





2008 REPORT

THE MEDICAL FOUNDATION RESEARCH GRANTS DIVISION

Where Science and Philanthropy Converge to Fund Medical Discoveries



Walter Schaffer, Ph.D., (N.I.H.), Nancy Sung, Ph.D., (B.W.F.), Sally McNagny, M.D., (T.M.F.), Bill Galey, Ph.D., (H.H.M.I.)

TO CLIENTS AND THE BIOMEDICAL RESEARCH COMMUNITY

Welcome! For those of you who are new to us, the Research Grants Division at The Medical Foundation has been funding outstanding biomedical investigators for more than 50 years. Private individuals, family foundations and bank trust departments engage us to design customized grant programs and convene scientific review committees that identify and recommend some of the world's most talented researchers for funding. In the last two years alone, our clients' grant programs have awarded more than \$20 million to investigators in the United States, Israel and Europe. This Report highlights the accomplishments of these programs and the exceptional award recipients who received funding this year.

Clients also value our grant program evaluation services. For example, in 2008, we invited colleagues from the Howard Hughes Medical Institute (H.H.M.I.), the National Institutes of Health (N.I.H.), and the Burroughs Wellcome Fund (B.W.F.) to participate in a Focus Group that assessed the Smith Family New Investigator Awards Program. Focus Group recommendations are described on page 12 of this Report.

In addition to evaluation services, we provide in depth reports about the current state of specific fields of research. These reports assist clients in determining the most effective ways of leveraging their funding to improve patient outcomes for a specific disease. After interviewing senior academic investigators, industry leaders in drug discovery and N.I.H. section chiefs, we recommend to clients where additional funding will make the greatest impact. Learn more about our consulting services on page 3.

With the close of 2008, let me take this opportunity to thank the 113 senior scientists who have donated their time and talent to serve on our Scientific Review Committees as well as the many other experts who have provided advice and guidance throughout the year. Now more than ever during this period of reduced government funding, philanthropic support is a critical catalyst for medical research discoveries.

July Mc Nagny, MD, MPH

Sally E. McNagny, M.D., M.P.H. Vice President

ABOUT The Medical Foundation

The Medical Foundation is a non-profit, public health and medical research funding organization. Our mission is to help people live healthier lives through prevention, health promotion and support of medical research.

Over the past 19 years under the leadership of Ray Considine, President, the organization has grown in expertise and size to 88 staff of public health professionals, social scientists and physicians. The Community Health Division, led by Steve Ridini, Ed.D., works in partnership with cities, neighborhood coalitions and non-profit organizations to identify and address the public health needs of individuals and communities. Recently, two new Departments – Public Health Policy and Environmental Health—have been established within the Community Health Division.

The Medical Research Grants Division is featured in this Report. The Grants Division is advised by The Medical Foundation Board Committee chaired by Gordon H. Williams, M.D., Professor of Medicine, Harvard Medical School and the Brigham and Women's Hospital.

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Scientific Review Committees

Medical Research Grants Division

The Medical Foundation 95 Berkeley Street Boston, MA 02116

The Medical Research Grants Division

ABOUT US

Since 1957, foundations, bank trusts and individuals have engaged us to create and manage grant programs funding innovative research that accelerate medical discoveries. More than 100 internationally recognized scientists from across the United States and Europe serve on eleven Scientific Review Committees, providing critical and unbiased evaluations of all grant submissions and research progress reports. In 2008, our clients' programs awarded over \$12 million to support national and international grant recipients, maximizing the impact of every dollar by funding only the most outstanding investigators and physician-scientists.

GRANTMAKING SERVICES

Working closely with our clients, we define the research focus of each program, write application guidelines, announce funding opportunities, establish scientific review committees, field questions from potential applicants, accept applications online, distribute funds, review annual Progress and Fiscal Reports, organize scientific meetings and evaluate programs. Learn more about our work at www.tmfnet.org.

Our Staff



Sally E. McNagny, M.D., M.P.H., F.A.C.P., Vice President 617.279.2240, ext. 704 SMcNagny@tmfnet.org

Dr. McNagny received a B.S. in Biology from Stanford University, an M.D. from Harvard Medical School, an

M.P.H. from the Harvard School of Public Health, and completed her medical residency in 1988 at the Brigham and Women's Hospital. She served on the faculty at Emory University School of Medicine for 12 years, where she was Principal Investigator of the N.I.H. Women's Health Initiative and other clinical research trials in the field of postmenopausal hormone replacement therapy. She also conducted health services research studies in access to care, high blood pressure management and smoking cessation. Currently, Dr. McNagny is a board member of the Health Research Alliance, a membership organization of non-governmental funders of medical research and training. She oversees the Medical Research Grants Division and also serves on the faculty at Harvard Medical School.



Gay Lockwood, M.S.W., Senior Program Officer 617.279.2240, ext. 702 GLockwood@tmfnet.org

Ms. Lockwood manages a variety of grant programs, oversees annual scientific poster sessions and works with award recipients

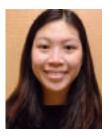
throughout the funding cycle to monitor their research progress and fiscal obligations. She brings organizational, resource and program management skills from her prior experience in both diplomatic and healthcare settings. Her expertise in building and maintaining relationships with academic research institutions and senior scientists ensures that programs are effectively and efficiently administered.



Jeanne Brown Program Officer 617.279.2240, ext. 709 JBrown@tmfnet.org

Ms. Brown's experience is in project management, operations management and client relations in both healthcare and

academic settings. She applies her knowledge and best practices in the management of several programs including one international grantmaking program. Ms. Brown specializes in building processes for the delivery of efficient and complete grantmaking services for our clients. She brings core skills such as planning, budget management and problem solving to the team.



Linda Lam Program Officer 617.279.2240, ext. 710 LLam@tmfnet.org

Ms. Lam is trained in business administration with experience in database development and management. In

addition to managing several grant programs, she organizes Scientific Review Committee meetings in New York City as well as two-day scientific meetings in Boston. Ms. Lam updates the international distribution list that is used to alert institutions of funding opportunities. She also designs systems to track grant recipients throughout their funding period and works with the Finance Department to manage award payments. Ms. Lam is currently pursuing an M.B.A. in health administration at Suffolk University.



Kristen Harding Grants Associate 617.279.2240, ext. 320 KHarding@tmfnet.org

Ms. Harding is a recent addition to the Grants Division. As a new associate, she has taken on the responsibility of manag-

ing the online grant application database. She is an essential component in the overall maintenance and design of the database and webpage. Ms. Harding provides additional support for the grant programs and performs a wide variety of administrative tasks to ensure that the everyday operations run seamlessly.

Other Professional Staff

Drawing from a talented 88-member staff, the Research Grants Division is assisted by Finance, Information Technology, Communications and Operations professionals.

