/15)

Eckhard R. Podack, M.D., Ph.D., AAI '79
Miami, FL
(d. 10/8/15)

John H. Weis, Ph.D., AAI '87
Salt Lake City, UT
(d. 12/11/15)

Dov H. Pluznik, Ph.D., AAI '82
Bethesda, MD
(d. 1/1/16)

Kerri A. Mowen, Ph.D., AAI '06
La Jolla, CA
(d. 2/14/16)

Thomas W. Jungi, Ph.D., AAI '79
Oberhofen, Switzerland
(d. March 2016)

GRIP

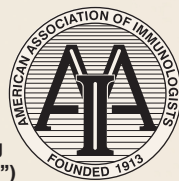
Grant Review for Immunologists Program

Get a GRIP: An AAI program designed to help new investigators prepare their NIH grant proposals

The AAI Grant Review for Immunologists Program (GRIP) offers new principal investigators (PIs) access to established PIs for guidance in preparing grant proposals as they embark on their independent careers. Early-career PIs (assistant professors or equivalents) are invited to submit their grants' "Specific Aims" pages to the GRIP coordinator who, with the assistance of a small volunteer subcommittee, will attempt to match each topic of the proposal with the research experience of an established PI. Matches will be made as quickly as possible to allow participants to meet upcoming NIH grant deadlines. Participation is open only to AAI regular members and is strictly voluntary. The program is not intended to supplant internal mentoring programs at applicants' institutions.

To apply, please send your CV and the grant's "Specific Aims" page to infoaai@aai.org. (please write "GRIP" in the subject line)

To volunteer as a mentor, please send your CV and a brief description of your grant-reviewing experience to infoaai@aai.org. (subject line "GRIP")



Program details at aai.org/Education/GRIP

AAI LOOKS BACK

1916

100 years of *The JI*

2016

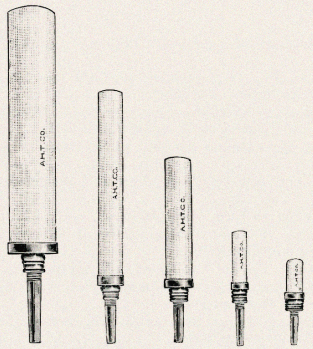
Words & Pictures

Advertising in The Journal of Immunology: The First 50 Years

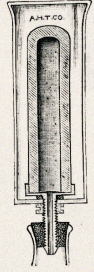
Early editions of *The Journal of Immunology* (*The JI*) with their simple text-based covers paled in comparison with the visually impressive covers of the journal of today. The entire first volume in 1916 contained only a single use of photographic images—a series of five photographs showing kidney lesions resulting from chronic anaphylaxis.¹ All of this changed, of course, with the arrival of the first ads, which drew the reader from text to eye-catching, graphic elements meant to induce purchases. Looking back on decades of ads published in *The JI*, we see that they illustrate a fascinating history of the journal and the field: what advertisers thought would interest early scientists and how ads changed to address the needs of immunology's maturing, diversifying, and expanding discipline.

Ads in the first 50 years of *The JI* fall into four general categories according to their specific appeals or styles. The largest group of ads promoted the tools necessary to perform research, such as lab equipment, research animals, and reagents, with the drugs and other pharmaceutical products comprising a second category. A third type of ad publicized civic engagement campaigns that would be of interest to scientists. A fourth category emerged when journal advertisers began using modern graphic design and advertising techniques to strengthen their message. The following advertisements (Figures 1-4) are examples of each of these categories.

MANDLER DIATOMACEOUS FILTERS FOR BACTERIOLOGICAL WORK



No. 27689. Mandler Diatomaceous Filter Cylinders with Metallic Headpieces



Cross section showing Mandler Diatomaceous Filter attached to glass mantle in correct position for filtering

Mandler Diatomaceous Filters are specially made for the filtering of serums, toxins and other sterile liquids of all sorts. The Infusorial Products Company, of Toledo, have been experimenting since 1914 toward the perfection of diatomaceous earth filters for bacteriological laboratory use in connection with their manufacture of filters for household and manufacturing purposes. With the assistance and cooperation of bacteriologists in the laboratories of several of the largest manufacturers of biological products, U. S. Government Departments, etc., a filtering mass has now been perfected which seems likely to surpass in quality that heretofore used for similar purposes.

The metal caps are of heavy brass nickel plated and provided with a new feature in the way of a special projection fitting inside the tube, which prevents the cap from working back and forth with a tendency to destroy the cement joint. The cementing of the cylinder to the metal cap is a distinct improvement over the method heretofore followed. With the exception of a new size, 8 x 1½ inches, the cylinders offered correspond exactly in size and may be used in the same fittings as the filters of foreign make heretofore widely used for similar purposes.

27689. Filters, Mandler Diatomaceous, cylinders only, with metallic headpieces, with certificate of air pressure test.						
Size, inches.....	10x2	8x1½	8x1	5x1	2½x¾	1¾x¾
Each, net.....	3.50	3.15	3.00	2.50	1.25	1.15
27690. Filters, Mandler Diatomaceous, with glass mantle with circular opening in bottom as shown in illustration, but without flask or other container for filtering.						
Size of cylinder, inches.....	10x2	8x1½	8x1	5x1	2½x¾	1¾x¾
Each, net.....	5.25	4.40	4.25	3.50	2.00	1.65
27691. Glass Mantles only, for Mandler Diatomaceous Filters, such as are included with No. 27690.						
Size, inches.....	14x4	11x2½	5¾x2½	4x1	2½x¾	
Each, net.....	1.75	1.25	1.00	.75	.50	

ARTHUR H. THOMAS COMPANY
IMPORTERS—DEALERS—EXPORTERS
LABORATORY APPARATUS AND REAGENTS
WEST WASHINGTON SQUARE PHILADELPHIA, U.S.A.

