

INSIDIE SALK

Salk Researchers Find Receptor That Controls Obesity

A cellular receptor that balances the accumulation of fat and fat burning in the body may be a new target for anti-obesity and cholesterol-fighting drugs, according to a Salk Institute study.

The study, published in the April 18 issue of *Cell*, identified the function of this key receptor for the first time. The receptor, called PPAR α , was found to regulate how fat is used and could point the way to new treatments for obesity as well as its associated lethal medical complications: type II diabetes, cardiovascular disease, hypertension and atherosclerosis.

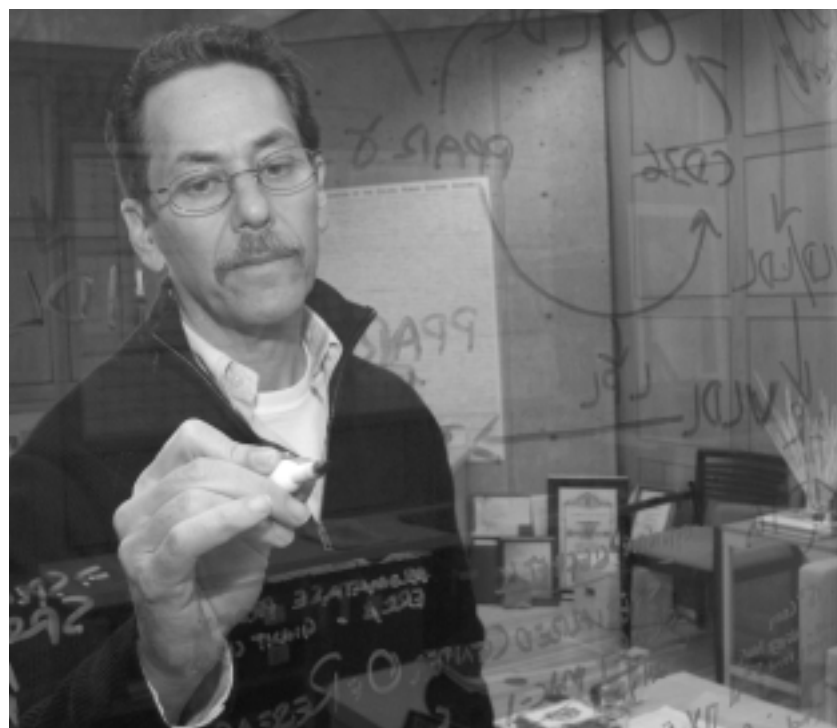
The study was led by Professor Ronald M. Evans, the March of Dimes Chair in Developmental and

Molecular Biology at the Institute, Howard Hughes Medical Institute investigator, and this year's winner of the March of Dimes Prize (see page 6). His team found that stimulating PPAR α — short for peroxisome proliferator-activated receptor —

depleted fat deposits in mice, while mice deficient in PPAR α were prone to obesity.

“We have long known that excess calories are warehoused in fat tissue for future use,” says Evans. “We also know that fat is released and consumed in times when energy is needed, such as from >>

Ron Evans and his team have opened new possibilities for the development of targeted anti-obesity drugs.



“By exploiting PPAR α , exercise or shivering from cold exposure. we hope to design This study shows us that drugs that can control PPAR α is an important regulator of this function. By exploiting how much fat is PPAR α , we hope to design drugs that can stored in the body.” control how much fat is stored in the body.”

Mice that had the active PPAR α gene did not show significant weight gain over a month's time, despite having a high-calorie, high-fat diet. Mice without the active gene, however, became obese. In addition, a short-term treatment of the obese mice with a molecule that activated PPAR α caused a dramatic reduction in fat in their tissues.

“PPAR α activates an array of genes that are required for fatty acid combustion and uncoupling, but does not activate genes that are involved in the formation and storage of fats,” says Evans. “We show then, that PPAR α coordinates fatty acid oxidation (burning) and energy uncoupling to regulate the use of fat.”