The Medical Foundation Board of Directors

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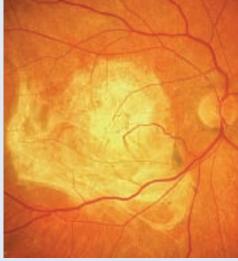
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Nelson A. Valverde, M.B.A.

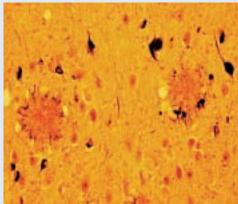
Ann Webster, Ph.D.

Gordon Williams, M.D.

Consulting Work



In our 50-year history of funding biomedical research, we have established a network of scientists who donate their time to serve on Scientific Review Committees as well as connect us with investigators at the N.I.H., academic medicine and pharmaceutical companies. When clients wish to learn more about a specific field of medical research, we interview leaders in the field, contact relevant governmental and nonprofit funders and consult with investigators as we review the medical literature.



Top: Retinal image of age-related macular degeneration **Bottom:** Alzheimer's disease brain tissue

In 2008, we worked with a Maryland trust that was charged with the mission to distribute \$80 million to support medical research with the long term goal of advancing patient care for those suffering from Alzheimer's disease or age-related macular degeneration. They turned to us to determine what kind of grants program would be the most effective in distributing their funds. Our recommendations were informed by months of interviewing experts in both fields, reviewing grant funding that is currently being offered by governmental and private sources and summarizing medical breakthroughs in both fields.

In another consulting initiative, the Klarman Family Foundation engaged us to interview leading investigators in the field of eating disorders and investigate current funding opportunities for researchers in this field. Our report highlighted the striking lack of current funding and the pressing need to develop new therapies. Thus, the Klarman Family Foundation launched their Grants Program in Eating Disorders Research and made their first awards in June 2008. Learn more about this new program on page 14.



HONORING AN OUTSTANDING BOARD MEMBER

In 2008, **Walter Guralnick**, **D.M.D.**, Professor of Oral and Maxillofacial Surgery, Emeritus, Harvard Medical School, stepped down from the Clinical Research Scientific Review Committee for the King Trust Postdoctoral Fellowship Program. Serving as Chair from 1998–2004, Dr. Guralnick offered invaluable guidance in selecting committee members and overseeing the review of fellowship applications. He currently serves on The Medical Foundation Board of Directors and was Board Chair in 2006 and 2007. For 15 years, Dr. Guralnick was Chief of Services and Chair of the Department of Oral and Maxillofacial Surgery at the Massachusetts General Hospital. He is a member of the National Institute of Medicine of the Academy of Sciences as well as a Harvard Medal Award Recipient. With great appreciation, we thank Dr. Guralnick for his leadership and service.

The Reach of Our Clients' Programs





For the 2008 grant programs, The Medical Foundation received 739 applications from 167 academic and research institutions throughout the United States and 23 applications from investigators working in other countries. Red dots on the map indicate cities from which applications originated.

International Applications

Australia Belgium

Canada

Israel

Italy

Netherlands Switzerland



The Medical Foundation is proud to be a founding member of the Health Research Alliance (HRA), an organization of nonprofit, non-governmental funders of medical research and training. Collectively, HRA members provide nearly \$1.5 billion in research awards each year, funding over 5,500 researchers annually. The 2008 HRA Meeting in Washington, D.C. explored philanthropy's role in encouraging scientific risk taking; offered workshops in international grantmaking and strategies in advancing career training in biomedical research; and featured outstanding speakers from the National Institutes of Health and academic institutions.

Sally McNagny, M.D., M.P.H. of The Medical Foundation served on the 2008 HRA National Conference Program Committee and will co-chair the 2010 HRA National Conference Program Committee with Dr. William Galey of the Howard Hughes Medical Institute. At the 2008 conference, Dr. McNagny and Marc Hurlbert, Ph.D. of the Avon Foundation presented a session about best practices in peer review and post-award monitoring. To date, HRA has grown to 35 member organizations in the United States and Europe.

Edward M. Kennedy Scholars Award in Health Policy Research and the Edward M. Kennedy Scholarships in Science, Medicine, Public Health and Allied Health Sciences

Awards of The Medical Foundation



Senator Edward Kennedy and Philip Caper, M.D. at a hearing before the Senate Health Subcommittee in 1971

TMF THE MEDICAL FOUNDATION

As part of The Medical Foundation's 50th anniversary celebration in 2007, the Board of Directors committed resources to create two new Awards in honor of Senator Edward Kennedy. Philip Caper, M.D., a Board member who served on Senator Kennedy's staff in the 1970s, spearheaded this initiative. Senator Kennedy's forty year commitment to improving health care for all Americans is consistent with The Medical Foundation's mission to help people live healthier lives through prevention, health promotion and support of biomedical and health policy research.

The Kennedy Scholars Award is intended to support one junior faculty investigator working in a public health Massachusetts academic research institution whose project may lead to improving the delivery of effective health care services at the community and population levels. The Award is in the amount of \$100,000 over two years.

The Kennedy Scholarship Awards were created to support two outstanding high school students in the Boston area who are interested in pursuing careers in the fields of medicine, science, public health or the allied health sciences. From 54 scholarship applications, two talented high school graduates each received a \$10,000 college scholarship award.

Recipients



Award Recipient

Dr. Amy Lischko holds a D.Sc. in health services research from Boston University and a B.S. and Masters of Public Health from the University of Massachusetts at Amherst. For 15 years, she worked in Massachusetts state government, managing research and policy activities including oversight of the recent health care reform legislation. In 2007, Dr. Lischko joined the Tufts University School of Medicine faculty as Assistant Professor in the Department of Public Health and Family Medicine. She also provides consulting services to organizations and states including the National Governor's Association and Academy Health in the area of health care reform.

Total health care expenditures in Massachusetts reached \$43 billion in 2004 representing an increase of 35 percent from 2000. A major cause of rising health care costs is over-treatment, defined as the overuse or incorrect use of medical procedures, tests, and specialist care. With

support from the Kennedy Scholars Award, Dr. Lischko will identify the extent of over-treatment through unwarranted variation in the provision of inpatient and outpatient care in Massachusetts; study the influence that provider capacity has on over-utilization; and develop strategies that policymakers and regulators can use to constrain health care costs through the reduction of over-treatment. Her long term goal is to bridge the gap between research and policy by making academic research more accessible to policymakers.

2008 Recipients

Kennedy Scholars Award

Amy Lischko, D.Sc.

