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NEWS AND NOTES 2001, MARCH 9

The Rockefeller University

MARCH 9, 2001

news & notes

THE NEWSLETTER OF THE ROCKEFELLER UNIVERSITY

FRIDAY LECTURE

Darnell to discuss the role of Stats today

Vincent Astor Professor James E. Darnell Jr. will give the Friday lecture today (March 9). His topic will be "The Stats: Roles in Transcription and Cancer."

The family of STAT proteins plays an important role in many normal developmental processes, but during the past several years, a growing number of scientific reports have indicated that human tumor samples contain persistently activated Stats (Stats 1, 3 and 5 most frequently). Similarly, reports also have cited a persistent activation of Stat proteins, particularly Stat3, in cell lines started from human tumors and in laboratory experiments in which oncogenes (cancer-causing genes) are used to turn normal cells into cancer cells. Recent research in the lab showed that activated Stat3 could, by itself, act as the transforming agent. Darnell's laboratory discovered the Stats and pioneered studies of the activation of these proteins.

The broad purpose of Darnell's research has been to gain a better understanding of what regulates messenger RNA content (gene expression) in mammalian cells, as opposed to the simpler, better understood bacterial cells. (In bacteria, the DNA is not bound within a nuclear

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Professor James E. Darnell Jr.'s lab discovered the Stats and pioneered studies of the activation of these proteins.

Symposium to explore drug abuse and addiction

Why does the use of heroin, cocaine and alcohol lead to life-threatening dependency in some people, while others never become addicted? And why do some people succeed in treatment, while others continue to relapse?

Centennial Lecture

On Thurs., March 29, Alan Leshner, director of the National Institute on Drug Abuse, will present a special Centennial Lecture on Science and Society entitled "Bringing the Power of Science to Bear on Drug Abuse and Addiction." Exploring how genetic research and new brain-scanning technologies are shedding light on risk factors, Leshner also will discuss the changes that result from short- and long-term drug abuse, and describe how this new understanding will have an impact on the future of treatment and prevention.

Symposium

On Fri., March 30, six leaders in the field of addiction research will present an overview of the latest scientific findings on cocaine, opiate and alcohol addiction in a symposium entitled "The Biology of Drug Abuse and Addiction: More Tangled Than *Traffic*."

The modern field of addiction research was launched at The Rockefeller University Hospital in the 1960s, when then-Professor Vincent Dole began testing methadone as a treatment for heroin dependency. Today, many of Dole's ideas serve as the foundation for research on drug addiction in laboratories around the world. At Rockefeller, cutting-edge research on addiction continues under the leadership of one of Dole's former colleagues, Mary Jeanne Kreek, who heads the Laboratory of the Biology of Addictive Diseases and directs a major interdisciplinary center at Rockefeller funded by the National Institute on Drug Abuse.

In addition to Kreek, speakers at the symposium include Enoch Gordis, director of the National Institute on Alcohol Abuse and Alcoholism, NIH; Nora Volkow, associate director for life sciences, Brookhaven National Laboratory; Charles O'Brien, chief of psychiatry, Veterans Affairs Medical Center, University of Pennsylvania; Eric J. Nestler, Lou and Ellen McGinley Distinguished Professor and chairman of the Department of Psychiatry at The University of Texas Southwestern Medical Center, Dallas;

Alan Leshner, Director, National Institute on Drug Abuse, will present a Centennial lecture on drug abuse.

and Chris Evans, a professor at the University of California, Los Angeles.

Gordis's principal goals as a physician and director of the National Institute on Alcohol Abuse and Alcoholism (NIAAA) are to establish the Institute and alcohol research as leaders in science and medicine

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E.O. Wilson wins this year's Lewis Thomas Prize

Scientist and two-time Pulitzer Prize-winner E.O. Wilson will receive the 2001 Lewis Thomas Prize, which honors "the scientist as poet."

In his newest book, *Consilience,* Edward O. Wilson seeks a union between science and the humanities. Fittingly, Wilson is this year's winner of The Rockefeller University's Lewis Thomas Prize, an award established in 1993 by the trustees of The Rockefeller University to recognize a scientist "whose voice and vision can tell us of science's aesthetic and philosophical dimensions."

