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The Rockefeller University

The Rockefeller University 1901

news&notes

APRIL 28, 2000 VOLUME 10, NUMBER 24 THE ROCKEFELLER UNIVERSITY

Friday lecture: Nobel pair to discuss metabolism regulation

At today's Friday lecture (April 28) Professors Joseph Goldstein and Michael Brown of the University of Texas Southwestern Medical Center in Dallas will discuss "SREBPs: Master Regulators of Metabolism."

Brown and Goldstein's current research is directed at unraveling the mechanism by which the SREBP (Sterol Regulatory Element Binding Protein) pathway regulates cholesterol metabolism at the molecular, cellular and whole-body levels. SREBPs are membrane-bound transcription factors that are part of a highly sensitive feedback system that adjusts the rates of transcription of genes encoding the LDL receptor and enzymes in the cholesterol and fatty acid biosynthetic pathways. Two SREBPs, SREBP-1a and SREBP-2, predominate in cultured cells. The activities of both are regulated by the sterol content of the cells. When cells are replete with sterols, the SREBPs remain bound to membranes of the endoplasmic reticulum and nuclear envelope and are therefore inactive. When the cells are depleted of sterols, a two-step process releases the active portions of the SREBPs, which then enter the nucleus and stimulate transcription of genes in three pathways of lipid metabolism. This feedback mechanism assures a steady supply of cholesterol and unsaturated fatty acids and prevents overaccumulation.

Using mutant cells with blocks in SREBP processing, which fail to grow in the absence of added cholesterol and unsaturated fatty acids, Brown and Goldstein have cloned two membrane-bound proteases and a membrane-bound sterol-sensing regulatory molecule that together mediate the regulated release of SREBPs from membranes. These proteins appear to be the key players in the pathway that controls the lipid composition of cell membranes.

Brown and Goldstein have collaborated since 1972, when they were both faculty members at the University of Texas Southwestern Medical Center. Their research has elucidated the biochemical and genetic mechanisms that regulate cholesterol levels in blood and cells. In 1974, they discovered that human cells possess a protein on their surfaces called the LDL (low-density lipoprotein) receptor. This receptor binds a cholesterol-carrying protein,

Michael Brown (above) and RU Trustee Joseph Goldstein (below) will present today's Friday lecture (April 28). *Photos courtesy of Michael Brown (above) and G. Hings (below).*

LDL, that circulates in the blood. They showed that mutations in the LDL receptor cause familial hypercholesterolemia, a disorder that leads to premature heart attacks in one out of every 500 people in most populations. Their work provided strong evidence for the theory that cholesterol-carrying particles are a major cause of heart attacks.

Brown and Goldstein also discovered the fundamental processes by which cells take up molecules from blood, and they isolated the gene for the LDL receptor, tracing the mutations to the molecular level. Brown and Goldstein have received many awards for their work, including the Albert D. Lasker Award in Basic Medical Research (1985), the Nobel Prize in Physiology or Medicine (1985) and the U.S. National Medal of Science (1988).

Brown and Goldstein first crossed paths while working as interns and residents in medicine at the Massachusetts General Hospital. Brown received an M.D. from the University of Pennsylvania in 1966, Goldstein from the University of Texas Southwestern Medical Center in Dallas, also in 1966. Following residency they both went to the National Institutes of Health, where Brown was a guest worker in Earl Stradtman's Laboratory of Biochemistry and Goldstein worked in the laboratory of Marshall W. Nirenberg. In 1971 Brown joined the faculty of the University of Texas Southwestern

see **Friday lecture**, page 3

Pais pens physicists' biographies

During his distinguished career as a theoretical physicist, Professor Emeritus Abraham Pais was privileged to know and work with many of the architects of modern physics. Now, in his latest book, entitled *The Genius of Science: A Portrait Gallery of Twentieth Century Physicists,* he records their lives and scientific achievements from a uniquely personal perspective.

After writing two biographies of Albert Einstein and one of Niels Bohr, Pais turned his attention to 17 other physicists, many of whom appeared as "supporting characters" in his previously published books, including his 1997 memoir *A Tale of Two Continents.* Among those remembered are Paul Dirac, who proposed the existence of anti-matter; Max Born, who coined the term quantum mechanics; Wolfgang Pauli, formulator of the exclusion principle; as well as Einstein and Bohr. Pais also writes about two Rockefeller University colleagues: the late George Uhlenbeck, who proposed the concept of electron spin with Samuel Goudsmit and whom Pais calls "the best teacher I ever had"; and Professor Mitchell Feigenbaum, inventor of chaos theory, which Pais cites as "one of the great revolutions of 20th-century physics, along with relativity and quantum mechanics."