Figure 1: Mandler Diatomaceous Filters, 1919
The Journal of Immunology


¹ T. Harris Boughton, "Kidney Lesions in Chronic Anaphylaxis," *The Journal of Immunology* 1, no. 1 (1916):105-18

Tools for Immunology Research

Ads comprising the broadest of the four categories focused on tools of immunological research: equipment, literature (scientific and medical journals and books), research animals, and reagents. Perhaps the finest example in this category is the first advertisement ever to appear in *The JI*. The Arthur H. Thomas Company promoted its Mandler diatomaceous filters (Figure 1) in the first ad ever placed in the journal (December 1916²). It stands as an example of the instructive nature of early advertising for tools used in immunological research. The ad includes a detailed rendering and a technical description of the uses and composition of the filter, as well as pricing. More discursive than most ads today, the description of the filter was written at a college reading level as was appropriate for readers of *The JI*, most of whom were M.D.s in 1916. The advanced level of writing highlights the cooperation between bacteriologists in industry and the U.S. government in perfecting the filter.

The Mandler filter, itself a new product on the market in 1916, was novel also for being designed and built in the United States. At the time, many American manufacturers of laboratory equipment were copying European designs. American production of such equipment arose with the growth of laboratory research in the U.S. prior to the outbreak of the World War I. Arthur H. Thomas Company, founded in 1900 in Philadelphia, was an early supplier of domestic and European laboratory products to the American market. When, in 1914, the company redesigned its catalog with illustrations and detailed

THE JOURNAL OF IMMUNOLOGY 1



Save the Tenth Child

STATISTICAL data show that approximately 10% of all children having Diphtheria die. Early and adequate Antitoxin treatment would save these children. In meeting this grave responsibility are you sure that your little patients are receiving the best Antitoxin obtainable? Do you have a satisfying consciousness of having done for them all that can be done?

The use of Parke, Davis & Company's Antitoxin inspires just that sort of confidence. For a quarter of a century it has been recognized as the standard the world over. It is potent, pure, and concentrated.

Parke, Davis & Company's Antitoxin is produced in a laboratory possessing unsurpassed facilities. Excellence in achievement here dominates all other interests.

"DIPHTHERIA IMMUNIZATION," a reprint, sent on request. Write nearest branch: Detroit, New York, Chicago, Kansas City, Baltimore, New Orleans, St. Louis, Minneapolis, or Seattle.

Parke, Davis & Company

Figure 2: Save the Tenth Child, 1922
The Journal of Immunology

² Research yielded no ads in *The JI* prior to volume 2, issue 1, in December 1916.

descriptions, such as seen in Figure 1, the catalog emerged as the “bible” of the U.S. laboratory research industry. Arthur H. Thomas Company was renamed Thomas Scientific in 1983 and continues to sell equipment and supplies to the scientific community today.

Products of Immunology Research

Some of the largest U.S. pharmaceutical companies of their day advertised their products in *The JI*, including Parke-Davis & Company, H. K. Mulford Company, The Arlington Chemical Company, and Wyeth.³ These and other companies promoted drugs and other pharmaceutical products.

Ads for these pharmaceutical products (for treating diseases and allergies) were present in almost every issue of *The JI* through World War II. These included treatments, antitoxins, and vaccines for maladies such as hay fever, poison ivy, pertussis, tuberculosis, scarlet fever, influenza, and diphtheria.

The “Save the Tenth Child” advertisement (Figure 2) is notable as one of the few that attempted to sell a pharmaceutical product to clinicians through a combination of fact and fear. The ad, which appeared only once in *The JI* (December 1922), called attention to diphtheria, still a deadly disease. In the previous year, there were 206,000 cases, with 15,520 deaths (7.5 percent mortality rate). Even with the availability of diphtheria antitoxins for over two decades and an easy and reliable diagnostic test for the disease (the Schick test), the mortality rate among children at the time was typically higher, up to 20 percent.