Obesity is now considered an epidemic in the United States. About 65 percent of Americans are considered overweight, and some states report an obesity rate of over 20 percent of their populations. The condition is strongly linked to some of the leading causes of death in the United States, including high blood pressure, heart disease and diabetes. Deaths due to overweight conditions kill more than 300,000 people a year, second only to tobacco-related diseases, according to the U.S. Centers for Disease Control.



John Thomas

Receptor Found That Guides Nerve Cells

■ In the developing brain, nerve cells make connections with one another by extending processes, often over long distances. The growing tips of these nerve cell processes are guided to their ultimate connection sites by molecular cues in the environment. In a study that was published in the March 17 edition of *Nature*, a Salk Institute research team has discovered a receptor-protein interaction that guides nerve cells along specific pathways.

John Thomas, professor of molecular neurobiology, working on the fruit fly *Drosophila*, found that a protein called Wnt5, a member of a large family of signaling molecules, binds to a receptor called Derailed, present on the surface of growing nerve cells. This binding guides the tips of these nerve cells to their final destination by preventing them from entering the wrong pathway.

The mechanism appears especially important for nerve cells that extend processes across the midline to make connections on the opposite side of the nervous system, a prominent class of nerve cells also found in vertebrates. Thomas' research could have implications for understanding birth defects as well as the regeneration of nerve cells.

Gene Transfer Reduces Levels of Key Alzheimer's Disease Protein

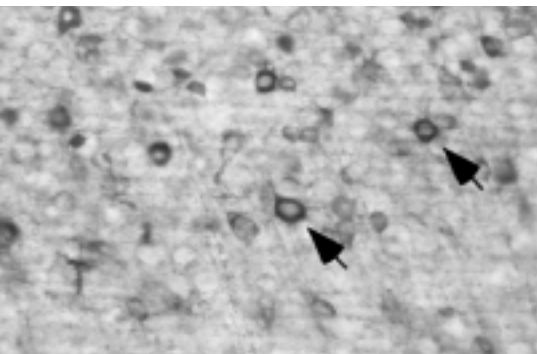
A Salk research team led by professors Fred H. Gage and Inder Verma has identified a molecule that naturally degrades a protein linked to Alzheimer's disease. The molecule, called neprilysin, appears to reduce the levels of that protein by nearly 50 percent when delivered by gene therapy.

Robert Marr, working under Verma and in collaboration with the laboratories of Gage, used a modified version of the HIV virus to transfer neprilysin to neurons of transgenic mice producing human beta-amyloid, which lowered levels of the harmful protein to half that found in untreated animals. Furthermore, treatment was shown to eliminate the degeneration that was caused by buildups of beta-amyloid. The study marks the first time researchers could directly show that neprilysin inhibits beta-amyloid accumulation in animals.

"This study supports a role for neprilysin in the regulation of beta-amyloid," says Verma. "It highlights the potential of using viral vectors for a gene therapy approach to treat, or perhaps prevent, Alzheimer's disease."

"What's significant about this is that neprilysin isn't a drug, but a molecule that controls levels of beta-amyloid naturally," says Gage. "This study is an example of how understanding the basic mechanisms of protein interaction can lead to new disease treatments."

Usually controlled by neprilysin, beta-amyloid exists in normal brains at far lower levels than seen in Alzheimer's disease. Its role in brain function is still in question, but scientists at the Institute and other institutions suspect it plays important roles in transporting sub-cellular structures and molecules from one end of a nerve cell to another.



Nepriylsin appears to reduce the levels of a protein linked to Alzheimer's by nearly 50 percent when delivered by gene therapy.

Institute Creates Employees' Council

■ The Salk Institute Employee Council, formed in January 2003, seeks to improve the quality of life at the Institute by fostering mutual understanding, recognition of staff contributions and respect for the contributions and worth of all members of the Institute. Members of the council, who represent all administrative departments, gather information and address ideas that impact employees.

The Council has focused on a range of issues, including the approval of a catastrophic leave benefit that allows employees to donate accrued vacation time to co-workers who have experienced an unforeseen medical emergency.

"We are excited about the council's work, and we look forward to getting new ideas and input from employees throughout the Institute about issues relevant to us all," says Charlie Garcia, who chairs the council.