Drawing from his personal associations with these giants of modern physics—who, with a few exceptions, are no longer living—Pais hopes to "bring these people back to life" with a blend of personal recollections and summaries of their work. For example, Pais notes that his most treasured link to the past is a galley proof of the second appendix to Einstein's 1950 edition of *The Meaning of Relativity* with the following words written by Einstein: "Pauli (after perusal please give to Pais!)." And on Uhlenbeck, whose friendship brought Pais to Rockefeller in 1963, Pais recalls his first encounter after emigrating to the United States in 1946: "[I] was attending a meeting of the American Physical Society in New York. There I met Professor Uhlenbeck

Professor Emeritus Abraham Pais has written a new book profiling 20th-century physicists. *Photo by Joe Selsing.*

again... As a well-bred Dutchman, I answered Uhlenbeck's questions with yes professor, no professor. After a while he peered at me, then said: 'Why don't you call me George?'"

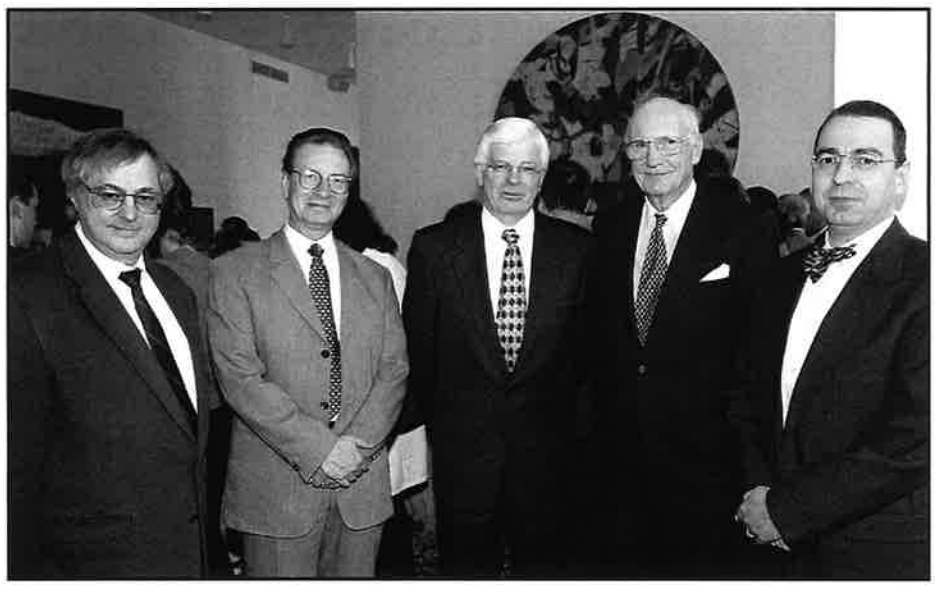
Pais has won the American Book Award for Science and the American Institute of Physics–United States Steel Foundation Science Writing Award in Physics and Astronomy for his book *Subtle is the Lord: The Science and Life of Albert Einstein* as well as the university's Lewis Thomas Prize: Honoring the Scientist as Poet. But it is the interest of his readers that fuels his writing passion; more than 3,000 copies of *The Genius of Science* were ordered in advance of its publication date. Says Pais, "It's gratifying to know that people want to read what I've written."

The Genius of Science, published by Oxford University Press (ISBN 0198506147), is in bookstores now.

Talking about the Human Genome Project

On Mon., April 17, Horace Freeland Judson presented a talk entitled "Talking about the Genome Project" as part of the Centennial Lectures on Science and Society and the Zanvil A. Cohn Forum on Health Affairs in Caspary Auditorium. Judson cautioned that language can control the way we think. In particular he asked scientists and the media to be careful not to fall into a semantic trap with the language they use to describe genomic research. *Photo by Paul Schneck.*

Burley inaugurates Furlaud Distinguished Lecture



Peter Ringrose, chief scientific officer of Bristol-Myers Squibb Company and president of the BMS Pharmaceutical Research Institute, and William Koster, senior vice president of drug discovery at BMS PRI, visited campus Fri., April 14, for the first Richard M. Furlaud Distinguished Lecture. Bristol-Myers Squibb established the lectureship to honor its retired president, who is chairman emeritus of the RU board. From left to right: RU President Arnold J. Levine, Ringrose, Koster, Furlaud and Stephen K. Burley, the Furlaud Professor who lectured on the structural biology of eukaryotic genes. RU Council member Albert Edelman, an attorney who attended the lecture and a dinner that followed, celebrated the occasion in the verses below. *Photo by Paul Schneck.*

Some Eukaryotic Evening

Oh what a wondrous evening it was
We were entranced by the lecture and scene
By Steve Burley's eloquence and
3-dimensional slides
On the structured adventures of the
Eukaryotic gene.

Who needs a new musical on Broadway
When there's a drama by Maestro Levine
Of transcription, translation and architecture
On the biologic expressions of the
Eukaryotic gene.