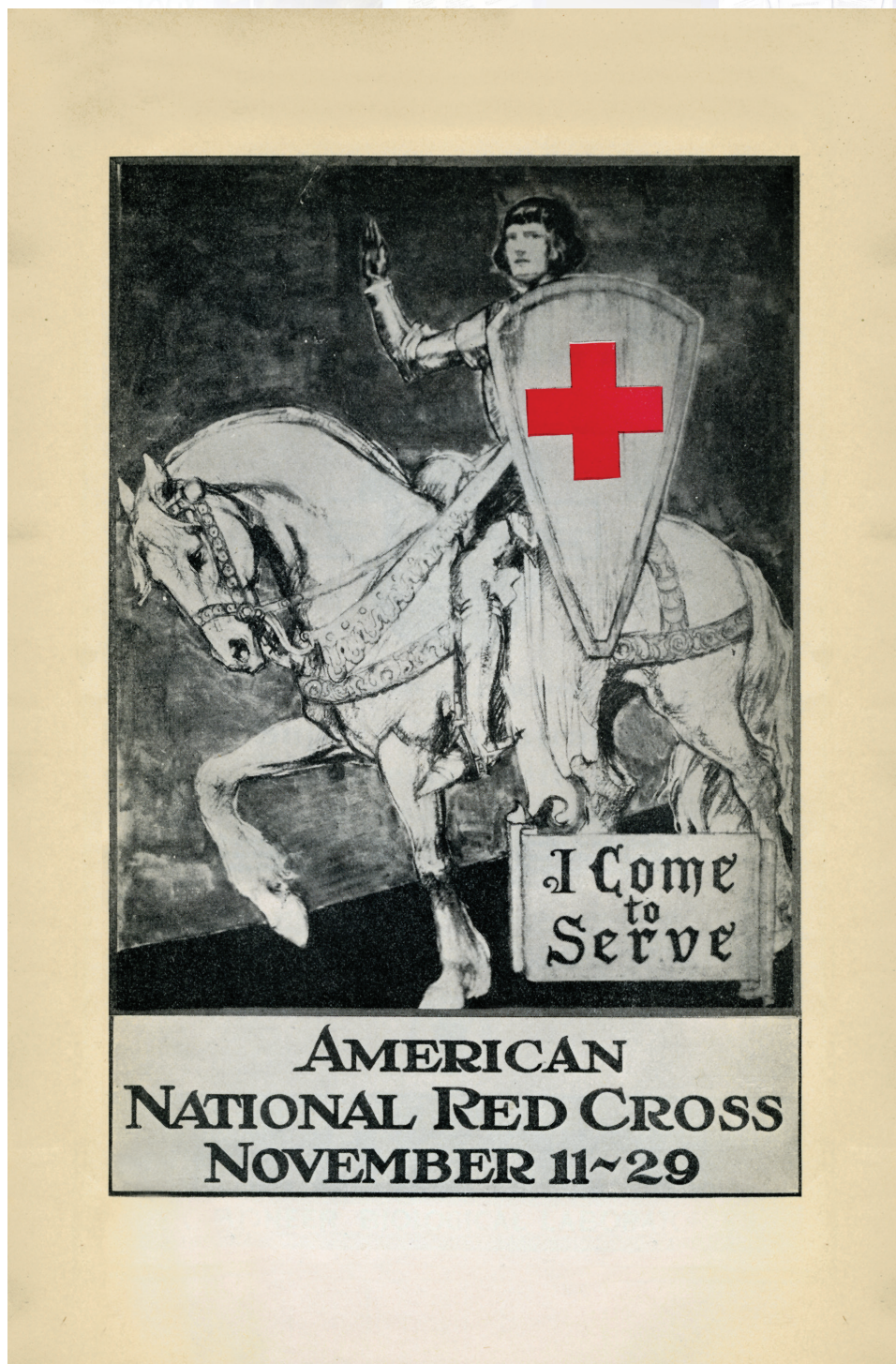


Figure 3: American National Red Cross Roll Call, 1923
The Journal of Immunology

³ Parke-Davis was acquired by Pfizer in 2000. Mulford merged with Sharp and Dohme in 1929 and later with Merck & Co. in 1953. The Arlington Chemical Company was acquired by the U.S. Vitamin and Pharmaceutical Corporation in 1951 and later bought by Revlon in 1966. Wyeth was acquired by Pfizer in 2009.



AAI LOOKS BACK

In 1890, Emil von Behring announced that he had created a successful diphtheria antitoxin. The following year, George Davis (“Davis” in Parke-Davis) recruited scientists from the University of Michigan, including E. M. Houghton (AAI '16). They set up a lab and developed the Parke-Davis antitoxin.⁴ By the early 1920s there were many antitoxins commercially available for clinicians to select. In this case Parke-Davis appealed to the readers’ sense of responsibility to their “little patients”—not only the responsibility to treat them effectively but also to use the “best Antitoxin available.” Without mentioning the cases of deaths from antitoxin treatment, which were rare but newsworthy, the ad implies that the Parke-Davis antitoxin, produced “in a laboratory possessing unsurpassed facilities,” would be safer than its competitors’. In the environment exemplified by the Pure Food and Drug Act of 1906, this appeal to purity and high scientific standards was particularly attractive.

Civic Engagement Campaigns

Civic engagement campaigns appeared exclusively in the first three decades of the journal with ads promoting involvement in issues of public concern or public health crusades.

In November 1923, the first civic engagement campaign advertisement appeared in the final issue of the year. It would have been striking to any reader of the journal because of the first use of color ink in *The JI*. The ad (Figure 3) is for the seventh annual American National Red Cross Roll Call in 1923, which lasted

124

products for
tissue culture procedures

CULTURSTAT—sterile, lyophilized tissue culture media/
sterile animal sera/sterile embryo extracts and serum/
liquid and dry tissue culture media and reagents/
cell cultures, primary and serially propagated/
B-B-L media for pleuropneumonia-like organisms/
FALCON tissue culture dishes, flasks, tubes/
FALCON plastic pipet

Aardvarks* we don't have

BUT VIRTUALLY ANYTHING ELSE YOU MIGHT NEED
FOR TISSUE CULTURE PROCEDURES WE CAN
SUPPLY. For example, horse, calf, fetal calf, rabbit,
chicken, swine, human, and lamb are only some
of the sterile animal sera available. One hundred
and twenty-four different products in 323 different
package forms are ready to meet your specific
requirements.

CULTURSTAT—sterile, lyophilized tissue culture
media—is ready to use in seconds, offers added
convenience and saves time for the busy researcher.

Products of B-D Laboratories are available through
your local distributor. Further information on request.

B-D

*PRIDE IS AN AARDVARK

B-D LABORATORIES INC., BALTIMORE, MARYLAND, U.S.A.

Baltimore
Biological
Laboratory

Falcon
Plastics

Science
Education
Products

In Canada: Becton, Dickinson, & Co., Canada, Ltd., Clarkson, Ontario
Overseas: Becton, Dickinson & Co., S.A., P.O. Box 1173, Colon, Free Zone, Panama

B-D, B-B-L, CULTURSTAT, FALCON, AND SEPICO ARE TRADEMARKS. 04964

Figure 4: Aardvarks We Don't Have, 1955
The Journal of Immunology

⁴Milton L. Hoefle, “The Early History of Parke-Davis and Company,” *Bulletin of the History of Chemistry* 25, no. 1 (2000): 31–32.



from Armistice Day, November 11, to Thanksgiving, November 29. This annual fundraising drive recruited new volunteers and brought in a significant portion of the more than \$10 million the Red Cross spent each year.