To learn more about the council, please feel free to contact Beth Alton, director of human resources, at alton@salk.edu or at extension 1554. >>



Charlie Garcia

DEVELOPMENT NEWS

Major Gift Funds Mass Spectrometry Center

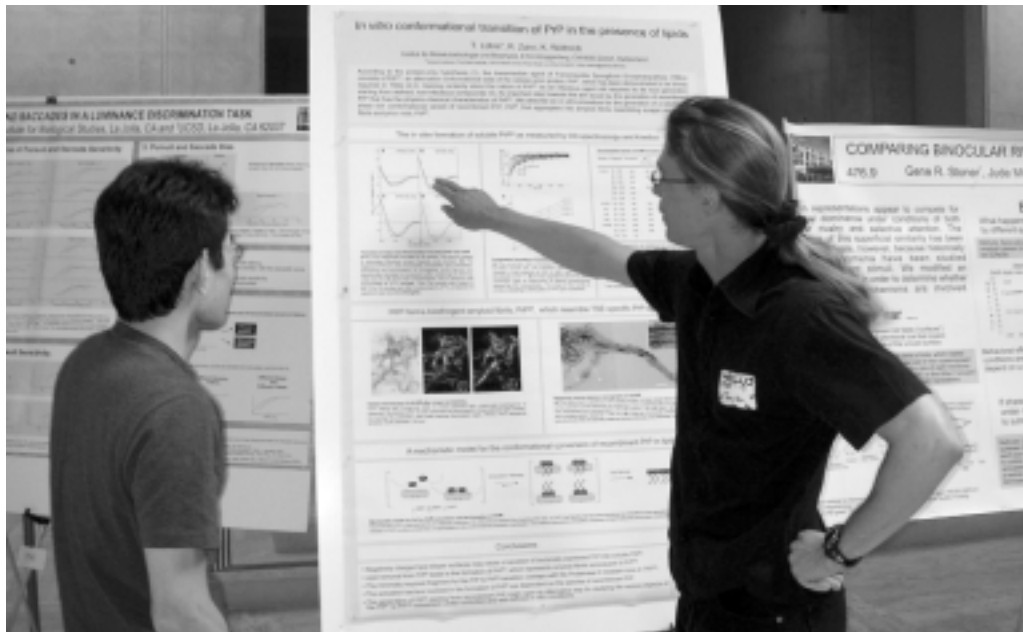
■ The Vincent J. Coates Foundation has made a \$550,000 matching gift to create a new mass spectrometry center at the Institute.

The Coates Center also received funding from Donald and Darlene Shiley and the Mary K. Chapman Foundation. These private gifts matched a grant from the National Science Foundation to establish the center.

The center will advance Salk research in a range of areas, including the Institute's focus on proteomics. Mass spectrometry is a powerful analytical technique that is used to identify unknown proteins and their chemical properties.

"The Vincent J. Coates Foundation Mass Spectrometry Center will be used by scientists across the Institute," said Bruce Stevenson, vice president for academic affairs at the Institute. "It will be an invaluable research tool as we work to address the complex problems related to understanding protein interactions and other questions."

Vincent J. Coates and his wife, Stella, have been important philanthropists at the Institute. They previously endowed a chair for Salk professor Charles Stevens in the Molecular Neurobiology Laboratory. Vincent Coates is the founder of Nanometrics, Inc., which is based in Milpitas, Calif. The company serves the global semiconductor industry as its primary market, and is a leading supplier to the flat panel display and magnetic recording head industries.



Graduate Students Pick Up Poster Session Awards

■ Two graduate students received best presentation awards at the Salk Institute's annual poster day, winning in a competitive field of 34 students, postdoctoral fellows, research associates and staff scientists. Four postdoctoral fellows also were included among the six winners.

Christian Carlson, who works with Associate Professor Matthew Weitzman in the Laboratory of Genetics, won for his presentation of a new role for a recently discovered protein complex called Mre11-Rad50-NBS1 that helps maintain DNA and repair broken strands of genetic material. The faculty judges commented that his poster "was well-presented, and reported a potentially novel role for the Mre11-Rad50-NBS1 complex in recognizing double-strand break DNA damage."