Rockefeller just knows how to do it
With the Furlauds right by its side
Generating vital inter-active components
For the epic molecular ride.

Oh to be a Furlaud Professor
Watching proteins switching genes with DNA.
Dick and Isabel should derive satisfaction
That for Burley it's sheer pastime and play.

Gripped though I was by the proceedings
I confess that I ended up a tree
When Steve Burley left me gasping for rescue
With that hepatocyte nuclear factor-3.

—Albert Edelman

Potpourri

Lectures

Professor A. James Hudspeth gave a talk on hearing yesterday, Thurs., April 27, at the Institut Pasteur in Paris as part of the institute's Neuroscience and Medicine lecture series. He will present again today, Fri., April 28, at the Institut Curie in Paris where he will give a talk entitled "How the Ear Works: Mechanoelectrical Transduction by Hair Cells of the Inner Ear." Next Tues., May 2, Hudspeth will lecture at the University of Basel's neurobiology lecture series, which is a joint seminar with the Friedrich Miescher Institute, the Biozentrum and associated hospitals and industry, such as Novartis and Roche.

Campus tree spraying

On Sat., April 28, from 4 a.m. to 10 a.m. trees and shrubs on campus will be sprayed. During this time it is recommended that you

- close any windows
- shut off any air conditioners
- stay out of direct contact with the drift
- keep pets indoors

In the event of inclement weather, trees will be sprayed Sun., April 29, beginning at 4 a.m.

Biological Foundations of Music

The New York Academy of Sciences is sponsoring a conference entitled Biological Foundations of Music from Sat., May 20 to Mon., May 22, in Caspary Auditorium. The conference will highlight research on music perception and performance and their correlates in the human brain. The goal of the conference is to bring together leading scientists working in the area who are using a wide range of different methodologies from the cognitive sciences and the neurosciences. The conference will involve in-depth presentations from invited speakers, round-table discussions and a poster session. The registration fee for attending the entire conference is $385 for NYAS members, $485 for nonmembers and $170 for students/residents/fellows. The daily rate is $180. For program and registration information visit http://www.nyas.org or contact conference@nyas.org or 212-838-0230, x324.

AwardsCorner

Professor **Brian Chait** has been awarded the Bijvoet Medal by the Bijvoet Center for Biomolecular Research in the Netherlands, a joint institute of the Utrecht University and the Netherlands Foundation for Chemical Research. The Bijvoet Medal was established in 1989 to recognize outstanding contributions to the area of biomolecular mass spectrometry. Past recipients of the medal include Fred McLafferty, Isabelle Karle and Harmut Michel.

Tri-institutional Noon Recital

Today's Tri-institutional Noon Recital will feature violinist Mela Tenenbaum performing works by Vivaldi, Biber, Locatelli, Shostakovich and Paganini. She will be accompanied by Richard Kapp on piano and Mark Ptashne on violin.

Tenenbaum received her master's degree in music from the Kiev State Conservatory. She performed as soloist with the Kiev Chamber Orchestra and Kiev State Philharmonic from 1979 to 1989. During this time she was also concertmaster and a frequent soloist with Perpetuum Mobile, a chamber orchestra based in Kiev, which is supported by the Ukrainian Union of Composers. Thanks to this alliance, Tenenbaum has premiered numerous works written for her by Russian and Ukrainian composers. She is equally at home as a violinist, violist and as a player of the rarely heard viola d'amore and has toured extensively throughout the USSR and Europe.

Tenenbaum emigrated to the United States in 1990. Three years later she was appointed concertmaster of Philharmonia Virtuosi, the resident orchestra at New York's Metropolitan Museum of Art. Since that time she has appeared regularly as violin soloist and chamber musician.

Kapp is the conductor, founder and music director of Philharmonia Virtuosi. His career has combined both artistic and administrative positions. For nine years he was the program officer at the Ford Foundation. He also has been the music director of Young Audiences, Inc. In 1988 he founded ESS.A.Y Recordings as a vehicle for Philharmonia Virtuosi and other artists and repertoire.

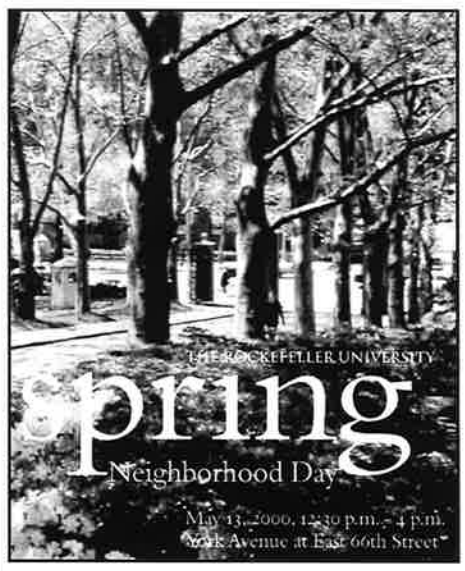
Kapp's own recording activity has been extensive, with more than 40 orchestral recordings with European orchestras as well as a series with Philharmonia Virtuosi for CBS Masterworks (now Sony) and currently with BMG (RCA) and ESS.A.Y.