Department of Public Health
and Family Medicine

Tufts University School of Medicine

Kennedy Scholarship Awards Huajin Li John O'Bryant High School for Science and Math

Paoli Roman Fenway High School

"The Kennedy Awards are a meaningful way to recognize Senator Kennedy's 40 years of work toward improving U.S. health care policy. Working for Senator Kennedy was a great honor, a great responsibility and one of the most challenging and rewarding periods of my career."

Philip Caper, M.D., Board of Directors, The Medical Foundation





Davis Foundation Postdoctoral Fellowship Program in Eating Disorders Research

A Program of the Hilda and Preston Davis Foundation



Program Officer
Jeanne Brown
JBrown@tmfnet.org

Program EligibilityPostdoctoral fellows within their

first three years of training

Geographic Eligibility United States

Research Focus

Basic research with direct relevance to the biological causes of eating disorders

Award

Three-year fellowships in the amount of \$141,000-\$177,000

The Hilda and Preston Davis Foundation was established "...to advance the development of all areas of the lives of children and young adults... with special emphasis... on those suffering from eating disorders." After consultation with academic and governmental experts in eating disorders research, the Davis Foundation has elected to direct a portion of its philanthropic resources towards young scientists who are just starting their research careers. By attracting postdoctoral fellows to the field, each award may lead to a lifetime of career contributions to eating disorders research. The long term goal of the program is to accelerate medical

research discoveries that will lead to improved therapies for anorexia nervosa and bulimia nervosa.

The Program will be announced to the research community in January, 2009 with applications due on April 2, 2009. Up to ten three-year awards will be made to postdoctoral fellows working in nonprofit academic, medical and research institutions in the United States.



Jeffrey Friedman, M.D., Ph.D. Chair, Davis Foundation Scientific Review Committee

Dr. Friedman will chair the first Davis Foundation Fellowship Scientific Review Committee meeting in May 2009. He is the Marilyn M. Simpson Professor at Rockefeller University and an investigator at the Howard Hughes Medical Institute. He will work with The Medical Foundation in building the Scientific Review Committee and developing the Program's Application Guidelines.

For the past two decades, Dr. Friedman has studied the molecular mechanisms that regulate food intake and body weight. In 1994, he and his colleagues identified a gene in mice and humans that codes for a hormone he later named leptin, after the Greek word leptos, for thin, Recently, his research has suggested that a number of brain regions, including those known to regulate emotional behavior and higher brain functions, modulate how leptin impacts the hypothalamus (a specific area of the brain). The Friedman team has also shown that the neural circuits that respond to leptin are extremely dynamic and that leptin has rapid and dramatic effects on the number of synapses (connections between nerve cells) found on key neural pathways that regulate feeding. Ultimately, his work may clarify the complex relationships among appetite regulation, emotional behavior and body weight.

Goldhirsh Foundation Brain Tumor Research Awards Program

A Program of The Goldhirsh Foundation

The Goldhirsh Foundation was established by

Bernard A. Goldhirsh in 2000, shortly after he

innovative brain tumor research. Prior to his

was diagnosed with brain cancer. He envisioned a grants program that would fund high-risk

death in 2003, he directed the Scientific Advisory

Committee to identify those rare scientists who

outside the box." Mr. Goldhirsh's own career

have brilliant ideas as well as a style of "thinking

exemplified this entrepreneurial spirit. He launched

two multi-million dollar magazines-Sail and Inc.,

the latter becoming one of the most successful



To date, the Goldhirsh Foundation has awarded \$14.4 million to outstanding investigators working in U.S. and Israeli research institutions. Review of funded research projects revealed that 15 involved basic brain tumor biology, 24 were categorized as translational research and six projects were clinical studies. Some of the translational research projects investigated mechanisms by which glioblastoma tumors invade normal tissue, novel drug delivery systems and new imaging techniques. Taken as a group, Award recipients were highly productive, publishing 627 papers and advancing medical discoveries in brain tumor biology and treatment.



Bernard Goldhirsh, Founder

Program Officer

LLam@goldhirshfoundation.org

Program Eligibility

Investigators working in nonprofit research organizations

Geographic Eligibility

United States, Canada and Israel

Research Focus

Clinical and basic science research relevant to brain tumors

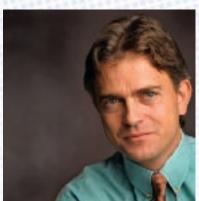
Three-year awards (\$600,000) and one-year awards (\$100,000)

Recipients

magazines in history.



Yael Mardor Ph D



Erwin Van Meir, Ph.D.

Dr. Mardor completed her Ph.D. in Nuclear Physics at Tel Aviv University in Israel in collaboration with Brookhaven National Lab in 1997. She is currently the Chief Scientist and Head of the MR Research Group at the Advanced Technology Center at Sheba Medical Center and Senior Lecturer at Tel-Aviv University Medical School. Dr. Mardor is investigating the use of nanoparticles as drug carriers that may allow slow drug release and targeted drug delivery for brain tumors. Her team will deliver these particles directly into the brain via intracranial catheters using a convection-enhanced drug delivery system that minimizes systemic toxicity.

Dr. Van Meir received his Ph.D. in Molecular Virology from the University of Lausanne in Switzerland in 1989. He is currently the Director of the Winship Cancer Institute Brain Tumor and Molecular Pathways and Biomarkers Programs at Emory University. His earlier research has shown that a specific protein (Gal3) induces the death of a variety of tumor cells, including brain tumor cells, but does not damage normal cells. With support from the Goldhirsh Foundation, he will assess whether Gal3 can be used for glioma therapy in mice. These preclinical studies may lead to the development of novel therapeutic agents that may someday be tested in human subjects.

2008 Award Recipients

Three-Year Award (\$600,000)

Keith Ligon, M.D., Ph.D.

Dana-Farber Cancer Institute

John Sampson, M.D., Ph.D.

Erwin Van Meir, Ph.D.

Emory University

Wei Zhang, Ph.D.

The University of Texas M.D. Anderson Cancer Center

One-Year Awards (\$100,000)

Jef Boeke, Ph.D., D.Sc.

Johns Hopkins University

School of Medicine

Joseph Costello, Ph.D. University of California, San Francisco

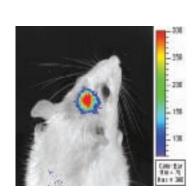
Calvin Kuo, M.D., Ph.D.

Stanford University

Yael Mardor, Ph.D.

Chaim Sheba Medical Center

Kyle Weaver, M.D. Vanderbilt University







Wendy Chaite, Esq., LRF Founder and President and Jacqueline Reinhard, Executive Director (foreground)

Program Officer Jeanne Brown JBrown@tmfnet.org

LRF Postdoctoral Fellowship **Awards Program Eligibility** Postdoctoral fellows within their first three years of training

Geographic Eligibility Worldwide

Research Focus Clinical and basic science research relevant to the lymphatic system

Two-year fellowships ranging from \$81,000-\$95,000

The LRF Additional Support Awards fund N.I.H. F32 Fellows working in the United States whose research is relevant to the lymphatic system. These two-year awards are in the amount of \$20,000.