This ad was rather unusual compared with most American Red Cross ads of the early 1920s. Ads at that time typically featured images of Red Cross nurses promoting the organization's non-militant activities, including public health nursing services in rural areas, disaster preparedness, and the Junior Red Cross. Although the First World War had ended five years before on November 11, 1918, the Red Cross of the early 1920s was an organization in transition. After receiving accolades during the war, it entered peacetime turmoil as the Red Cross faced plummeting membership, declining dues, a reorganization of the national office, and public critiques of wartime management and finances. Despite these challenges, the organization remained steadfast to its commitments, including the growing financial burden of being a primary provider of treatment and benefits for disabled veterans and their families.⁵

Although having no bearing on research, the appeal and accompanying artwork would have resonated deeply with members of the American Association of Immunologists (AAI) and readers of *The JI*.⁶

Following an AAI resolution in April 1917 offering the "services and facilities" of member laboratories to the "Federal and respective State governments" to satisfy the need for "bacteriologists and immunologists" for the war effort, a significant number of AAI members and *The JI* editors had become directly involved in the war.⁷ Some volunteered in the U.S. Army Medical Corp and served in hospitals or on the front lines in Europe. Others who enlisted remained in the states conducting wartime research at their laboratories.⁸ The wartime experiences of AAI members would have made them promising candidates for participation in the Roll Call.

Modern Advertising

As the birth of modern advertising started to "animate the inanimate," using eye-catching color printing and photography, journal ads began appealing to the reader through visual creativity as well as a compelling "story."

Modern advertising came a little later to *The JI* than to commercial publications, but the 1950s brought contemporary design and advertising techniques to the advertisements published in the journal. The ads were no longer plainly factual. Text was simplified and abbreviated, and most ads featured new design and fonts, photography, color, trademarks, and/or slogans.

Becton, Dickinson and Company (BD) stood apart as one of the most innovative advertisers (Figure 4), especially in the use of color ads. BD had recently expanded beyond designing and manufacturing medical equipment with its acquisition of Baltimore Biological Laboratory in 1955. BD Laboratories quickly became a significant source of the reagents so important to immunological research and began promoting their products such as the one featured in the ad on the previous page.

This particular ad uses a contemporary approach in both design and copy to sell specialized biological research materials to scientists in the same way that consumer goods were sold to the public.⁹ The whimsical language and design appealed to modern sensibilities, but the ad still informed the readers about what BD could offer. It focused on the wide variety of products: 124 products in 323 package forms, which reflect both the diversity of tools and expanding need of new reagents being used by researchers.

Author: John S. Emrich, Ph.D., AAI Historian

Contributors: Kaylene J. Kenyon, Ph.D., AAI Publication Director; Charles Richter, AAI History Intern

Editors: Mary I. Bradshaw, AAI Senior Director of Communications and Development; Daniel S. Patrell, AAI Director of Communications

⁵ For a more detailed assessment of the American Red Cross from 1918 to 1923, see Foster Rhea Dulles, *The American Red Cross: A History* (New York: Harper & Brothers, 1950), 148–256; Patrick F. Gilbo, *The American Red Cross: The First Century* (New York: HarperCollins, 1981), 95–96.

⁶ Dulles, *The American Red Cross*, 221.

⁷ "Minutes of the Fourth Annual Meeting of the American Association of Immunologists," April 6–7, 1917, AAI Archive, Rockville, Maryland.

⁸ Those who enlisted included AAI member Richard Weil, AAI president (1916–17), member of *The JI* board of editors (1916–1917), and author of the first article in the journal, who volunteered for the U.S. Army Medical Corp and died of complications from the 1917 influenza pandemic while stationed at Camp Wheeler, Georgia.

⁹ Note the asterisk after the slogan refers to the crossed-out picture of an aardvark below. The image is labelled "This is an aardvark." Most casual references to the animal in newspapers at the time included a basic description.

The Proud History of

Chronicling the AAI Legacy

AAI staff historians and scientists are rigorously researching, archiving, and publishing materials to preserve the proud heritage of the association. Articles posted in the history section of the AAI website, www.aai.org/about/history, include:

- The Founding of AAI
- Industry Representation in Early AAI
- The Science at the First AAI Annual Meeting
- The Founding of *The Journal of Immunology*
- “Studies in Anaphylaxis”: The First Article in *The Journal of Immunology*
- Country Doctor, Pioneering Parasitologist, and the Father of Preventative Dentistry—Charles C. Bass
- Elise Strang L’Esperance: Pioneer in Cancer Prevention and Recipient of Lasker Award
- Immunologists during the First World War: One Soldier-Scientist’s Experience—Stanhope Bayne-Jones
- The 1918–1919 Influenza Pandemic as Covered in *The Journal of Immunology*
- Anna Wessels Williams: Infectious Disease Pioneer and Public Health Advocate
- 100 Years of AAI: A Look Back at Two Early Immunologists in Hawaii
- PI in the Scotland Yard of Streptococcal Mysteries—Rebecca Lancefield



Above: Rebecca Lancefield in her laboratory

Credit: Rockefeller Archive Center

Left: Stanhope Bayne-Jones (front row, center) in the trenches, ca. 1918

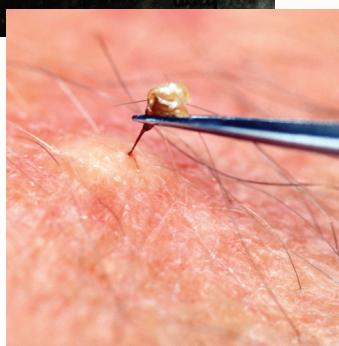
Credit: National Library of Medicine

- What's Old is New Again: Early Editors of *The JI* Act to Address Perennial Challenges in the Peer-Review and Editing Process
- A Legacy of Advocacy Is Born as AAI Confronts McCarthyism
- The Founding of AAI Summer Courses in Immunology
- Creating a Buzz in the Field of Immunology: Mary Hewitt Loveless and the Development of Venom Therapy for the Prevention of Sting-Induced Anaphylaxis
- Words & Pictures: Ads in *The JI*—The First 50 Years
- The Emergence of Immunology in Pittsburgh
- Immunology at the Mouth of the Mighty Mississippi: Diseases and Institutions that Shaped Research in Louisiana
- IMMUNOLOGY 2016™: The 100th Annual Meeting