Wilson's own career bridges the sciences and humanities: he is both a foremost entomologist and two-time Pulitzer Prize winner.

He received his B.S. and M.S. in biology from the University of Alabama and, in 1955, his Ph.D. in biology from Harvard, where he has since taught and where he has received both of Harvard's college-wide teaching awards. He currently is University Research Professor and Honorary Curator in Entomology of the Museum of Comparative Zoology at Harvard. His two Pulitzer Prize-winning books are *On Human Nature* (1978) and *The Ants* (1990, with Bert Hölldobler). He is the recipient of many fellowships, honors and awards, including the 1977 National Medal of Science, the Crafoord Prize from the Royal Swedish Academy of Sciences (1990), the International Prize for Biology from Japan (1993), and, for his conservation efforts, the Gold Medal of the Worldwide Fund for Nature (1990) and the Audubon Medal of the National Audubon Society (1995). He is on the board of directors of The Nature Conservancy, Conservation International and the American Museum of Natural History and gives many lectures throughout the world.

Lewis Thomas himself received the first Lewis Thomas Prize in 1993. Other recipients of the prize have been François Jacob (1994), Abraham Pais (1995), Freeman Dyson (1996), Max Perutz (1997), Ernst Mayr (1998) and Steven Weinberg (1999).

The award ceremony will take place on Tues., March 27, at 5:30 p.m.

Prospective students visit poster session today

This weekend, prospective students will attend an Open House at The Rockefeller University. This is an important step in the admissions process, giving admitted students a chance to learn more about the university, both its science and ambiance.

The visiting students will attend poster sessions today (March 9) to learn more about research at the university. This year, about 70 faculty, postdocs and students will present posters about their current laboratory projects. These sessions will take place on the 17th floor of Weiss from 1 p.m. to 3:30 p.m.

All members of the campus are encouraged to attend to experience the vitality of research at the university and to meet the prospective students.

Last week's poster session was attended by prospective students and by members of the campus.

AROUND CAMPUS

National Academy of Sciences event on campus

Vincent Astor Professor Paul Greengard (above) was one of the speakers at the National Academy of Sciences Public Symposium and New York Regional Members' Meeting, which was held at Rockefeller on Wed., Feb. 21.

Fellowship applications deadline

Applications for several internal Rockefeller University postdoctoral fellowships, to be awarded in the upcoming year, are due in the Development Office no later than Thurs., March 15. These fellowships include the Charles H. Revson and Norman and Rosita Winston Foundation Fellowships, the Bristol-Myers Squibb Postdoctoral Fellowship in Basic Neurosciences, the Merck Postdoctoral Fellowship, the C. H. Li Memorial Scholar Fund and the King of Thailand Biomedical Fellowship. Contact Leslie Blau, x7430, for further information.

Papers and talks

If you are about to publish a paper or give a scientific talk, *News&Notes* would like to know about it. Please send your information by campus mail to Box 68, by e-mail to newsno or by fax to x7876.

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Ideas and submissions can be sent interoffice (Box 68), by electronic mail (newsno) or by fax (212) 327-7876.

New postdoc association holds first elections

The newly formed Postdoctoral Association of The Rockefeller University is holding elections this month for its first committee of representatives. The first of its kind at Rockefeller, the organization will provide postdoctoral researchers with a sense of community by offering social and career development resources, opportunities to exchange ideas with other scientists and representation of their interests to the Rockefeller faculty and administration.

"This program will allow postdocs at Rockefeller to interact among themselves and with other scientists around the world," says Daniel Besser, a postdoctoral associate in the Laboratory of Molecular Cell Biology, and a member of the association's exploratory committee.

The idea for the association grew out of what is loosely referred to as the "postdoc hour"—a time set aside after each Friday lecture when postdocs have an opportunity to speak with the lecturer individually at the Faculty and Students Club. Now in its second year, the postdoc hour was established by Leon Hess Professor Titia de Lange and Jan Karlseder, a postdoctoral fellow in the Laboratory of Cell Biology and Genetics.