Lymphatic Research Foundation (LRF) Postdoctoral Fellowship Awards and LRF Additional Support Awards for N.I.H. Funded F32 Postdoctoral Fellows

Programs of the Lymphatic Research Foundation

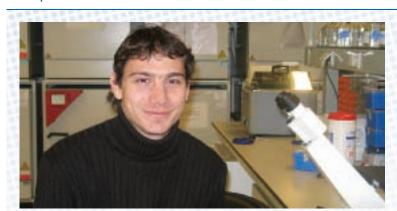
Wendy Chaite, Esq., established the Lymphatic Research Foundation (LRF) in 1998 to advance research of the lymphatic system and to find the cause of and cure for lymphatic diseases, lymphedema, and related disorders. In only a few years, the Foundation created successful alliances with academic institutions; professional associations; industry; and government, especially the National Institutes of Health (N.I.H.). As momentum grew, the scientific community has responded with greater attention to the lymphatic system and the key role it plays in diseases afflicting millions.

For LRF, 2008 has been an eventful year. Jacqueline Reinhard, whose professional career spans twentyfive years in both the non-profit and for-profit sectors, joined LRF as Executive Director. LRF is also pleased to announce the establishment of the first ever endowed academic chair dedicated to advancing scientific and medical knowledge of the

lymphatic system at Stanford University. LRF played an instrumental role in creating the Allan and Tina Neill Professorship of Lymphatic Research and Medicine. Stanley G. Rockson, M.D., Chair of LRF's Scientific/Medical Advisory Board, is Stanford's inaugural appointee to the professorship.

Since 2005, LRF has partnered with The Medical Foundation to create and manage all aspects of the LRF grant programs. The goal of these programs is to expand and strengthen the pool of outstanding junior investigators in the field of lymphatic research. These grants support researchers who have recently received their doctorates, a critical point in career development when young scientists choose their lifelong research focus. Over time, the programs will contribute to future leadership. fostering discoveries that will lead to therapeutic advances.

Recipients



Xabier Lopez Aranguren, Ph.D., Award Recipient

Dr. Aranguren received his Ph.D. in Biochemistry in 2006 from the University of Navarra in Pamplona, Spain. He is currently a postdoctoral fellow in the Molecular and Cellular Medicine Department, Center for Molecular and Vascular Biology, Katholieke Universiteit Leuven in Belgium under the mentorship of Dr. Aernout Luttun.

What triggers adult stem cells to change into specialized cells that become part of new lymphatic vessels during wound healing? Through the support of the LRF Fellowship Program, Dr. Aranguren will investigate which genes and proteins play a role in this process called stem cell differentiation. His long term goal is to find ways to generate new lymphatic vessels from stem cells that will lead to promising therapies for patients who are in need of new lymphatic vessels.

2008 Award Recipients

Xabier Lopez Aranguren, Ph.D. Katholieke Universiteit Leuven (Belgium)

Damien Gerald, Ph.D. Beth Israel Deaconess Medical Center

Sunkuk Kwon, Ph.D. **University of Texas** Health Science Center, Houston

Deborah Munroe Noonan Memorial Research Fund Bank of America, Trustee

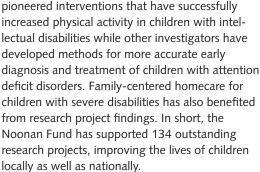
A Program Sponsored by Philanthropic Management Bank of America, Boston, MA

Bank of America



The Deborah Munroe Noonan Memorial Research Fund, established in 1947 by Frank M. Noonan in memory of his mother, was created to improve the lives of children who were left crippled by polio. As Trustee of the Fund, Bank of America later broadened the scope to include support of innovative clinical research or demonstration projects whose results may improve the quality of life for children with disabilities. The Noonan Fund plays a critical role in supporting an area of research where funding is scarce. Former award recipients have

pioneered interventions that have successfully increased physical activity in children with intellectual disabilities while other investigators have developed methods for more accurate early diagnosis and treatment of children with attention deficit disorders. Family-centered homecare for children with severe disabilities has also benefited from research project findings. In short, the Noonan Fund has supported 134 outstanding research projects, improving the lives of children





Jeanne Brown JBrown@tmfnet.org

Program Eligibility Investigators working in non-profit organizations

Geographic Eligibility Greater Boston

Research Focus Clinical research or demonstration projects relevant to children with disabilities

One-year awards in the amount of \$75,000



Marji Erickson Warfield, Ph.D. will Chair the 2009 Review Committee of the Noonan Fund Program. She is a Senior Scientist at Brandeis University's Heller School and the Interim Director of the Starr Center for Mental Retardation and the Lurie Institute for Disability Policy. Her research has focused on longitudinal studies assessing the development and adaptation of children with developmental disabilities and their families. She is the Co-Principal Investigator of the Early Intervention Collaborative Study (EICS) which is the longest running study of young children with special needs and their families in the United States. In addition, she has conducted numerous evaluations of early childhood programs investigating implementation, outcome, and efficiency questions.

Recipients



Award Recipient

Dr. Leslie received an M.D. in 1989 from the University of North Carolina at Chapel Hill and her M.P.H. in 2006 from San Diego State University. In 2007, she joined the faculty at Tufts University School of Medicine where she is Associate Professor of Medicine and Pediatrics and Director of the Tufts University Clinical and Translational Sciences Institute's Center for Aligning Researchers and Communities for Health.

The number of young children in the United States under the age of five in foster care is staggering and growing larger each year. Many of these children are in need of early intervention programs that diagnose and manage developmental and behavioral disabilities. With the support of the Noonan Fund, Dr. Leslie's research focuses on the identification and treatment of developmental and mental health needs of children and adolescents in Massachusetts. After collecting information from state agencies and foster parents, she will use this data to inform approaches aimed at decreasing barriers to accessing early intervention services. The long-term goal of her research is to improve the quality of life for the vulnerable population in the child welfare system.