Wei Zhou, a Ph.D. candidate working with Professor Senyon Choe in the Structural Biology Laboratory, won for his poster displaying insights into the functional roles and relationships between calcium and certain potassium channels that maintain cellular health. The judges lauded his "nice use of structural information to gain insights into how calcium may regulate calcium-activated potassium, with interesting comparisons to the structure of calmodulins."

Calmodulins are ubiquitous proteins that constitute building blocks of certain enzymes and help regulate many cellular functions — they also are regulated by calcium.

The contest is held every spring to showcase the research conducted by scientists in training. In addition to facilitating exchange of scientific information, the poster sessions show Salk researchers how we are represented at national and international meetings, and

More than 100 graduate students participated in the Institute's annual poster day.

provide tangible recognition of presentation skills among future scientists. "The prizes also help students develop a *curriculum vitae* as they build their careers," says Sophia Colamarino, a postdoctoral fellow who heads the Society for Research Fellows, the Salk's key organization for graduate students and postdoctoral trainees.

Typically, between 90 and 100 Ph.D. candidates conduct their laboratory research with Salk Institute faculty. This year, about 14 students are conducting research while also attending medical school in UC San Diego's MD/Ph.D. program.

SALK IN THE NEWS



Francis Crick

■ A story in the April 29 issue of the *Wall Street Journal* focused on Salk researchers including the laboratory of **Fred H. Gage**, and their contributions to the “use it or lose it” theory of the brain related to memory and cognition.

■ A cell receptor called PPAR δ and Salk Professor **Ronald Evans** received a plethora of news coverage. The front page of the April 18 *San Diego Union-Tribune* discussed the cell receptor and its implications for helping obesity and cholesterol. The story was also picked up by NBC, CBS, KUSI, and the WB channel, as well as by the newspapers and radio stations in Canada.

■ While celebrating the 50th anniversary of the double helix discovery, the April 3 *Nature* also recognized **Francis Crick's** current scientific pursuits. The article, “Crick’s Immodest Ambitions,” discusses his work

regarding the biology of human consciousness. “Many great thinkers have turned to the human mind as the last great frontier of scientific endeavour,” the editorial states. “But few have done it with rigorous attention to the neuroscience—from single — unit physiology to cognitive psychology — that must inform any biologically based theory of consciousness.”

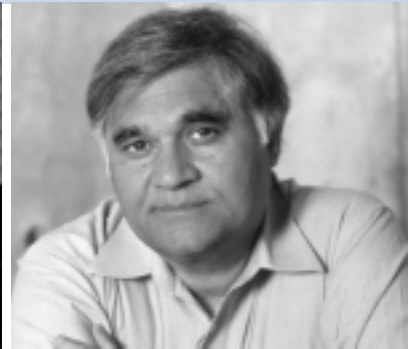
■ *Time* magazine’s special issue on the war in Iraq included a major article on the 80 most significant days in history. Among the days was Feb. 28, 1953, for Salk Distinguished Research Professor **Francis Crick** and his colleague James Watson’s discovery of the DNA double helix. This year’s anniversary of the discovery was featured in the *New York Times*’ Feb. 25 *Science Times* section and was the cover story for *Time*’s Feb. 17 issue; both focused on the impact of their work. The 50th anniversary also garnered coverage from *BBC*



Louis Kahn and Jonas Salk

News, the *Daily Telegraph*, the *Los Angeles Times*, the *Wall Street Journal*, the *Orange County Register* and other media outlets across the country.

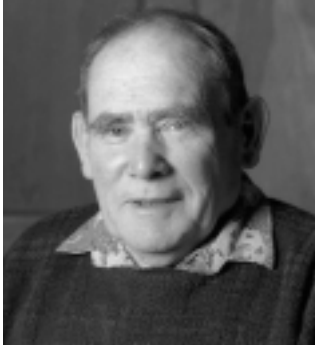
■ Nathaniel Kahn has written and directed a documentary about his father, **Salk architect Louis Kahn**. The documentary, “My Architect; A Son’s Journey,” follows the son’s quest to understand his father through his architectural achievements. The *New York Times* included a film festival review of the feature on March 29. Tadao Ando, architect and 2003 Kyoto Prize recipient, was featured in the Arts section of the *San Diego Union-Tribune* on March 3. The article highlighted **Louis Kahn** as an important influence on Ando’s work. Ando commented on the architectural importance of the Salk and visited the Institute later that week.