Mela Tenenbaum (right) will perform at today's Tri-institutional Noon Recital with Mark Ptashne (not pictured) and Richard Kapp. *Photo by Steve J. Sherman.*

Today's guest artist, Ptashne, is a professor and principal investigator at Sloan-Kettering Institute. In 1997 he was awarded the Lasker award for Basic Research. As a violinist, he regularly participates in the Yellow Barn Music Festival in Vermont.

The violins that are to be played today deserve special note. Tenenbaum will play the 1734 "Wilmotte" Strad by Antonio Stradivari with a François Tourte bow, both on loan from Ptashne. Ptashne will perform with the 1735 "Plowden" Guarnarius Del Gesu by Guarnarius Del Gesu, which according to W. E. Hill and Sons of London is one of the five greatest Del Gesu's extant. Ptashne will perform with a Dominique Pecatte bow.

The performance is at noon today in Caspary Auditorium. Admission is free for members of the tri-institutional community and their guests.



This year's Spring Neighborhood Day is on Sat., May 13, and features a talk by landscape architect Daniel Urban Kiley. The schedule of events for the day is below.

12:30 p.m. Campus Grounds are open to the public.

1:00 p.m. Daniel Urban Kiley and Jane Amidon discuss their book, *The Complete Works of America's Master Landscape Architect,* in Caspary Auditorium.

2:00 p.m. Guided tours of campus begin (weather permitting).

4:00 p.m. Event concludes.

The Myth and Magic of Marilyn Monroe

On Tues., April 11, author Joyce Carol Oates (left), film critic Molly Haskell (second from left), author Dominick Dunne (second from right) and columnist Liz Smith came to Caspary Auditorium to participate in a panel discussion on the life and legacy of Marilyn Monroe presented by the 92nd Street Y. *Photo by Paul Schneck.*

Chipping away at leptin's effects

RU researchers use genechip technology to identify genes specifically regulated by the hormone leptin

Members of the Friedman lab are using genechip technology to identify genes regulated by the hormone leptin. From left to right are Senior Research Associate Nicholas Socci, RU Professor and HHMI Investigator Jeffrey Friedman, and Biomedical Fellows Alexander Soukas and Paul Cohen. *Photo by Amanda Gersh.*

Using genechip technology, a powerful tool for analyzing the expression patterns of thousands of genes at a time, researchers have identified a number of genes that are specifically regulated by the hormone leptin.

Leptin is produced by fat tissue and secreted into the bloodstream, where it travels to the brain and other tissues, causing fat loss and decreased appetite. Identifying genes regulated by leptin will improve knowledge of how leptin causes its effects on weight and appetite, and may also offer new targets for drugs designed to stimulate weight loss.

Biomedical Fellow Alexander Soukas holds a normal mouse (at left) and a mouse that cannot produce leptin (right). *Photo by Amanda Gersh.*

Since the discovery of leptin in 1994, many have hoped that the hormone would be a promising weight-loss treatment for humans. Studies of the hormone's weight-reducing effects in humans are under way, but researchers still have a way to go before they fully comprehend how the hormone affects the brain and other tissues.

In experiments described in the April 15, 2000, issue of the journal *Genes & Development,* RU Professor Jeffrey M. Friedman, who is also an HHMI investigator, and Rockefeller colleagues Alexander Soukas, Paul Cohen and Nicholas D. Socci report that they are beginning to probe the genetic program orchestrated by leptin to induce weight loss.

"We knew that an animal given leptin eats less and loses fat," said Friedman. "And while restricting food intake also causes weight loss, we had reason to believe that the two weight-loss responses are very different." For example, said Friedman, leptin triggers weight loss of fat stores alone, while food-restriction robs the body of both fat and muscle. Also, he said, a diet-restricted human or animal compensates for decreased caloric intake by lowering energy expenditure, while leptin treatment shows no such energy-robbing effect. Until now, however, no one had explored the molecular basis of such differences in detail, said Friedman.

Studying normal mice and a mutant strain that cannot produce leptin, the researchers looked for differences in gene expression patterns related to either leptin administration or caloric restriction.

After administering leptin to or restricting food intake in the two groups of mice, the researchers analyzed gene expression in the mice by extracting messenger RNA from their fat cells. Messenger RNA levels reflect the expression levels of different genes. They applied these collections of messenger RNA to a series of "oligonucleotide microarrays," popularly known as genechips. Each kind of messenger RNA "found" and adhered to its corresponding gene on the genechip. Indicator molecules revealed the level of RNA present, showing the expression levels of hundreds of fat-tissue-related genes.