Above: In the Praed Street Laboratory, St. Mary's Hospital, London, 1906 (L-R) Frank S. Patch, Orville H. Brown, Francis M. Pottenger (AAI '13), Almroth Wright (AAI '14), Gerald B. Webb (AAI '13, president 1913–15), and Aylmer May

Credit: The American Association of Immunologists Collection, UMBC



Above: Stinger being extracted from hand

Credit: U.S. Department of Agriculture; Photo by Scott Bauer

Explore the history of AAI at www.aai.org/about/history

AAI Website

The history section of the AAI website continues to evolve as a living archive. Current and future resources include:

- AAI history articles published in the AAI Newsletter
- Oral History Project—exclusive interviews offering a rare glimpse into the lives and times of influential immunologists
- Digital Immunology Timeline, including all the images from the physical Centennial Timeline as well as citations for the scientific events
- Profiles of notable AAI members, including AAI Nobel and Lasker recipients, and past presidents and officers
- An eBook of commentaries on “Pillars” articles from *The Journal of Immunology*
- AAI Story Booth—attendees’ stories of events that shaped their careers in immunology, recorded at the past four annual meetings

2016 Winter Cycle Travel for Techniques Award Recipients

Three members were selected as recipients of AAI Travel for Techniques Awards for the winter application cycle that closed on February 15, 2016. The program reimburses up to \$1,500 in travel expenses for a member PI or designated lab member to travel to another laboratory to learn a technique or method that might benefit his or her current or future research goals. Proposals are considered on a rolling basis, with application deadlines in February, June, and October.

The 2016 Winter Cycle Travel for Techniques Award recipients are:



William Kerr, Ph.D.
AAI '99
Professor
SUNY Upstate Medical University

Kerr intends to visit Didier Marguet's laboratory at the Center for Immunology Marseille-Luminy

to learn nanoscopic microscopy techniques. He plans to apply these techniques to characterize the lateral organization of the cell membrane in normal and mutant lymphocyte populations at a sub-optical level.



Ming Zhang, Ph.D.
AAI '09
Assistant Professor
SUNY Downstate Medical Center

Zhang will travel to the laboratory of Leta Nutt at St. Jude Children's Research Hospital to receive

training in a cell-free apoptosis technique. Zhang will use this technique to investigate the role of complement factors in regulating programmed cell death at the molecular level.



Lora Petrie-Hanson, Ph.D.
AAI '16
Associate Professor
Mississippi State University

To become proficient in using clustered regularly interspaced short palindromic repeats (CRISPR)/

Cas9 methodology in zebrafish, Petrie-Hanson will have her trainee Preeti Muire (AAI '15) travel to the laboratory of Jeffrey Yoder (AAI '02) at North Carolina State University in Raleigh. They aim to apply this technique to the identification of conserved signaling pathways in NK cells.

Coming Soon

Plan now for the Fall 2016 Travel for Techniques application cycle

Start your plans now to apply for the next cycle of AAI Travel for Techniques Awards. This career-development program provides travel assistance to enable AAI regular and associate member scientists to visit another laboratory to learn techniques to further their research. Applications are considered three times a year; awards are based on relevance of the technique to the applicant's program and financial need. The next application cycle will open August 15 and close October 15.

To find out how AAI can help your research career on multiple fronts, visit <http://aai.org/careers>.



Important Dates for Two AAI Awards Programs

AAI Programs to Benefit Your Lab's Current or Future Research

AAI Careers in Immunology Fellowships

KEY DATES	APPLICATIONS OPEN	APPLICATIONS CLOSE
	JANUARY 15	MARCH 15

These fellowships provide AAI member PIs with one year of salary support for a graduate student or postdoctoral fellow in their labs. Member PIs in good standing with less than \$250,000 (excluding PI's salary) in annual direct costs are eligible to apply.

Consideration is based on the merit of the PI's proposed project, potential of the trainee, and quality of the training environment.

Direct inquiries to fellowships@aai.org.

AAI Travel for Techniques Award Program

AWARDS CYCLE	APPLICATIONS OPEN	APPLICATIONS CLOSE
WINTER	DECEMBER 15	FEBRUARY 15
SPRING	APRIL 15	JUNE 15
FALL	AUGUST 15	OCTOBER 15

The Travel for Techniques Award is given to member PIs, reimbursing up to \$1,500 in expenses for travel to learn a new technique. Member PIs in good standing with less than \$250,000 (excluding PI's salary) in annual direct costs are eligible to apply.

Direct inquiries to awards@aai.org.

These two exciting awards programs were launched by The American Association of Immunologists in 2014, adding significantly to its already robust support for scientists through fellowships, career awards, and travel grants. For more information, visit www.aai.org/awards.

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WASHINGTON, DC

www.IMMUNOLOGY2017.org



AAI Outreach Program Update

AAI continues to enrich the careers of young scientists through its Outreach Program. Each year, the association supports selected member-organized immunology meetings that provide speaking opportunities and awards to young investigators. AAI was pleased to sponsor the keynote speaker and oral and poster abstract awards at the Midwinter Conference of Immunologists this past winter.

The Midwinter Conference of Immunologists (MCI)

The 55th annual MCI drew approximately 225 registrants, January 23–26, 2016, to the Asilomar Conference Grounds' seaside setting in Pacific Grove, California. MCI Executive Director Christel H. Uittenbogaart (AAI '84) presided, and Shannon J. Turley (AAI '05) and Shane Crotty (AAI '04) served as co-chairs for the conference. The AAI-sponsored Dan H. Campbell Memorial Lecture was given by Michel N. Nussenzweig (AAI '91), who spoke on the challenges of creating an HIV vaccine.