Karlseder later asked Besser to help him organize the meetings, and the two of them, together with the help of Jean Devlin, director of educational affairs, initiated meetings with the administration last November regarding a new postdoc association. A subsequent round of questionnaires confirmed that postdocs at Rockefeller were indeed interested in such an opportunity, and a 12-member exploratory committee was formed.

"Most other top universities have postdoc associations, and therefore it is appropriate that Rockefeller is offering this resource for members of the postdoc community," says Devlin.

The first concern of the exploratory committee, composed entirely of postdocs, is to elect five representatives to head the association. Candidates, who can be any postdoc working at Rockefeller, will present five-minute speeches at the Candidates Presentation Day, to be held in Caspary Auditorium on Wed., March 14, from 3 p.m. to 5 p.m. After this date, ballots will be sent via interoffice mail to each postdoc and are due back by Wed., March 28. The committee strongly encourages all postdocs either to run for election or volunteer their services, and most importantly, to vote.

Postdocs at Rockefeller have formed a new Postdoctoral Association, the first of its kind at the university.

Further goals outlined by the exploratory committee include: scientific interaction within the university community through seminars, poster sessions, retreats and their Web site; career development resources, including contacts to industry job fairs and seminars on grant writing, lab management and alternative careers; representation to the faculty and administration regarding issues of importance to postdocs, such as day care, salary, housing and visa/immigration; and social events for postdocs and their families.

"This is the kind of input postdocs need," said Katerina Akassoglou, a research associate in the Laboratory of Neurobiology and Genetics, and a member of the association's exploratory committee. "After all, your postdoc is your training period in becoming independent."

"Postdoc," as defined by the association, includes postdoctoral associates, postdoctoral fellows, research associates, senior research associates and fellows. There currently are 424 postdocs at The Rockefeller University.

For more information about the Postdoctoral Association see their Web site at www.rockefeller.edu/pda.

Friday continued

membrane. The bacterial genes are arranged in sequence along a single, circular chromosome.) This research is basic to understanding how normal cells develop and become specialized—that is, how instructions in genes get copied into mRNA and expressed at the right time and at the proper rate.

Darnell's work supplied much of the evidence for the now generally accepted concept that all RNA is formed by extensive "molecular carpentry." His first studies on RNA were with ribosomal and tRNA molecules that assist in coding mRNA to make protein. He found that both these molecules were chemically "processed" (chemical groups were added after synthesis and a long initial product was cut into usable pieces) before their use in the cytoplasm.

He also demonstrated that in the manufacture of mRNA a long nuclear molecule that had to be cut into pieces was the initial product. Others demonstrated that in fact some of the pieces were "spliced" back together again. Currently, he and his colleagues are exploring what initiates and regulates mRNA synthesis in the normal cells of a developing embryo and in cells infected with cancer-causing viruses.

Darnell received a B.A. degree in 1951 from the University of Mississippi and an M.D. degree in 1955 from the Washington University School of Medicine, which awarded him the Borden Undergraduate Research Award in 1956. From 1955 to 1956, he interned at Barnes Hospital in St. Louis, Missouri. From 1956 to 1960, he was engaged in poliovirus research in the Laboratory of Cell Biology headed by Harry Eagle at the National Institute of Allergy and Infectious Diseases.

From 1960 to 1961, he studied with Francois Jacob at the Institut Pasteur in Paris. In 1961, he joined the faculty of the Massachusetts Institute of Technology as an assistant professor of biology. He became associate professor in 1962, and he was the recipient of the United States Public Health Service Career Scientist Award (1962-64) while at M.I.T.

Darnell was appointed professor of biochemistry and cell biology at the Albert Einstein College of Medicine in 1964 and remained there until 1968, when he became professor in the biological sciences department at Columbia University. He was named chairman of the department in 1971.

From 1965 to 1970, he served concurrently as Career Scientist of the Health Research Council of the City of New York. He was Alan H. Kemper Professor of Biological Sciences at Columbia from 1971 to 1974.

In 1974, shortly after his arrival at Rockefeller, Darnell was named a Vincent Astor Professor under a grant from The Vincent Astor Foundation for the establishment of two chairs to be held by senior scientists of The Rockefeller University whose past work and planned investigations relate to one of the fields basic to achieving a deeper understanding of the treatment and prevention of cancer. He was vice president for academic affairs from 1990 to 1991.