Analyzing data from many such experiments with the mice, the scientists were able to group the expressed genes into clusters that appeared to behave similarly increasing or decreasing in expression in tandem as the mice were subjected to different regimes of leptin treatment or food restriction.

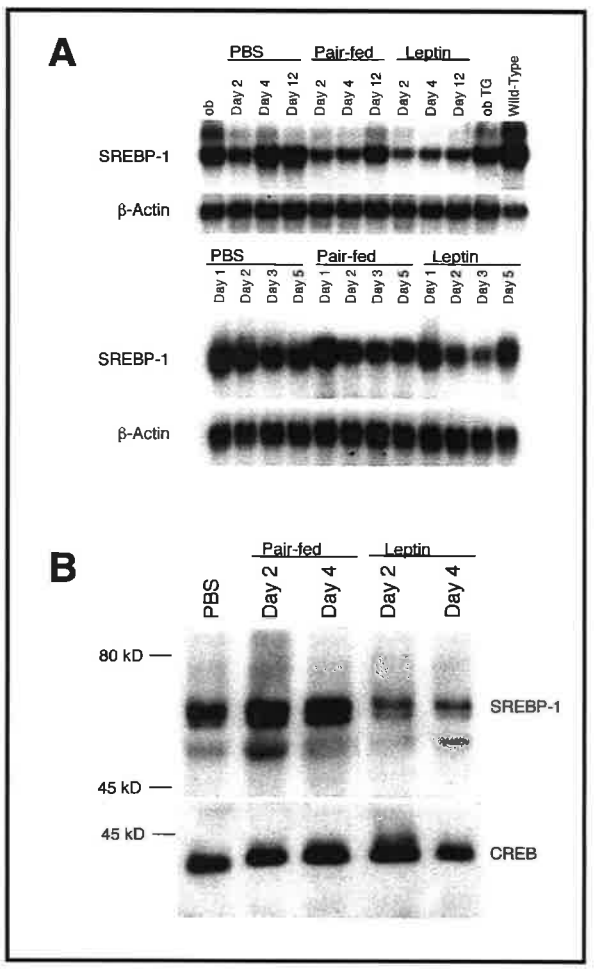
"We were able to find at least half a dozen distinct clusters of genes that were specifically regulated by leptin and that were not regulated in the same way by food restriction," said Friedman. "So, leptin is doing a lot more than just leading to food intake restriction."

The discovery of these leptin-regulated genes offers a glimpse of the complex metabolic machinery controlled by leptin.

"We would infer that for each of the clusters of genes that behave similarly in response to leptin and that there is some unifying regulatory element," said Friedman.

In fact, he said, his group has uncovered evidence of just such a regulatory element finding that one cluster of genes is regulated by a protein called SREBP-1, which regulates many of the genes that control the synthesis of fatty acids.

"This finding tells us that we now need to explore how leptin alters SREBP-1's effects," said Friedman. "It is also sort of a proof of principle, suggesting that there are other important mechanisms regulating the genes in the other leptin-regulated clusters."



A Northern blot analysis (A) reveals that leptin specifically down-regulates SREBP-1 mRNA in both wild type and genetically *obese* mice. A Western blot analysis (B) shows that leptin decreases amounts of transcriptionally active SREBP-1 protein. *Image courtesy of Alexander Soukas* et al.

> *"We were able to find at least half a dozen distinct clusters of genes that were specifically regulated by leptin and that were not regulated by food restriction. So, leptin is doing a lot more than just leading to food intake restriction."*

"Now we can follow up to try to piece together the different regulatory elements of these leptin-related responses," he said.

The new findings also open a promising pathway for understanding the complexity of leptin's effects on different body tissues, said Friedman. Although researchers know that leptin is produced by fat cells and suppresses appetite by affecting the hypothalamus, the hormone may also trigger metabolic changes in fat and other tissues. Learning how changes in gene regulation lead to these effects is a goal of future studies in Friedman's laboratory.

"We can begin to probe where these regulatory signals are coming from by specifically knocking out leptin receptors in different tissues such as the brain or the liver or even in fat itself and studying the resulting effects on gene expression," he said.

Overall, said Friedman, better understanding of the leptin-related machinery is needed if the hormone is ever to become a basis for clinical treatment of obesity in humans.

"These studies make it clear that leptin produces a very complicated set of effects on the body, and we have much more to learn about them," he said.

This research was supported by the National Institutes of Health, the National Science Foundation, the Alfred P. Sloan Foundation and the Howard Hughes Medical Institute. Article reprinted with permission from the Howard Hughes Medical Institute.

Friday lecture, from page 1

Medical Center in Dallas, becoming a full professor in 1976. He is currently the Paul J. Thomas Professor of Molecular Genetics and the director of the Jonsson Center for Molecular Genetics at the university, where he is also the Distinguished Chair in Biomedical Sciences and serves as the director of the M.D./Ph.D. program.