2008 Award Recipients

Marina Bers, Ph.D. **Tufts University**

Elizabeth Caronna, M.D. **Boston Medical Center**

Srilakshmi Gnanasekaran, M.D., M.P.H. Massachusetts General Hospital

Laurel Leslie, M.D., M.P.H. **Tufts Medical Center**

Ellen Lipstein, M.D. Massachusetts General Hospital

Naomi Steiner, M.D. **Tufts Medical Center**









Harvey P. Hood II



Charles H. Hood I

Hood Foundation Child Health Research Awards Program

A Program of the Charles H. Hood Foundation

Program Officer
Gay Lockwood
GLockwood@tmfnet.org

Program Eligibility Investigators within five years of their first faculty appointment

Geographic EligibilityNew England

Research Focus

Clinical, basic science and health services research relevant to pediatric diseases

Award

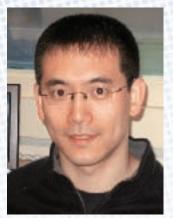
Two-year awards in the amount of \$150,000

The history of the Charles H. Hood Foundation demonstrates a century-long tradition of commitment to community and child health. In the late 1800's, Charles H. Hood was a pioneer in the dairy industry, making important advancements in the sanitary production and distribution of milk. By introducing pasteurization, his company significantly improved the lives of thousands of New England children. His interest in science and his commitment to the health of New England families inspired his son, Harvey P. Hood II, to formally incorporate the Charles H. Hood Foundation in 1942 to improve the health and quality of life for children in New England. His son, Charles H. Hood II, assumed the presidency of the Foundation in 1974 and continues to direct the activities of the Foundation's trustees. Grants support junior faculty involved in clinical, basic science, public health, health services

and epidemiology research that are hypothesisdriven and relevant to pediatric diseases.

A review of the 180 Awards funded in the past 15 years revealed that investigators conducted research that addressed the major causes of sickness and death in children—infectious diseases; endocrine and nutritional problems; cancer; disorders involving the heart; diseases of the nervous, respiratory, immune and digestive systems; and congenital malformations. The majority of projects involved laboratory-based investigation while 30% of investigators were engaged in translational, clinical or health services research. In sum, the Hood Foundation has funded outstanding New England pediatric investigators whose research discoveries continue to advance child health.

Recipients



Yong Xiong, Ph.D. Award Recipient

Dr. Xiong studied physics at Tsinghua University in Beijing, China. He received his Ph.D. in Biophysics at Ohio State University in 2000 and carried out postdoctoral research at Yale University. Dr. Xiong joined the faculty as Assistant Professor in the Department of Molecular Biophysics and Biochemistry at Yale University in 2006.

Fanconi anemia (FA) is a childhood disease characterized by multiple devastating symptoms, which include bone marrow failure, developmental abnormalities, and a high incidence of cancer. Recent evidence suggests that abnormal proteins involved in

DNA repair may be a critical link to the underlying basis of FA. With Hood Foundation support, Dr. Xiong's laboratory will undertake biochemical studies of these FA proteins, identify their interaction complexes and determine their crystal structures. Information gained from this research may lead to new medical advances that provide improved anticancer treatment for children with Fanconi Anemia and possibly a broader population of children afflicted with cancer.

2008 Award Recipients

Sumita Bhaduri-McIntosh, M.D., Ph.D. Yale University

Suzy Bianco, Ph.D.Brigham and Women's Hospital

Nadine Gaab, Ph.D. Children's Hospital Boston

Hetal Kocinsky, M.D.Yale University School of Medicine

Bernhard Kühn, M.D. Children's Hospital Boston

Michael Silverstein, M.D., M.P.H. Boston Medical Center

Brian Tseng, M.D., Ph.D.Massachusetts General Hospital

Lauren Wise, Sc.D., M.Sc.Slone Epidemiology Center at Boston University

Yong Xiong, Ph.D. Yale University

Robert Leet and Clara Guthrie Patterson Trust Postdoctoral Fellowship Program in Brain Circuitry.

Bank of America, Trustee

A Program Sponsored by Philanthropic Management Bank of America, Hartford, CT

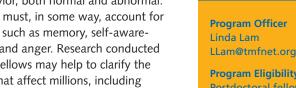
Bank of America



The Robert Leet and Clara Guthrie Patterson Trust was created to improve healthcare through support of medical research. Since 1980, the Trust has made awards to outstanding research scientists in a broad range of disciplines. In 2005, Bank of America contracted with The Medical Foundation to create a new grants program for the support of postdoctoral biomedical investigators in the research area of brain (neural) circuitry.

Neural circuitry focuses on the relationship between the intricate organization of brain wiring and the

emergence of behavior, both normal and abnormal. Thus, neural circuits must, in some way, account for high-level functions such as memory, self-awareness, language, joy and anger. Research conducted by Patterson Trust Fellows may help to clarify the causes of diseases that affect millions, including schizophrenia, mood disorders, degenerative brain disorders such as Alzheimer's disease and Parkinson's, epilepsy, and autism.



Program Eligibility Postdoctoral fellows within their first five years of training

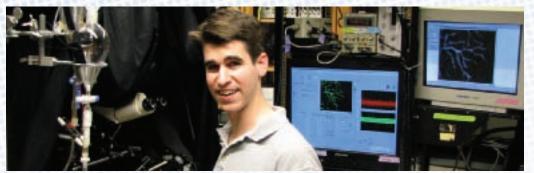
Geographic Eligibility Connecticut, New Jersey and New York

Research Focus Research with direct relevance to brain circuitry

Award

Two-year fellowships in the amount of \$89,000-\$104,000

Recipients



Eugene Civillico, Ph.D., Award Recipient

Dr. Civillico first became interested in neural network function while completing his honors thesis on the computational modeling of memory effects as an undergraduate in the Mind, Brain, and Behavior program at Harvard University. After teaching high school math and science for one year, he earned a Ph.D. in neuroscience in the lab of Dr. Diego Contreras at the University of Pennsylvania School of Medicine. In 2006, he began his postdoctoral fellowship in Dr. Samuel Wang's laboratory at Princeton University, studying neural computation in the cerebellum using optical and biophysical approaches.

Purkinje cells, the largest neurons in the brain, play a vital role in motor coordination. These cells possess elaborate branching structures (see image) having hundreds of thousands of small bumps, each of which is a site for input from other neurons. Dr. Civillico's experiments make use of a custom-built apparatus which is capable of exciting neuronal branches in spatial patterns produced by passing an ultraviolet laser through a vibrating crystal which allows it to visit up to 20,000 locations in one second. With these complex stimuli as input, Dr. Civillico measures the fluctuating output of the cell both electrically, with a tiny glass electrode sealed onto the cell and chemically, using laser-scanning imaging of a calcium-sensing fluorescent dye which is loaded into the cell. His findings have relevance to a variety of diseases that affect movement and coordination such as autoimmune diseases, genetic mutations, and sporadic ataxias, and potentially to cognitive disorders such as autism and schizophrenia.