Inder Verma

■ *The Economist* discussed San Diego’s marketing of Biotech Beach as an attempt to best the nicknames of our northern Californian neighbors, Silicon Valley and Biotech Bay. The magazine mentioned the **Salk Institute** as one of three major biomedical research centers within walking distance of each other. This March 29 special report titled “Climbing the helical staircase: a survey of biotechnology” attributed the discovery of the DNA helical structure (made by **Crick** and Watson) to sparking the revolution in biotechnology.

■ The *BBC* and the *San Diego Union-Tribune* reported March 26 and 27, respectively, on a new study by Salk Investigators **Inder Verma** and **Fred H. Gage** that suggest ways to clear damaging amyloid plaques seen in Alzheimer’s disease. >>



Sydney Brenner

■ Adjunct faculty member **Carolee Barlow's** work on Gulf War syndrome and the NTE gene garnered coverage in *Bio World Today* and was broadcast on KNSD March 24, as well as on television stations throughout the country.

■ **Sydney Brenner** was acknowledged as an excellent keynote presenter for the Molecular Medicine Marketplace conference at the Cambridge Healthtech Institute on March 17 in *Women's Financial Network Online*, *National Hispanic Corporate Council*, *Yahoo Finance* and *PR Newswire*.

■ **Polly Murphy**, vice president for technology management, and **Bruce Stevenson**, vice president for academic affairs, were quoted in the March 13 *NatureJobs* regarding the future of San Diego's biotech community and its employment opportunities.

Professor **Ronald Evans**, the March of Dimes Chair in Molecular and Developmental Biology, has received the 2003 March of Dimes Prize in Developmental Biology for pioneering the molecular pathways that lead to the most common chronic diseases affecting humans, including heart disease and diabetes. He has also been awarded the Alfred P. Sloan Prize, one of three awards given annually by the General Motors Cancer Research Foundation (GMCRF).

The March of Dimes Prize is given every year to scientists whose research has profoundly advanced understanding of birth defects. The Sloan Prize is given for the most outstanding recent contribution in basic science related to cancer research.

Evans shares both prizes with Pierre Chambon, MD, director of the Institute for Genetics and Cellular and Molecular Biology in Strasbourg, France, for their work in discovering nuclear hormone receptors, revealing their structure and function, and defining their central role in human physiology.

Evans joins a list of notable scientists who have been awarded the prize



since the March of Dimes began the program in 1996, including the Salk Institute's Sydney Brenner, who received the prize last year. The March of Dimes created the prize as a tribute to Dr. Jonas Salk.

Evans has been cited for opening new areas of study in the machinery of hormones and cellular physiology especially those that exchange signals from the cell's nucleus. His work shows that these seemingly divergent aspects of physiology in the body employ a similar molecular logic to achieve their control. His research also suggests specific ways chemistry can be employed in the development of approved drugs such as Targretin and Panretin, used to fight certain cancers and exploratory therapeutics

for pediatric and adult onset diabetes as well as obesity, heart disease, and chronic inflammation. His research focuses on genetic switches, known as hormone receptors, that control sugar, salt and fat metabolism, metabolic rate and reproduction.

Salk Professor **Fred H. Gage** has been elected to the National Academy of Sciences. Election to membership in the academy is considered one of the highest honors that can be accorded a U.S. scientist or engineer.

Gage and his lab focus on the adult central nervous system and the unexpected plasticity and adaptability that remain throughout the life of all mammals. His research has shown that, contrary to years of dogma,

Thomas Albright (top right), a Salk Institute professor of neuroscience and director of the vision center laboratory, was elected to the American Academy of Arts and Sciences. On May 5, the academy named 187 fellows and 29 foreign honorary members to the nation's oldest learned society.