Goldstein continued his postdoctoral studies as an NIH fellow in the Division of Medical Genetics at the University of Washington School of Medicine in Seattle. In 1972 he joined the faculty of the University of Texas Southwestern Medical School in Dallas, becoming full professor in 1976. He currently serves as chairman of the Department of Molecular Genetics at the university and is the Paul J. Thomas Professor of Medicine and Genetics. Goldstein also serves as chairman of the Medical Advisory Board of the Howard Hughes Medical Institute and as chairman of the Albert Lasker Medical Research Awards Jury and as a member of the board of trustees of The Rockefeller University. He currently serves as chairman of the board of scientific advisors of the Van Andel Research Institute and is a member of the board of directors of Pfizer, Inc.

The lecture begins at 3:45 p.m. in Caspary Auditorium and is preceded by a tea in Abby Aldrich Rockefeller Lounge. All are welcome.

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APRIL 28 | 13 MAY

calendarofevents

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THE ROCKEFELLER UNIVERSITY—*Please post*

FRIDAY, APRIL 28

11:00 a.m. **Molecular Chaperone-like Activity of α-crystallin.** Ch. Mohan Rao, Deputy Director, Centre for Cellular and Molecular Biology Hyderabad, India. Seminar. **305 Weiss.**

12:00 p.m. **Antibody Genes and B Cell Development.** Michel C. Nussenzweig, Professor, RU; Investigator, HHMI. Immunology Seminar. **117 Whitney, WMCCU, 1300 York Ave.** *Contact Michele Lavarde, 746-6452.*

12:00 p.m. **Regulation of Actin Filament Dynamics at the Leading Edge by WASp/Scar Proteins and Arp2/3 Complex.** Thomas D. Pollard, Professor, Salk Institute for Biological Studies. Cellular Biochemistry and Biophysics Seminar. **116 Rockefeller Research Laboratories, MSKCC, 430 East 67th St.**

MONDAY, MAY 1

4:30 p.m. **Luminal Acidification in the Epididymis/Vas Deferens: Lessons from the Kidney.** Sylvie Breton, Assistant Professor, Renal Unit, Mass. General Hospital. PBMM Research Seminar. **Weill Auditorium, WMCCU, 1300 York Ave.** *Coffee at 4:15 p.m.*

TUESDAY, MAY 2

8:00 a.m.–5:30 p.m. **20th Annual Vincent du Vigneaud Memorial Research Symposium.** Keynote speaker, Philippa Marrack, HHMI and National Jewish Medical and Research Center. Research Symposium. **Uris Auditorium, WMCCU, 1300 York Ave., unless otherwise noted.** *Breakfast, 8:00 a.m., WMCCU lobby. Opening remarks, 8:45 a.m. Slide presentations, 9:00 a.m. to 10:30 a.m. and 2:30 p.m. to 4:15 p.m. Poster session, 10:30 a.m. to 2:30 p.m., Olin Hall Gymnasium, 445 East 69th St. Lunch 12:00 p.m. to 1:00 p.m., Archibold Commons, 2nd floor, WMCCU. Keynote address, 4:30 p.m. Reception, 5:30 p.m., Board Room, Rockefeller Research Laboratories, 430 East 67th St. Open to RU/WMCCU/NYPH/ MSKCC community and guests.*

2:30 p.m.–5:30 p.m. **Angiogenesis and Atherosclerosis.** Ronald Crystal, WMCCU; Karen Moulton, Brigham and Women's Hospital; Jeffrey Isner, Tufts U. School of Medicine and St. Elizabeth's Medical Center. N.Y. Lipid and Vascular Biology Research Club Seminar. **301 Weiss.** *Reception at 5:30 p.m., 17th Floor Weiss. Contact Hayes Dansky, 327-7733. All are welcome.*

4:00 p.m. **Kernel Methods for the Analysis of Gene Expression Microarray Data.** Bill Grundy, Assistant Professor, Columbia U. Center for Studies in Physics and Biology Seminar. **B Level Conference Room, Smith Hall Annex.** *Tea at 3:30 p.m. Contact Martin Zapotocky, 327-8835.*

4:00 p.m. **Something about GABA Receptors.** David Weiss, Associate Professor, Dept. of Neurobiology, U. of Alabama Birmingham. Progress in Neuroscience Seminar. **Weill Auditorium, WMCCU, 1300 York Ave.** *Tea at 3:45 p.m.*

WEDNESDAY, MAY 3

12:00 p.m. **Immune Pathogenesis of Multiple Sclerosis: Dissonant Interplay between T Cells, B Cells and the Brain Milieu.** Hartmut Wekerle, Director, Institute of Neurobiology, Max Planck Institute. Seminars in Clinical Research. **110B Nurses Residence.**