Elected to the National Academy of Sciences in 1973, Darnell is a foreign member of the Royal Society of London and an honorary member of theJapanese Biochemical Society and has received numerous awards in recent years.

He is the co-author of two textbooks, *General Virology* and *Molecular Cell Biology.* He has also served on the editorial boards of *The Journal of Cell Biology, The Journal of Molecular Biology* and *Cell.*

Darnell has been a member of a number of advisory bodies to the National Science Foundation, the National Institutes of Health and the American Cancer Society, and is a member of the American Academy of Arts and Sciences.

The lecture begins in Caspary Auditorium at 3:45 p.m. and is preceded by a tea in Abby Aldrich Rockefeller Lounge at 3:15 p.m. All are welcome.

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calendar

MARCH NINTH THROUGH APRIL EIGHTH

EVENTS

Friday Lectures and Thesis Presentations

THESE EVENTS ARE HELD IN CASPARY AUDITORIUM AT 3:45 P.M. AND PRECEDED BY TEA AT 3:15 P.M. IN ABBY ALDRICH ROCKEFELLER LOUNGE. ALL ARE WELCOME.

FRIDAY, MARCH 9

The Stats: Roles in Transcription and Cancer. James Darnell, Professor, RU.

FRIDAY, MARCH 16

Proliferation-associated Cell Death: Conflict or Choice? Jean Wang, Professor, Department of Biology, University of California, San Diego.

FRIDAY, MARCH 23

The Frizzled Family of Wnt Receptors. Jeremy Nathans, Investigator, HHMI, Johns Hopkins University Medical School.

FRIDAY, APRIL 6

Richard M. Furlaud Lecture: Towards a Chemical Genetics. Stuart Schreiber, Investigator, HHMI, and Morris Loeb Professor, Harvard University.

FRIDAY, MARCH 9

11:00 A.M. **Hematopoiesis and Lymphocyte Development in a Vickid (Viable C-Kit-Deficient) Mouse.** Hans Reimer Rodewald, Professor, Department of Immunology, University of Ulm. Immunology Seminar. M-107 MSKCC, 1275 YORK AVE.

1:00 P.M.–3:30 PM. **Graduate Program Open House Poster Session.** WEISS 17TH FLOOR. OPEN TO RU COMMUNITY AND GUESTS.

MONDAY, MARCH 12

11:00 A.M. **Structuring Network Computations: Interactions between Hippocampal and Neocortical Circuits and Their Role in Memory Function.** Thanos Siapas, Center for Learning and Memory, Massachusetts Institute of Technology. Neuroscience Seminar. 301 WEISS. CONTACT BOBBIE LARRAGA, 327-7240. OPEN TO RU COMMUNITY AND GUESTS.

12:00 P.M. **Mechanisms of Membrane Targeting and Virus Assembly by HIV-1 Gag.** Marilyn D. Resh, MSKCC. CFAR Seminar. SIXTH FLOOR CONFERENCE ROOM, ADARC, 455 FIRST AVE.

4:00 P.M. **Genetic Factors That Underlie Cardiac Arrhythmias in Medical and Surgical Patients.** Jeffrey Balser, Associate Professor of Anesthesiology and Pharmacology, James Tayloe Gwathmey Chair, and Associate Dean, Physician-Scientist Development, Vanderbilt University School of Medicine. Anesthesiology Research Seminar. M-309 WMCCU, 1300 YORK AVENUE. CONTACT LISA FERRER, 746-2744.

4:30 P.M. **Heparan Sulfate Proteoglycans as Biologic Mediators in Developmental Processes: Growth Factor-Growth Factor Interactions and the Entry of Pathogenic Agents into Cells.** Robert Rosenberg, Professor, Castleman Professor of Medicine, Harvard Medical School, and Whitehead Professor of Biology, Massachusetts Institute of Technology. Cell Biology and Genetics Seminar. PAPANICOLAOU LIBRARY, A-106 WMCCU, 1300 YORK AVENUE. COFFEE WILL BE SERVED.