2008 Award Recipients

Albert Ayoub, Ph.D. Yale University

Eugene Civillico, Ph.D. **Princeton University**

Ebru Demir. Ph.D. **Cold Spring Harbor Laboratory**

Theofanis Karayannis, M.Sc., D.Phil. **New York University**

Duda Kvitsiani, Ph.D. **Cold Spring Harbor Laboratory**

Romesh Kumbhani, Ph.D. **New York University**

Xin Li, Ph.D. **New York University**

Hysell Oviedo, Ph.D. **Cold Spring Harbor Laboratory**

Taro Toyoizumi, Ph.D. Columbia University

Tim Vogels, Ph.D. Columbia University



Cerebellar purkinje cell



Richard and Susan Smith. Co-Presidents

Smith Family Awards Program for Excellence in Biomedical Research

A Program of The Richard and Susan Smith Family Foundation

Program Officer
Gay Lockwood
GLockwood@tmfnet.org

Eligibility

Investigators within two years of their first independent faculty appointment

Geographic EligibilityMassachusetts, Yale University
and Brown University

Research Focus
Biomedical research

Award

Three-year awards in the amount of \$300,000

The Smith Family Foundation created a medical research grants program in 1991 to support the next generation of outstanding researchers whose scientific discoveries will improve patient care. The intent of the Award is to provide newly independent faculty the opportunity to demonstrate their creativity and become highly competitive for major national funding. Since 1992, the Program has funded 109 Award recipients and provided \$16.6 million in research support. The Smith Family Foundation welcomes contributing partners to support the Awards Program. The Jessie B. Cox Charitable Trust, the Dolphin Trust, the Richard Allan Barry Fund at the Boston Foundation, the Ludcke Foundation, the Nancy Lurie Marks Family Foundation, and several anonymous donors have provided past and current support.

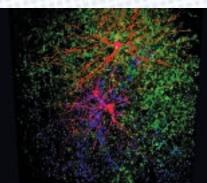
In 2008, The Medical Foundation convened a Focus Group to evaluate the Program formerly known as the Smith Family New Investigator Awards Program. Experts from the Howard Hughes Medical Institute, the Burroughs Wellcome Fund and the N.I.H. participated as did several former

Smith Family Award recipients and Ed Harlow, Ph.D., Chair of the Scientific Review Committee. The group was struck by the impressive career outcomes of the Smith Award recipients. For example, all but one Award recipient has remained in research; 81% received at least one N.I.H. R01; and the collective publication records of the 46 Recipients who received their Awards between 1992 and 1999 include 1,443 papers, with more than 30% appearing in top-ranked journals. Thus, the Focus Group encouraged the Smith Family Foundation to continue the Program and recommended that funding be extended from two to three years. Because biomedical discoveries often involve extensive collaboration, it was also recommended to broaden eligibility to include investigators from Departments of Chemistry, Bioengineering and Mathematics. The Smith Family Foundation incorporated these changes into the 2008 Grant Cycle and renamed the Program, "the Smith Family Awards Program for Excellence in Biomedical Research."

Recipients



Beth Stevens, Ph.D., Award Recipient



Visual system nerve cells

Dr. Stevens completed her Ph.D. in Neuroscience in 2003 at the University of Maryland, College Park and her postdoctoral fellowship at Stanford University School of Medicine in 2008. She established her independent laboratory in the Neurobiology Program at Children's Hospital Boston with a faculty appointment as an Assistant Professor at Harvard Medical School in 2008.

In the developing brain, synapses—hundreds of thousands of connections among neurons—are continually being "pruned" as the brain grows and remodels. Recent evidence suggests that this normal removal of synapses may be inappropriately triggered in neurodegenerative diseases. With support from the Smith Family Award, Dr. Stevens will investigate the role of a complement protein, C1q in "tagging" synapses for elimination in the developing and diseased brain. Understanding how C1q normally eliminates synapses during development could provide valuable insight into the mechanisms underlying synapse loss and dysfunction in neurodegenerative diseases such as Alzheimer's disease and Lou Gehrig's disease.

2008 Award Recipients

Zolt Arany, M.D., Ph.D. Beth Israel Deaconess Medical Center

Suzanne Paradis, Ph.D.
Brandeis University

John Rinn, Ph.D.
Beth Israel Deaconess
Medical Center

Tobias Ritter, Ph.D.Harvard University

Beth Stevens, Ph.D. Children's Hospital Boston

Charles A. King Trust Postdoctoral Fellowship Program

Bank of America, Co-Trustee

A Program Sponsored by Philanthropic Management Bank of America, Boston, MA

The Charles A. King Trust was established to support the "investigation of diseases of human beings, and the alleviation of human suffering through the improved treatment of human diseases." In keeping with these principles, the King Trust today supports postdoctoral fellows in the basic sciences as well as clinical and health services research. Bank of America, Edward Dane and Lucy West serve as Co-Trustees of the Charles A. King Trust.

Two scientific review committees evaluate all proposal submissions. In 2008, Deborah Cotton, M.D., M.P.H., Professor of Medicine and Epidemiology at Boston University School of Medicine and School of Public Health chaired the Clinical/Health Services Research Committee. She is also Chief Medical Officer of the Clinton Foundation

HIV/AIDS Initiative. H. Robert Horvitz, Ph.D. chaired the Basic Science Committee. He is Professor of Biology at M.I.T., a Howard Hughes Medical Investigator and a 2002 Nobel Laureate in Physiology or Medicine.

The Medical Foundation Fellowship Program began in 1957 with support from the United Way, the Permanent Charity Fund of Boston (now, the Boston Foundation), the Massachusetts Department of Public Health and private foundations. When the Charles A. King Trust became the major donor in 1979, the program was renamed but has received invaluable support from other contributors. Because of the long-standing commitment of the Charles A. King Trust and others, 746 scientists have received these fellowship awards.

Current and Former Contributors to the Fellowship Program

Alice Willard Dorr Foundation Bushrod H. Campbell and Adah F. Hall Charity Fund Charles H. Hood Foundation Eastern Associated Foundation Ellison Foundation First National Bank of Boston, Trustee of Charitable Trust **General Cinema Corporation** Harold Whitworth Pierce Charitable Trust Humane Society of the Commonwealth of Massachusetts **Hvams Foundation** John W. Alden Trust June Rockwell Levy Foundation Marion L. Decrow Memorial Foundation Nelson E. Weeks Fund of the

Recipients



Eduardo Torres, Ph.D., Award Recipient (Basic Science Research)



Joshua Roffman, M.D., Award Recipient (Clinical Research)

Dr. Torres received his B.S. in Physics from the City College of New York and his Ph.D. in Physiology and Biophysics from Cornell University. In 2004, he began his postdoctoral fellowship at M.I.T. under the mentorship of Dr. Angelika Amon. Dr. Torres has recently engineered cells to become aneuploid—the state in which cells have an abnormal number of chromosomes. He is searching for genes that play an important role in a cell's ability to tolerate aneuploidy. Since most human tumors are aneuploid, his research may discover genes that can serve as targets of new chemotherapeutic medications.