1:10 p.m. **Gender Differences and Role of Steroids in Cocaine Induced Alterations.** Jill B. Becker, U. of Mich.; Cynthia M. Kuhn, Duke U. Medical Center; Vanya Quinones-Jenab, Hunter College. Biological Correlates of Cocaine Abuse Program. **611HW West Building, Hunter College, 68th St. at Lexington Ave.** *Reception at 12:45 p.m.*

4:00 p.m. **The Regulation of p53 Tumor Suppressor Gene and Protein.** Arnold J. Levine, President, RU. 23rd Alexander S. Wiener Lecture. **Auditorium, New York Blood Center, 310 East 67th St.**

6:00 p.m. **From Stem Cells to Brain Tumors: Gli Proteins and Hedgehog Signaling in CNS Development and Disease.** Ariel Ruiz I Altaba, NYU School of Medicine. Neuronal Stem Cells, Breakthrough Research Seminar. **New York Academy of Sciences, 2 East 63rd St.** *Contact Henry Moss, 838-0230x410. Presented by the Neuroscience Section of the New York Academy of Sciences, the Neuroscience Therapeutics Section of Parke-Davis Pharmaceuticals and the New York Section of the Society for Neuroscience.*

6:00 p.m. **Role of Paired Ig-Like Receptors at the Interface between Innate and Acquired Immunity.** Max D. Cooper, Investigator, HHMI, U. of Alabama Birmingham. Henry Kunkel Society Lecture. **Caspary Auditorium.** *Cocktails at 7:00 p.m. in the Abby Lounge.*

THURSDAY, MAY 4

12:00 p.m. **Inter- and Intracellular RNA Transport in the Testis.** Norman B. Hecht, William Shippen Jr. Professor of Human Reproduction, Dept. of Obstetrics and Gynecology, University of Penna. Endocrinology and Reproductive Biology Seminar. **Northeast Dining Room, Weiss 17th Floor.**

3:00 p.m. **Why Do Things Look as They Do?: Contextual Influences on Visual Processing.** Thomas Albright, Professor, The Salk Institute. Systems Neuroscience Seminar. **305 Weiss.** *Open to RU/WMCCU/NYPH/MSKCC community and guests.*

4:00 p.m. **The Multiepiptope Approach to the Treatment and Prevention of Infectious Diseases.** Alessandro D. Sette, Vice President, Research & Development, Chief Scientific Officer, Eppimmune, Inc. LFKRI Research Seminar. **Lower Level Conference Room, New York Blood Center, 310 East 67th St.** *Tea at 3:45 p.m.*

FRIDAY, MAY 5

10:30 a.m. **Viable Leprosy Bacilli as a Research Reagent and Studies of Host Response to Live *M. leprae* in Gene Knock-Out Mice.** Jim Krahenbuhl, Chief of Hansen's Disease Center, Louisiana State U. New York TB Club Seminar. **110B Nurses Residence.** *Contact Claudia Manca, 327-8103.*

12:00 p.m. **From Mad Cows to "Psi"-chotic Yeast: Expansion of the Prion Hypothesis.** Susan Lindquist, Investigator, HHMI; Professor, U. of Chicago. Molecular Biology Seminar. **116 Rockefeller Research Laboratories, MSKCC, 430 East 67th St.** *Refreshments at 11:45 a.m.*

MONDAY, MAY 8

11:00 a.m. **The Cold Zone: A Curious Convergence of Tick-borne Diseases.** David H. Persing, Vice President, Diagnostic Research, Corxia Corporation. LFKRI Research Seminar. **Lower Level Conference Room, New York Blood Center, 310 East 67th St.**

12:30 p.m. **Altered TCR Signaling: Potential Role in Susceptibility to Autoimmune Disease.** Terry Delovitch, Director, Autoimmunity/Diabetes Group, John P. Roberts Research Institute, Ontario. Immunology Lecture. **Second Floor Conference Room, HSS, 535 East 70th St.**

4:00 p.m. **Surprising Roles for the Matrix Metalloproteinase Matrilysin in Normal and Neoplastic Processes.** Lynn M. Matrisian, Professor and Chair, Dept. of Cancer Biology, Vanderbilt U. School of Medicine. Cell Biology and Genetics Seminar. **Weill Auditorium, WMCCU, 1300 York Ave.**

5:00 p.m. **The Role of RNA Polymerase II C-terminal Domain in Transcription and RNA Processing.** David L. Bentley, Professor, Dept. of Biochemistry and Molecular Genetics, U. of Colo. Medical School. Pathology Seminar. **117 Whitney, WMCCU, 1300 York Ave.** *Refreshments will be served. Contact J. Jillian Zhang, 746-4614.*