5:30 P.M. **Stem Cells: Persons or Therapies in Embryo?** Steven H. Holtzman, Chief Business Officer, Millennium Pharmaceuticals Inc. Zanvil A. Cohn Forum on Health Affairs. ABBY DINING ROOM. SHERRY AND WINE AT 5:00 P.M. IN THE ABBY LOUNGE.

TUESDAY, MARCH 13

4:00 P.M. **Chemistry and Biology of Novel Anticancer Agents.** Gunda Ingrid Georg, University Distinguished Professor, Department of Medicinal Chemistry, University of Kansas. Molecular Pharmacology and Therapeutics Seminar. 116 ROCKEFELLER RESEARCH LABORATORIES, MSKCC, 430 EAST 67TH ST. TEA AT 3:45 P.M.

4:00 p.m. **Neural Integrators.** David W. Tank, Biological Computation Research Department, Bell Labs, Lucent Technologies. Seminar. B LEVEL CONFERENCE ROOM, SMITH HALL ANNEX. CONTACT ERIK VAN NIMWEGEN, 327-8184.

4:00 P.M. **Target and Drug Discovery Strategies in Neuroscience.** James Treanor, Department of Neuroscience, Amgen Inc. Pharmacology Seminar. E-415 WMCCU, 1300 YORK AVE. COFFEE AT 3:45 P.M. CONTACT LISSETT CHECO, 746-6250.

WEDNESDAY, MARCH 14

12:00 P.M. **Determinants of Lipoprotein-Proteoglycan Interactions in Atherogenesis.** Alan Chait, Professor of Medicine, University of Washington. Seminars in Clinical Research. 110B NURSES RESIDENCE. CONTACT DALE MILLER, 327-8411.

3:00 P.M. **Presentation of Candidates for the Representatives of the Rockefeller University Postdoctoral Association.** CASPARY AUDITORIUM. CONTACT DANIEL BESSER, 327-8793. CANDIDATES WILL PRESENT 5 MINUTE STATEMENTS FOLLOWED BY A PANEL DISCUSSION. OPEN TO RU COMMUNITY AND GUESTS.

THURSDAY, MARCH 15

3:30 P.M. **Epigenetic Regulation of Mammalian Growth and Development.** Shirley Tilghman, Professor, Department of Molecular Biology, Princeton University. 2001 Stubenbord Lecture. Molecular Biology Seminar. URIS AUDITORIUM, WMCCU, 1300 YORK AVE. CONTACT DENISE CRUZ, 746-6505.

4:00 P.M. **Direct Isolation of Human CNS Stem Cells.** Nobuko Uchida, Director, Neural Stem Cell Research, Stem Cells, Inc., Sunnyvale, Calif. LFKRI Research Seminar. LOWER LEVEL CONFERENCE ROOM, NEW YORK BLOOD CENTER, 310 EAST 67TH ST. TEA AT 3:45 P.M. CONTACT ROSANNA MARTINEZ, 570-3357.

4:30 P.M. **The Biology of Cancer Metastasis.** Isaiah J. Fidler, Chairman, Department of Cancer Biology, University of Texas M.D. Anderson Cancer Center. MSKCC President's Research Seminar—D. Wayne Calloway Lecture. AUDITORIUM, ROCKEFELLER RESEARCH LABORATORIES, MSKCC, 430 EAST 67TH ST. TEA AT 4:00 P.M.

8:00 P.M. **Genetic Control of Genome Stability.** Richard D. Kolodner, Head, Laboratory of Cancer Genetics and Professor, Ludwig Institute for Cancer Research, Department of Medicine and Cancer Center, University of California, San Diego, School of Medicine. Harvey Society Lecture. CASPARY AUDITORIUM.

FRIDAY, MARCH 16

9:00 A.M. **Neurocognitive Deficit in Children with the 22q11 Deletion Syndrome: Deciphering Links between Genes and Behavior.** Christina Sobin, Research Associate and Clinical Scholar, RU. Clinical Scholars' Grand Rounds. 110B NURSES RESIDENCE.

12:00 P.M. **Driving the Cell Cycle.** David Morgan, Professor, Department of Physiology, University of California, San Francisco. Cell Biology Seminar. 116 ROCKEFELLER RESEARCH LABORATORIES, MSKCC, 430 EAST 67TH ST.