Albright and his colleagues study the neuronal structures and events that lead to visual perception of motion, form and color. His work has unveiled the existence of multiple areas in the brain devoted to processing visual information from the eyes.

His work, by furthering the understanding of vision, may result in new treatments for a number of eye and brain-related vision disorders. Albright was one of seven scientists elected for achievements in neurosciences, computer and behavioral biology. He joins seven other fellows of the academy at the Salk Institute.

The American Academy of Arts and Sciences was founded in 1780 by President John Adams, James Bowdoin, John Hancock and other scholar-patriots. Each year, the academy elects noted scientists, scholars and world leaders as fellows or foreign honorary members.



Wylie Vale (below left), professor and head of the Clayton Foundation Laboratories for Peptide Biology and Helen McLoraine chair of molecular biology, is the Salk Institute's faculty chairman for 2003-2004. He succeeds Greg Lemke, professor of molecular neurobiology.

As faculty chair, Vale presides over the Salk Institute Academic Council, which is the representative of the faculty and formulates academic policies of the Institute. The council deliberates on policy and its recommendations are reviewed by voting faculty members. Vale says he will emphasize establishing an ongoing scientific planning process that will involve faculty, nonresident fellows, members of the board of trustees, and administrators.

Vale has been on the Salk faculty since the mid-1970s, and he served as the first faculty chair in 1989, and served as faculty chair again in 1997. His research focuses on the structures and actions of peptide and protein hormones in the brain and endocrine systems. He and his group have discovered more than a dozen new hormones, growth factors and their receptors, including corticotropin-releasing factor, a key component of the body's response to stress.



humans are capable of growing new nerve cells within their brains throughout life and that physical exercise can enhance the growth of new brain cells.

The National Academy of Sciences is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. Currently, 13 of the Salk Institute's 56 faculty members are members of the National Academy.

Board of Trustees Elects Three New Members

During its spring meeting, the Salk Institute Board of Trustees elected three new members: Corinne Mentzelopoulos, Alain Merieux, and Jerre L. Stead.

Corinne Mentzelopoulos is the owner and CEO of Chateau Margaux, an internationally known winery in Bordeaux, France. She also served as vice chairman of Exor, S.A., a holding company for food retail distribution and real estate. In the early 1980s, she was a financial controller for Primisteres, a diverse holding company in Paris, and also worked as an advertising manager for a major French advertising firm.

Mentzelopoulos has served on the Salk International Council since 1988. She served on the board of directors of the Exor Group in Luxembourg, as well as the Societe des Industries Chimiques du Nord de la Grece in Athens, Greece. She has earned the titles of Chevalier of the Legion D'Honneur and

Chevalier of the Ordre National Du Merite for achieving excellence in her field. In 1999, she was appointed to the French Foreign Trade Council. She received her bachelor's degree from Paris University and her MBA from the Institut D'Etudes Politiques.

Alain Merieux serves as chairman and CEO of bioMerieux, which he founded in 1963. Based in France, bioMerieux specializes in infectious disease diagnostics, coagulation diagnostics, and industrial microbiology control. It ranks among the top ten biological diagnostics companies in the world and is an international leader in the field of microbiology.

Merieux has served as chairman and CEO of Institut Merieux from 1968 to 1994, during his tenure the institute became the world leader in the field of human and animal vaccines. In 1991, he became chairman of Transgene, which specializes in gene therapy,



Corinne Mentzelopoulos



Alain Merieux



Jerre Stead

and he held that position until 2002. Merieux has served as premier vice president of the Rhone-Alpes Regional Assembly and received numerous decorations, including commander of the national order of merit and officer of the Legion of Honour. He is a member of several international boards, including Wendel Investissement, Plastic Omnium, and Akzo Nobel. He received his medical degree from Faculte de Medicine de Lyon and attended the PMD program at the Harvard Business School.