TUESDAY, MAY 9

11:00 a.m. **Tertiary Structure of a Functional Ribozyme Active-site Revealed through Chemogenetic and Computational Methodologies.** Anna-Marie Pyle, P&S Associate Professor of Biochemistry and Molecular Biophysics, HHMI Investigator, Columbia U. Pels Family Center for Biochemistry and Structural Biology Seminar. **301 Weiss.** *Contact Bobbie Larraga, 327-7240. Open to RU/WMCCU/NYPH/MSKCC community and guests.*

4:00 p.m. **Cardioprotective Effects of Opiods.** Garrett J. Gross, Professor of Pharmacology and Toxicology, Medical College of Wisc., Dept. of Pharmacology and Toxicology. Pharmacology Seminar. **Weill Auditorium, WMCCU, 1300 York Ave.** *Coffee at 3:45 p.m. Contact Virginia Ramos, 746-6250. Open to RU/WMCCU/ NYPH/ MSKCC community and guests.*

4:00 p.m. **Correlated Spontaneous Activity in Slices of Mouse Visual Cortex: A Window into the Cortical Circuitry?** Rafael Yuste, Assistant Professor, Columbia U. College of Physicians and Surgeons. Center for Studies in Physics and Biology Seminar. **B Level Conference Room, Smith Hall Annex.** *Tea at 3:30 p.m. Contact Martin Zapotocky, 327-8835.*

7:00 p.m. **Cancer: New Technologies, New Directions.** Karen H. Antman, Director, Herbert Irving Comprehensive Cancer Care Center, and Chief, Division of Medical Oncology, Columbia U. Revolutionizing Medicine in the 21st Century: Impact of Genetics and Molecular Biology Lecture. **Main Auditorium, American Museum of Natural History, Central Park West at 79th St.** *Admission $12 for single lecture ($10 Museum members, students, senior citizens.) To register, call 439-4300 or fax reservation requests to 769-5272. Tickets also can be reserved at tickets@amnh.org. Reserved tickets can be paid for at the door on the night of the lecture.*

WEDNESDAY, MAY 10

12:00 p.m. **Clinical Cancer Genetics: How Good Are the Data?** Judy Ellen Garber, Assistant Professor of Medicine, Dana Farber Cancer Institute, Harvard Medical School. Seminars in Clinical Research. **110B Nurses Residence.**

4:00 p.m. **Drug Discovery: Novel Molecular Design Technology.** Eugene Cordes, Professor, U. of Mich. Seminar. **301 Weiss.** Contact Jill Benz, 327-8092.Open to RU/WMCCU/NYPH/ MSKCC community and guests.

THE ROCKEFELLER UNIVERSITY Friday Lectures & Thesis Presentations

These events are held in Caspary Auditorium at 3:45 p.m. Tea is served in Abby Aldrich Rockefeller Lounge at 3:15 p.m. All are welcome.

FRIDAY, APRIL 28

SREBPs: Master Regulators of Metabolism. Michael S. Brown, Director, Center for Medical Genetics; Joseph L. Goldstein, Professor and Chairman, Dept. of Genetics, U. of Texas Southwestern Medical Center, Dallas.

FRIDAY, MAY 5

Molecular Analysis of Aging. Leonard Guarente, Professor of Biology, MIT.

FRIDAY, MAY 12

Exploring the Genetic Origins of Mental Illness. Maria Karayiorgou, Assistant Professor, RU.

THURSDAY, MAY 11

12:00 p.m. **Non-ER-α and Non-ER-β Responses to Estrogens in ER-α KO Mice.** Dennis B. Lubahn, Associate Professor, Dept. of Biochemistry, U. of Missouri Columbia. Endocrinology and Reproductive Biology Seminar. **301 Weiss.**

2:30 p.m. **N.Y. Alzheimer Disease Research Symposium.** Mark Mattson, National Institute on Aging; Tom Wisniewski, NYU; Michael K. Ahlijanian, Pfizer Central Research. **305 Weiss.** *Refreshments at 5:30 p.m. in the Weiss 17th Floor. Contact Huaxi Xu, 327-7567.*

The Arts and Other Events

FRIDAY, APRIL 28

12:00 p.m. **Tri-Institutional Noon Recitals.** Mela Tenenbaum, violin; Mark Ptashne, violin; Richard Kapp, piano. Performing works of Vivaldi, Biber, Locatelli, Shostakovich and Paganini. **Caspary Auditorium.** *Contact John Gerlach, 327-7776. Open to RU/WMCCU/ NYPH/MSKCC community and guests.*

WEDNESDAY, MAY 10

8:00 p.m. **Peggy Rockefeller Concerts.** Guarneri String Quartet. Performing Brahms' *String Quartet in C Minor, Op. 51, No.1*; Bartók's *String Quartet No. 2, Op. 17* and Ravel's *String Quartet in F Major.* **Caspary Auditorium.** *Contact Cathy Rogers, 327-8437.*

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