The conference also featured a lecture by this year's AAI-Thermo Fisher Meritorious Career Award recipient Kenneth M. Murphy (AAI '95), entitled "Specification and commitment of CD8 α DCs involve distinct transcriptional events." Also in the proceedings were sessions on new insights into adaptive immunity and homeostasis and inflammation at barrier surfaces.

Nine young scientists' abstracts were selected by the conference organizers for AAI-sponsored Ray Owen Poster Awards. The recipients were Mridu Acharya (AAI '16) and Simon Glatigny (AAI '16) (Benaroya Research Institute), Amritha Balakrishnan (University of California, San Diego), Anna Beaudin (University of California, Santa Cruz), Lokesh Kalekar (AAI '13) (University of Minnesota), Adriana Mujal (University of California, San Francisco), Oriana Perez (AAI '12) (University of Connecticut), Gretchen Harms Pritchard (AAI '13) (University of Pennsylvania), and Thornton Thompson (University of California, Berkeley). Two trainees received AAI-sponsored Ray Owen Young Investigator Awards for oral presentations at the meeting: Jonathan L. Linehan (National Institute of Allergy and Infectious Diseases, National Institutes of Health) and Kristen Mittelsteadt (AAI '16) (University of Washington).



Above: (L-R) AAI Ray Owen Poster and Young Investigator Awardees Kristen Mittelsteadt, Jonathan L. Linehan, Simon Glatigny, Mridu Acharya, Anna Beaudin, Oriana Perez, Gretchen Harms Pritchard, Adriana Mujal, Lokesh Kalekar

Right: (L-R) AAI Ray Owen Poster Awardees Amritha Balakrishnan and Thornton Thompson





2016 Advanced Course in Immunology

July 31–August 5, 2016 • Seaport World Trade Center, Boston, Massachusetts

Director: Ulrich H. von Andrian, M.D., Ph.D.

Harvard Medical School and Ragon Institute at MGH, MIT and Harvard

Don't miss the premier course in immunology for research scientists!

This intensive course is directed toward advanced trainees and scientists who wish to expand or update their understanding of the field. Leading experts will present recent advances in the biology of the immune system and address its role in health and disease. This is not an introductory course; attendees will need to have a firm understanding of the principles of immunology.

Faculty

- Ulrich H. von Andrian**, *Harvard Medical School and Ragon Institute at MGH, MIT and Harvard*
Anatomy of the Immune Response
- Jonathan C. Kagan**, *Children's Hospital Boston Harvard Medical School*
Innate Immunity: Pattern Recognition and Anti-microbial Mechanisms
- Bruce Horwitz**, *Brigham & Women's Hospital, Harvard Medical School*
Innate Immunity: Gene Regulation
- Albert S. Bendelac**, *University of Chicago*
Innate Immunity: Cellular Mechanisms
- Wayne M. Yokoyama**, *Washington University School of Medicine*
NK Cells — Their Receptors and Function in Health and Disease
- Michael C. Carroll**, *Immune Disease Institute Harvard Medical School*
Molecular and Cellular Mediators of Inflammation
- Brian T. Edelson**, *Washington University School of Medicine*
Dendritic Cells
- Eugene M. Oltz**, *Washington University School of Medicine*
The Generation and Modification of Lymphocyte Antigen Receptor Genes
- Kay L. Medina**, *Mayo Clinic*
B Cell Development
- Avinash Bhandoola**, *NCI, NIH*
T Cell Development
- Kenneth L. Rock**, *University of Massachusetts Medical School*
MHC-Restricted Antigen Presentation to T Cells
- Leslie J. Berg**, *University of Massachusetts Medical School*
Signaling from Antigen Receptors
- Stephen C. Jameson**, *University of Minnesota Center for Immunology*
T Cell Memory
- Patrick C. Wilson**, *University of Chicago*
B Cell Memory
- Arup K. Chakraborty**, *Massachusetts Institute of Technology*
Computational Modeling of Immunological Processes
- Brian A. Cobb**, *Case Western Reserve University School of Medicine*
Glycoimmunology
- Richard S. Blumberg**, *Brigham & Women's Hospital, Harvard Medical School*
Mucosal Immunity
- Joel D. Ernst**, *New York University School of Medicine*
Immune Response to Pathogens
- Jennifer Anolik**, *University of Rochester Medical Center*
B Cell Tolerance and Autoimmunity
- Vijay K. Kuchroo**, *Brigham & Women's Hospital, Harvard Medical School*
T Cell Tolerance and Autoimmunity
- Kevin J. Tracey**, *Feinstein Institute for Medical Research*
Neuroimmunology
- Lisa H. Butterfield**, *University of Pittsburgh*
Tumor Immunology
- Dania Rabah**, *Biogen Idec*
Immunotherapeutics
- Dennis W. Metzger**, *Albany Medical College*
Vaccines

For complete course details and registration, visit: www.aai.org/Education/Courses

For assistance, contact (301) 634-7178 or meetings@aai.org. Overseas applicants are advised to apply early for visas; for details, visit www.aai.org/Education/Courses/Visa.html.

Your microbiome image wanted for the cover of *The JI!*



A series of Brief Reviews on "The Macro Influence of the Microbiome" will be featured in *The Journal of Immunology* in early 2017 and your image could be on the cover!

To enter, submit your microbiome-related images to *The Journal of Immunology* by September 1, 2016.

Email coverart@aai.org for more details!