Jerre Stead is the retired chairman and chief executive officer of Ingram Micro Inc. of Santa Ana, Calif. He is now the chairman of two companies — HAIC/HIS and BMC. Stead began his distinguished business career at Honeywell Inc. where he spent 21 years in various management positions in the United States and Europe. In 1987 he was named president and chief

Helen Myers McLoraine

operating officer of the Square D Company, a leading electrical distribution and factory automation manufacturer based in Palatine, Ill., becoming chairman and chief executive officer in 1989. In 1992, Stead was named chairman and chief executive officer of AT&T's Global Business Communications Systems.

In January of 1995, Mr. Stead became chairman and chief executive officer of the Legent Corporation. He headed up Ingram Micro in 1996, a distributor of high-tech products, until he retired in 2000. Stead has served on the board of directors of Armstrong World Industries, Conexant Systems, SoftBank eCommerce, TBG Group, and Brightpoint, Inc. He received his bachelor's degree from the University of Iowa and attended the Harvard University Advanced Management Program.

Helen was an extraordinary woman, full of compassion and vigor, and she will be remembered fondly by many Salk faculty and staff members.

Helen Myers McLoraine, a strong supporter and friend of the Salk Institute, passed away on January 23, 2003. Helen generously contributed to Salk over the past 15 years through her foundation, the Pioneer Fund. One of her greatest gifts was the initiation of the Pioneer Scholar Awards, the first postdoctoral fellowship endowment at the Institute. These fellowships have benefited over a dozen young scientists, giving them the resources necessary to continue their important research in the areas of molecular and cellular biology, as well as neurobiology.

Included in Helen's estate is a \$5 million bequest to the Salk. She designated this gift to support two endowed neurobiology chairs at the Salk Institute. The first recipient of the Helen McLoraine Chair in Molecular Neurobiology is Dr. Wylie Vale. The recipient for the Helen McLoraine Developmental Chair in Neurobiology has not yet been identified.

A resident of Denver, Helen was a savvy philanthropist and successful businesswoman in the gas and oil industry for nearly six decades. She contributed to numerous charitable causes around the country, always emphasizing in her gifts the importance of athletics, medical research and education.

Helen's commitment to science and education ensures that future generations of Salk scientists have the needed resources to continue their important research. Her contributions to Salk over the years total \$10 million. Helen was an extraordinary woman, full of compassion and vigor, and she will be remembered fondly by many Salk faculty and staff members.

INSIDE SALK

Outreach



From left, President's Club members Mark Murphy, Elaine Murphy, and Françoise Gilot-Salk at the New York lunch.

The Salk in New York

■ In April, the Salk Institute had a significant presence in New York, with a joint dinner between the Board of Trustees and the International Council and a President's Club Luncheon.

On April 10, more than 80 individuals from the New York City area came to a lunch at the River Club, which included a presentation on gene therapy from Salk Professor Inder Verma.

Later that evening, board and International Council members attended a special dinner at the Union Club, which included a short video celebrating Francis Crick and the 50th anniversary of the discovery of the DNA double helix.

Symphony at Salk

■ The annual tradition of music under the stars at the Salk Institute continues this summer, as the San Diego Symphony performs at a concert benefiting the Institute.

The eighth annual Symphony at Salk will feature guest conductor Edwin Outwater and acclaimed young violinist Leila Josefowicz. Outwater was named resident conductor of the San Francisco Symphony in 2001, and has served in a number of conducting posts since 1994. Since her debut at Carnegie Hall in 1994, Josefowicz has performed with the Boston and Chicago Symphonies, the Cleveland and Philadelphia Orchestras and the London and Los Angeles Philharmonics.

Symphony at Salk will be held Saturday, August 23, on the Institute's Gildred Court. Architectural tours start at 5 p.m., box suppers will be served beginning at 6 p.m., and the concert commences at 7:30 p.m. Tickets are \$150 for the concert, dinner, wine and architectural tours. For tickets or more information, contact the Institute Relations office at (858) 453-4100, ext. 1882.

Alumni Symposium in September 2003

■ Salk science alumni will return to the Institute on September 19-20 for the first Salk Science Alumni Symposium.