Dr. Roffman received his B.A. from Amherst College, his M.D. from the University of Maryland School of Medicine and additional training in translational neuroscience research at the National Institute of Mental Health through the Howard Hughes Medical Institute Cloister Program. Dr. Roffman completed residency training in adult psychiatry at Massachusetts General Hospital (MGH) and McLean Hospital, and is currently a postdoctoral fellow at MGH under the mentorship of Dr. Donald C. Goff. Dr. Roffman is using neuroimaging techniques to understand the effects of schizophrenia risk genes directly on brain function. His work focuses primarily on genes that regulate folate metabolism, which in turn influences many biochemical reactions that have been implicated in schizophrenia, including the expression of other schizophrenia-related genes. The long term goal of his research is to develop improved treatments for schizophrenia.

2008 Award Recipients

Vikas Bhandawat, Ph.D. Harvard Medical School

Melanie Brinkmann, Ph.D. Whitehead Institute for Biomedical Research

Craig Ceol, Ph.D. Children's Hospital Boston

Daniel Denning, Ph.D. Massachusetts Institute of Technology

Matthieu Giraud, Ph.D.
Joslin Diabetes Center

Erica Larschan, Ph.D.Brigham and Women's Hospital

Carlos Lopez, Ph.D. Harvard Medical School

Michele Markstein, Ph.D. Harvard Medical School

Catherine Merrick, Ph.D. Harvard School of Public Health

Satoshi Namekawa, Ph.D. Massachusetts General Hospital

Kimmie Ng, M.D., M.P.H. Dana-Farber Cancer Institute

Joo-Seop Park, Ph.D. Harvard University

Joshua Roffman, M.D. Massachusetts General Hospital

Dan Stoleru, M.D., Ph.D. Harvard Medical School

Eduardo Torres, Ph.D. Massachusetts Institute of Technology

Program Officer Linda Lam LLam@tmfnet.org

Permanent Charity Fund

Theodore Edson Parker Foundation United Way of Massachusetts Bay

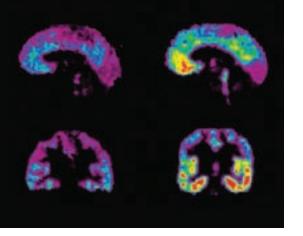
Program Eligibility M.D. and Ph.D. researchers who are pursuing additional training prior to their first faculty appointment

Geographic Eligibility Massachusetts

Research Focus Basic science, clinical and health services research

Award

Two-year fellowships ranging from \$86,000-\$100,000





Klarman Family Foundation Grants Program in Eating Disorders Research

A Program of The Klarman Family Foundation

Program Officer
Gay Lockwood
GLockwood@tmfnet.org

Program Eligibility Faculty at nonprofit research institutions

Geographic Eligibility

Research Focus Research with direct relevance to the basic biology of eating disorders

Award

Two-year awards in the amount of \$400,000

The Grants Program in Eating Disorders Research was created to fund scientific investigation of the basic biology of anorexia nervosa, bulimia nervosa and binge eating disorder. Faced with the reality that few neuroscience investigators devote their research careers to this field, the short-term goal is to attract outstanding scientists from related disciplines to focus their attention on eating disorders research. The Program's long term goal is to accelerate progress in developing effective treatments that will significantly improve the lives of thousands of individuals.

Open to faculty throughout the United States, this new program was launched in the summer of 2007.

In early 2008, as part of a two-stage application process, 111 Initial Proposal Applications were received. Representing 75 separate academic and medical research institutions from 25 states, 23 applicants were then invited to submit a Full Proposal and eight award recipients were selected. For the upcoming 2009 grant cycle, the geographic eligibility has expanded to Canada and Israel. In April 2009, the current award recipients will convene in Boston to present their research findings to the Foundation's trustees and the Scientific Review Committee.

Recipients



Leslie Vosshall, Ph.D., Award Recipient

Dr. Vosshall received an A.B. in Biochemistry from Columbia University and a Ph.D. from Rockefeller University. She conducted postdoctoral training with Dr. Richard Axel at Columbia and returned to Rockefeller as an Assistant Professor in 2000. She was named an investigator of the Howard Hughes Medical Institute in 2008 and is a past recipient of awards from the John Merck, Beckman, and McKnight Foundations. Dr. Vosshall is the recipient of a 2002 Presidential Early Career Award for Scientists and Engineers, a 2005 New York City Mayor's Young Investigator Award for Excellence in Science and Technology, and a 2007 Blavatnik Award for Young Scientists.

People suffering from bulimia nervosa and binge eating disorder have a condition that induces them to overeat compulsively. Scientists have already shown that genes important for regulating food consumption in humans have the same role in the fruit fly. With support from the Klarman Family Foundation Award, Dr. Vosshall's long-term goal is to identify genes and neuronal circuits mediating the continuous feeding behavior of fruit fly larvae and to prove that this compulsive-like behavior can be decreased by specific pharmacological interventions. Her laboratory hopes to illuminate common principles underlying the regulation of feeding behavior that will be applicable to parallel processes occurring in human patients suffering from compulsive eating disorders.





Left: Fruit fly larva with blue-dyed food. Right: Fruit fly larva that has stopped eating (no blue dye)

2008 Award Recipients

Wade Berrettini, M.D., Ph.D. University of Pennsylvania

Catherine Dulac, Ph.D. Harvard University

Guido Frank, M.D. (supported by the Davis Foundation) University of Colorado at Denver

Angela Guarda, M.D.
Johns Hopkins University
School of Medicine

Alvaro Pascual-Leone, M.D., Ph.D. (supported by the Davis Foundation) Beth Israel Deaconess Medical Center

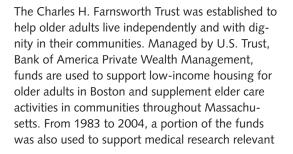
Maribel Rios, Ph.D.
Tufts University School of Medicine

Leslie Vosshall, Ph.D.The Rockefeller University

Jeffrey Zigman, M.D., Ph.D. U.T. Southwestern Medical Center

Charles H. Farnsworth Trust Scholars Program in Aging Policy Research

A Program of the Charles H. Farnsworth Trust



to the Trust's mission and 72 grants were awarded. With growing concern for the broader issues beyond medical care that impact the lives of older adults, the Farnsworth Trust funded Aging Policy Research from 2004 through 2008. The goal of the Scholars Program was to support research that would inform future policy decisions at the local and state levels

Recipients





Haiden Huskamp, Ph.D.