GRANT AND AWARD DEADLINES

July 1

Lupus Research Institute (LRI) Novel Research Grants

- **Prize/Award:** As much as \$100,000 in annual funding in support of one- to three-year projects proposing exceptionally creative and innovative approaches to major challenges in lupus research, including those that will advance novel hypotheses and/or technologies having the potential to stimulate new research directions and propel the field forward
- **Eligibility:** Early-stage investigators affiliated with academic institutions or research institutes in the United States, whether U.S. or non-U.S. citizens, who hold doctoral degrees at the assistant professor level or higher
- **Details:** <http://www.lupusresearchinstitute.org/new-research-grants-novel-approaches-lupus>
- **Contact:** Laura Hack, Grants Administrator: (212) 218 2840; researchadmin@lupusny.org

July 1

Rheumatology Research Foundation Awards & Grants

- **Prize/Award:** Multiple funding awards in support of rheumatology trainees and professionals at various career stages (medical/graduate studies; residency; postdoctoral/specialty training; early career; mid-career, established career); details at <http://www.rheumresearch.org/funding-opportunities>
- **Eligibility:** Physician scientists and health professional researchers and clinicians; eligibility details for all awards at <http://www.rheumresearch.org/funding-opportunities>
- **Details:** <http://rheumresearch.org/Awards>
- **Contact:** (404) 365-1373; Foundation@rheumatology.org

July 8

Lupus Research Institute (LRI) Dr. William E. Paul Distinguished Innovator Awards in Lupus and Autoimmunity

- **Prize/Award:** Up to 4 awards of as much as \$250,000 in annual funding for up to 4 years in support of novel research into the fundamental causes of lupus that offers the potential of opening new directions toward a cure or prevention
- **Eligibility:** Outstanding established investigators holding a position at a U.S. or foreign academic institutions who have demonstrated creativity and productivity in their field of research and propose pioneering hypothesis- or discovery-driven research into the fundamental, causative pathways of lupus and present a compelling vision of how the targeted discovery would lay the groundwork for a potential cure, prevention, or highly effective therapy
- **Details:** <http://lupusresearchinstitute.org/2016-dr-william-e-paul-distinguished-innovator-awards-lupus-and-autoimmunity>
- **Contact:** Laura Hack, Grants Administrator: (212) 218 2840; researchadmin@lupusny.org

July 15

Ferring Innovation Grants

- **Prize/Award:** A limited number of one-year grants of \$50,000 to \$100,000 in support of exploratory, discovery, and preclinical research into novel extracellular drug targets that are addressable with peptides and/or proteins, for indications within the program's core therapeutic areas of reproductive health, urology, gastroenterology, and endocrinology; awards may include competitive postdoctoral and graduate student fellowships
- **Eligibility:** Investigators whose research tests a scientific hypothesis relevant to the program's qualifying therapeutic areas and whose project aims can be completed in a 12-month period; previous funding is not an indicator of future support
- **Details:** <http://ferringri.wpengine.com/wp-content/uploads/2016/03/Ferring-Innovation-Grants-Summary-Important-Information-2016.pdf>
- **Contact:** (858) 657-1400; info@ferring-research.com

July 22

Lupus Foundation of American (LFA) Evelyn V. Hess Award

- **Prize/Award:** Award of \$5,000 in recognition of research that has advanced understanding of the pathophysiology, etiology, epidemiology, diagnosis, or treatment of lupus
- **Eligibility:** Clinical or basic researchers with an M.D. or Ph.D., an established career of outstanding achievement in basic or clinical research in lupus, and an academic appointment at the level of professor or equivalent
- **Details:** <http://www.lupus.org/research/hess-award>
- **Contact:** nominations@lupus.org

July 26

American Heart Association National Innovative Research Grants, Established Investigator Award

- **Prize/Award:** Two-year grant awards of up to \$75,000 in annual funding in support of highly innovative, high-risk, high-reward research that could ultimately lead to critical discoveries or major advancements capable of accelerating the field of cardiovascular and stroke research
- **Eligibility:** Investigators with an M.D., Ph.D., D.O., or equivalent doctoral degree and a faculty appointment whose work in any basic, behavioral, epidemiological, or community or clinical research field bears on cardiovascular and/or stroke problems; applicants must be U.S. citizens, permanent residents, or holders of one of the qualifying visas specified in the published program requirements

- **Details:** http://professional.heart.org/professional/ResearchPrograms/ApplicationInformation/UCM_321936_Association-wide-Innovative-Research-Grant.jsp
- **Contact:** (214) 360-6117; apply@heart.org

July 26

American Heart Association National Established Investigator Award

- **Prize/Award:** Five-year awards of up to \$80,000 in annual funding in support of research broadly related to cardiovascular function and disease and stroke, or to related clinical, basic science, bioengineering, biotechnology, or public health problems, including multidisciplinary efforts
- **Eligibility:** Mid-career investigators with unusual promise, an established record of accomplishment, and demonstrated commitment to cardiovascular or cerebrovascular science, who hold an M.D., Ph.D., D.O., or equivalent doctoral degree, a faculty or staff appointment, and current, national-level funding as a principal investigator on an R01 or equivalent grant; awardees must be at least four and not more than nine years removed from their first faculty/staff appointment at the assistant professor or equivalent level, and must be U.S. citizens, permanent residents, or holders of one of the qualifying visas specified in the published program requirements
- **Details:** http://professional.heart.org/professional/ResearchPrograms/ApplicationInformation/UCM_321935_Association-wide-Established-Investigator-Award.jsp
- **Contact:** (214) 360-6107; apply@heart.org



Meetings and Events Calendar

Mark Your Calendar for These Important Dates!