Salk alumni — former graduate students, postdocs, and visiting scientists — will participate in the "The Biology of Growth and

Development," a series of scientific presentations and social gatherings at the Institute. Salk alumni speakers include Mike Bevan (University of Washington), Jon Cooper (Fred Hutchinson Cancer Research Center), Tom Curran (St. Jude Children's Hospital), Clare Isacke (Institute of Cancer Research, London), Jerry Joyce (The Scripps Research Institute), Jim McNamara (Duke University), Ellen Rothenberg (California Institute of Technology), Sara Sukumar (Johns Hopkins University), Gerry Weinmaster (UCLA), Irv Weissman (Stanford University), and Heiner Westphal (National Institute of Health).

For more information about the symposium, please contact Professor Walter Eckhart, chair of the Salk Science Alumni Association, at eckhart@salk.edu or extension 1386.

March of Dimes WalkAmerica



Walkers from the Salk Institute raised more than \$15,000 for the March of Dimes WalkAmerica. The Institute ranked among the top 10 organizations in San Diego County in terms of total dollars raised. Salk staff member Tony Basurto, pictured second from left, raised more than \$3,200 for the event, the highest individual total in San Diego County.



FROM THE PRESIDENT

The complementary strengths of our scientists, staff, trustees, and donors ensure the Salk's vibrant and exceptional scientific culture.

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Research at the Salk Institute is a partnership. Led by scientists whose curiosity drives them to probe the frontiers of biology, our laboratories are supported by talented staff who provide essential services, trustees who contribute their time, talent, and resources to our cause, and generous donors, whose commitment of financial resources demonstrate their belief in our work. This issue of *Inside Salk* reflects that partnership.

If the discovery of basic principles of biology is the Salk Institute's product, by that measure our scientists continue to excel. Several articles describe recent breakthrough discoveries by Salk scientists that have led to new understandings of the body's metabolism of fats, the identification of molecules that regulate spinal cord development possibly important in coaxing spinal cord neurons to re-connect following injury, and ideas for novel therapies for Alzheimer's disease.

Inside Salk also reports on the activities of the Salk's Employee Council. The Institute's staff makes our scientific operations possible, and meeting employee needs remains a high priority. The Council provides a monthly forum in which information about Institute affairs is shared with employees and issues of importance in the workplace are discussed.

This issue also announces the appointment of three new trustees to the Salk's Board. We rely on our board members, many with outstanding histories of organizational management, to provide us arm's-length views of the Institute's operations, and to advise on policy. Board members also take a financial leadership position in supporting our mission and in helping us raise funds from others.

Finally, this issue of *Inside Salk* details the generosity of several philanthropists who have made significant gifts. Three-fourths of Salk research funding comes from hard-won federal grants obtained by faculty, but federal grants stop short of covering all research costs. Donations therefore become essential: they establish endowments that ensure the long-term fiscal health of the Institute; they fund the labs of newly recruited faculty integral to the Institute's ongoing renewal; they support Salk postdocs and graduate students; and they foster the development of nascent research programs until they qualify for outside funds. Donations also support the Institute's shared core facilities and they make possible meetings, research retreats, and a seminar program in which we exchange information with scientists from around the world.

Taken together, the complementary strengths of our scientists, staff, trustees, and donors ensure the Salk's vibrant and exceptional scientific culture.

INSIDE SALK

Calendar

JUNE 27 - JULY 1

Cell Cycle Meeting

JULY 13

Post-Polio Symposium

AUGUST 8 - 10

Salk/Caltech Joint Symposium

AUGUST 15 - 19

Salk Institute/EMBL Oncogenes
and Growth Control Meeting

AUGUST 23

Symphony at Salk

SEPTEMBER 12

Usha Mahajani Symposium
on Molecular Medicine

SEPTEMBER 19 - 20

Salk Science Alumni Symposium

Foundation representatives from across the country came to San Diego to participate in the 31st Salk Institute Tax seminar. Participants had an opportunity to take tours of labs at the Institute.



STREET ADDRESS

10010 North Torrey Pines Road
La Jolla, California 92037-1099

MAILING ADDRESS

Post Office Box 85800
San Diego, California 92186-5800

Telephone: 858.453.4100
Fax: 858.552.8285
www.salk.edu

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