Dr. Huskamp completed a Ph.D. in Health Policy at Harvard Medical School in 1997 and joined the Harvard Medical School faculty in the Department of Health Policy. In 2002, she secured the prestigious National Institute for Mental Health Career Development Award followed by the Robert Wood Johnson Foundation Investigator Award in Health Policy Research in 2007.

With support from the Farnsworth Trust, Dr. Huskamp is exploring ways to improve end of life care. Many patients with terminal illness die in pain or with insufficient support. Although earlier referral to hospice helps patients and families, many patients are not encouraged to consider hospice care until the final days before death. Data suggest that nursing homes play a key role in the decision to send patients to hospice. Using data from a hospice serving five New England states, her research team will examine factors that influence the timing of hospice referral for nursing home residents. This study will shed light on ways to ensure earlier access to hospice care where appropriate among Massachusetts residents.

that impact older adults in Massachusetts.

Program Officer

Jeanne Brown JBrown@tmfnet.org

Program Eligibility

Faculty and Policy Analysts at nonprofit organizations

Geographic Eligibility Massachusetts

Research Focus

Aging policy research with direct relevance to state and local government

One-year awards in the amount of \$60,000



2008 Award Recipients

Haiden Huskamp, Ph.D. Harvard Medical School

Thomas Shapiro, Ph.D. The Heller School at Brandeis University

2008 Scientific Review Committees

Our Scientific Review Committee members donate hundreds of hours each year to read, discuss and ultimately recommend to clients the most outstanding applicants for each grant program. The Medical Foundation greatly appreciates their commitment.

Charles A. King Trust **Postdoctoral Fellowship Program** (BASIC SCIENCE RESEARCH)

H. Robert Horvitz, Ph.D. (Chair) Angelika Amon, Ph.D. Sangeeta Bhatia, M.D., Ph.D. Myles A. Brown, M.D. Brent Cochran, Ph.D. Bruce Demple, Ph.D. Robert Desimone, Ph.D. Catherine Dulac, Ph.D. Ulla Hansen, Ph.D. Daniel N. Hebert, Ph.D. Philip W. Hinds, Ph.D. Brigitte Huber, Ph.D. Joshua M. Kaplan, Ph.D. Ann Marshak-Rothstein, Ph.D. Andrew P. McMahon, Ph.D. Mary-Lou Pardue, Ph.D. Dagmar Ringe, Ph.D. Jonathan G. Seidman, Ph.D. Piali Sengupta, Ph.D. Pamela Sklar, M.D., Ph.D. Michael Starnbach, Ph.D. Gregory L. Verdine, Ph.D.

Charles A. King Trust Postdoctoral Fellowship Program (CLINICAL AND HEALTH SERVICES RESEARCH)

Denisa D. Wagner, Ph.D.

Deborah Cotton M.D., M.P.H. (Chair) Walter Guralnick, D.M.D. C. Robert Horsburgh, Jr., M.D., M.U.S. Gordon Huggins, M.D. David M. Kent, M.D. E. Greg Koski, M.D., Ph.D. E. John Orav, Ph.D.

Charles H. Farnsworth Trust Scholars Program in Aging **Policy Research**

Chris C. Streeter, M.D.

Joseph Coughlin, Ph.D. (Chair) William Apgar, Ph.D. Lillian Glickman, Ph.D. Robert Hudson, Ph.D. Ruth Palombo, Ph.D. Andrew Sum, Ph.D.

Charles H. Hood Foundation Child Health Research **Awards Program**

Charlotte M. Boney, M.D. (Chair) Howard Bauchner, M.D. David R. Beier, M.D., Ph.D. Jeffrey R. Gruen, M.D. Stella Kourembanas, M.D. Scott A Rivkees M.D. John R. Schreiber, M.D. Kevin Staley, M.D. John L. Sullivan, M.D. Dale T. Umetsu, M.D., Ph.D. Patrick M. Vivier, M.D., Ph.D.

Deborah Munroe Noonan Memorial Research Fund

Mary C. Cerreto, Ph.D. (Chair) Helene Dumas, M.S., P.T. Rani Elwy, Ph.D. Marji Erickson Warfield, Ph.D. Linda Grant, M.D., M.P.H. Robert A. Hoch, M.D., M.P.H. Judith S. Palfrey, M.D. James M. Perrin, M.D., FAAP Richard Robison, D.Min.

Edward M. Kennedy Scholars Award in Health **Policy Research**

John Z. Ayanian, M.D., M.P.P. Philip Caper, M.D. Karen M. Freund, M.D., M.P.H. Elizabeth Goodman, M.D. Jay Himmelstein, M.D., M.P.H.

Goldhirsh Foundation Brain Tumor Research Awards Program

Webster K. Cavenee, Ph.D. (Chair) Xandra O. Breakefield, Ph.D. E. Antonio Chiocca, M.D. Ph.D. David H. Gutmann, M.D., Ph.D. Linda M. Liau, M.D., Ph.D. Victor Ling, Ph.D. James M. Provenzale, M.D. Dinah Sah, Ph.D. W. K. Alfred Yung, M.D.

Klarman Family Foundation Grants Program in Eating Disorders Research

Edward Scolnick, M.D. (Chair) Cori Bargmann, Ph.D. Evan Deneris, Ph.D. Joel K. Elmquist, D.V.M., Ph.D. John D. E. Gabrieli, Ph.D. Walter H. Kave, M.D. Eleftheria Maratos-Flier, M.D. Emmanuel Mignot, M.D., Ph.D. Timothy H. Moran, Ph.D.

Lymphatic Research Foundation Awards Programs

Guillermo Oliver, Ph.D. (Chair) Michael Detmar, M.D. Thomas Glover, Ph.D. Miheala Skobe, Ph.D. Melody Swartz, Ph.D. Miikka Vikkula, M.D., Ph.D. David Zawieja, Ph.D.



Courtesy of G. Buzáski, Ph.D. Member, Patterson Trust Review Committee

Patterson Trust Fellowship Program in Brain Circuitry

Thomas M. Jessell, Ph.D. (Chair) J. Anthony Movshon, Ph.D. (Co-Chair) György Buzsáki, M.D., Ph.D. Pasko Rakic, M.D., Ph.D. Harvey A. Swadlow, Ph.D. David W. Tank, Ph.D. Leslie Vosshall, Ph.D.

Smith Family Awards Program for Excellence in Biomedical Research

Ed Harlow, Ph.D. (Chair) Michael Czech, Ph.D. David Lambright, Ph.D. Jacqueline Lees, Ph.D. Judy Lieberman, M.D., Ph.D. Bradford B. Lowell, M.D., Ph.D. John A. Porco, Jr., Ph.D. David T. Scadden, M.D. Brian S. Schaffhausen, Ph.D. Shannon Turley, Ph.D.



Participants at the Smith Family Foundation Scientific Poster Session