2016

July 2, 2016

10th FENS (Federation of European Neurosciences Societies) Forum on Neuroscience

Copenhagen, Denmark

<http://forum2016.fens.org/>

July 1–4, 2016

9th International Conference of the Frontiers in Immunology Research Network

Grand Hotel Union

Ljubljana, Slovenia

www.firmweb.com/2016-conference/

July 9–14, 2016

AAI Introductory Course in Immunology

Long Beach, CA

www.aai.org/Education/Courses/Intro/index.html

July 24–29, 2016

IgE and Allergy, 50 Years and Onward (FASEB Science Research Conference)

West Palm Beach, FL

www.faseb.org/SRC

July 31–August 5, 2016

AAI Advanced Course in Immunology

Boston, MA

www.aai.org/Education/Courses/Advanced/index.html

August 4–8, 2016

Society for Developmental Biology
75th Annual Meeting/
International Society of Differentiation
19th International Conference

Marriott Copley Place

Boston, MA

www.sdbonline.org/2016mtg

August 16–18, 2016

Sixth International Conference on B Cells and Autoimmunity

Nantou, Sun Moon Lake, Taiwan

<http://www.bcell2016.org/>

August 16–19, 2016

IVIS 2016: International Veterinary Immunology Symposium

Gold Coast Convention Centre

Gold Coast, Australia

www.ivis2016.org/

August 21–26, 2016

ICI 2016: International Congress of Immunology 2016

Melbourne, Australia

<http://ici2016.org>

August 24–27, 2016

APS Conference: Inflammation, Immunity and Cardiovascular Disease

Westminster, CO

www.the-aps.org/inflammation.aspx

August 31–September 2, 2016

Colorado Immunology Conference

Steamboat Springs, CO

www.ucdenver.edu/academics/colleges/medicalschoo/departments/ImmunologyMicrobiology/calendar/Pages/2016ImmunologyConferenceSchedule.aspx

September 15–17, 2016

The Society For Leukocyte Biology's 49th Annual Meeting and "Neutrophil 2016"- Inflammation, Immunity and Cancer: Neutrophils and Other Leukocytes

University of Verona Congress Center

Verona, Italy

<http://leukocytebiology.org/Meetings/2016-Meeting.aspx>

September 21–24, 2016

European Society for Immunodeficiencies (ESID) 2016

Centre Convencions Internacional de Barcelona (CCIB)

Barcelona, Spain

www.esid.org

September 26–28, 2016

Immunogenomics 2016

HudsonAlpha Institute for Biotechnology

Huntsville, AL

<http://hudsonalpha.org/immunogenomicsconference/>

September 27–30, 2016

46th Annual Meeting of the German Society for Immunology

Congress Center Hamburg (CCH)

Hamburg, Germany

www.immunology-conference.de/

October 3–5, 2016

4th International Conference on HIV/AIDS, STDs and STIs

Orlando, FL

<http://hiv-aids-std.conferenceseries.com/>

October 13–14, 2016

Deep Sequencing in Infectious Diseases Workshop

Grand Copthorne Waterfront Hotel, Singapore

http://sgsi.org.sg/index.php?option=com_content&view=article&id=67&Itemid=61

October 15–16, 2016

The New England Immunology Conference

The Marine Biological Laboratory

Woods Hole, MA

www.newenglandimmunology.org/

October 16–19, 2016

Cytokines 2016: 4th Annual Meeting of the International Cytokine and Interferon Society (ICIS)

San Francisco, CA

<http://www.cytokines2016.com/>

October 24–27, 2016

19th Annual Upstate New York Immunology Conference

The Sagamore Resort and Conference Center

Bolton Landing, NY

www.amc.edu/NYIC/index.cfm

November 7, 2016

William E. Paul Memorial Symposium

Masur Auditorium, NIH

Bethesda, MD

<https://ncifrederick.cancer.gov/events/WilliamPaulMemorial/default.asp>

Meetings and Events Calendar

Mark Your Calendar for These Important Dates!

2018

November 18–21, 2016

Autumn Immunology Conference (AIC) 2016
Chicago Marriott Downtown
Chicago, IL
www.autumnimmunology.org/

December 6–9, 2016

Joint British Society for Immunology (BSI) and Dutch Society for Immunology (NVVI) Congress 2016
Arena Conference Centre, Liverpool, UK
www.bsicongress.com/2016

2017

January 28–31, 2017

56th Midwinter Conference of Immunologists at Asilomar
Pacific Grove, CA
www.midwconimmunol.org

March 26–29, 2017

LUPUS2017: 12th International Congress on SLE & 7th Asian Congress on Autoimmunity
Melbourne, Australia
<http://lupus2017.org/>

April 7–10, 2017

30th Annual Canadian Society of Immunology Spring Meeting
The Banff Centre
Banff, Alberta
www.csi-sci.ca/scientificmeeting.aspx

May 12–16, 2017

IMMUNOLOGY 2017™
AAI Annual Meeting
Walter E. Washington Convention Center
Washington, D.C.
www.aai.org/Meetings/Future_Meeting.html

November 17–20, 2017

Autumn Immunology Conference (AIC) 2017
JW Marriott
Chicago, IL
www.autumnimmunology.org/

May 4–8, 2018

IMMUNOLOGY 2018™
AAI Annual Meeting
Austin, TX
www.aai.org/Meetings/Future_Meeting.html

November 16–19, 2018

Autumn Immunology Conference (AIC) 2018
Chicago Marriott Downtown
Chicago, IL
www.autumnimmunology.org/

2019

May 9–13, 2019

IMMUNOLOGY 2019™
AAI Annual Meeting
San Diego Convention Center
San Diego, CA
www.aai.org/Meetings/Future_Meeting.html

The Journal of Immunology

Submit to the new

Systems Immunology

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This section includes:

- Analyses of novel large data sets that draw concrete conclusions about the biology of the system under study.
- Novel methods of data analysis, applied to publicly available data sets.



AAI Courses in Immunology

2016 Introductory Course in Immunology

July 9–14, 2016 • Long Beach Convention Center • Long Beach, California

This comprehensive two-part course provides an in-depth overview of the basics of immunology.

2016 Advanced Course in Immunology

July 31–August 5, 2016 • Seaport World Trade Center • Boston, Massachusetts

This intensive course is directed toward advanced trainees and scientists who wish to expand or update their understanding of the field.

For more information visit www.aai.org/Education/Courses
Please direct inquiries to meetings@aai.org or 301-634-7178.