MONDAY, MARCH 19

9:00 A.M. **Foreign Student and Scholar Tax Workshop.** Richard Locastro, Senior Manager, KPMG LLP, Consultant. Tax Seminar. 305 WEISS. CONTACT MARIA LAZZARO, 327-8059. OPEN TO RU COMMUNITY AND GUESTS.

12:00 P.M. **Unraveling the Mechanism of a DNA Helicase.** Dale Wigley, Head, Molecular Enzymology Laboratory, Imperial Cancer Research Fund. Molecular Biology Seminar. 116 ROCKEFELLER RESEARCH LABORATORIES, MSKCC, 430 EAST 67TH ST. TEA AT 11:45 A.M. CONTACT LINDA SMITH, 639-7655. OPEN TO RU/WMCCU/NYPH/MSKCC COMMUNITY AND GUESTS.

4:30 P.M. **Surface and Secreted Proteins of the Malaria Parasite, *Plasmodium*.** Thomas J. Templeton, Assistant Professor, Department of Microbiology and Immunology, WMCCU. Cell Biology and Genetics Seminar. PAPANICOLAOU LIBRARY, A-106 WMCCU, 1300 YORK AVE. COFFEE WILL BE SERVED.

TUESDAY, MARCH 20

11:00 A.M. **Molecular Architecture and Dynamics of cAMP-dependent Protein Kinase.** Susan Taylor, Professor, University of California, San Diego. Pels Family Center for Biochemistry and Structural Biology Seminar. 305 WEISS. CONTACT ROSER BUSQUETS, 327-7050. COFFEE AND COOKIES AT 10:45 A.M.

4:00 P.M. **Herpes Simplex-based Therapies for Cancer.** Yuman Fong, Associate Member, Department of Surgery, MSKCC. Molecular Pharmacology and Therapeutics Seminar. 116 ROCKEFELLER RESEARCH LABORATORIES, MSKCC, 430 EAST 67TH ST. TEA AT 3:45 P.M.

WEDNESDAY, MARCH 21

11:00 A.M. **Success and Failure in the Immune Control of the Oncogenic Epstein-Barr Virus.** Christian Munz, Postdoctoral Fellow, RU. Infectious Disease/Immunology Seminar. 301 WEISS. CONTACT BOBBIE LARRAGA, 327-7240. OPEN TO RU COMMUNITY AND GUESTS.

12:00 P.M. **Vertebrate Hedgehog Signal Transduction.** Frederic deSauvage, Senior Scientist, Department of Molecular Oncology, Genentech Inc. Lecture. 302 WEISS. OPEN TO RU COMMUNITY AND GUESTS.

12:30 P.M. **Reverse-engineering Gene Circuits Based on Accurate Expression Measurements from Living Cells.** Uri Alon, Weizmann Institute. Seminar. B LEVEL CONFERENCE ROOM, SMITH HALL ANNEX. CONTACT ERIK VAN NIMWEGEN, 327-8184.

3:00 P.M. **Data Analysis Issues and Tools in DNA Microarrays.** Sorin Draghici, Assistant Professor, Department of Computer Science, Wayne State University. STARR CENTER FOR HUMAN GENETICS SEMINAR. 305 WEISS. CONTACT EMILY HUFFMAN, 327-7387.

4:30 P.M. **Cellular Responses to DNA Damage.** Steve Elledge, Investigator, HHMI, and Professor, Department of Biochemistry, Baylor College of Medicine. MSKCC President's Research Seminar Series. AUDITORIUM, ROCKEFELLER RESEARCH LABORATORIES, MSKCC, 430 EAST 67TH ST. TEA AT 4:00 P.M.

5:00 P.M. **The Regulation of Transcriptional Programs by Tumor Suppressor Genes.** Arnold J. Levine, President, RU. Seminar. HUNTER COLLEGE WEST, ROOM 714, 68TH STREET AND LEXINGTON AVE. SPONSORED BY THE NEW YORK ACADEMY OF SCIENCES, SECTION OF MICROBIOLOGY AND BY HUNTER COLLEGE. FREE AND OPEN TO THE PUBLIC; REGISTRATION NOT REQUIRED. CONTACT HENRY MOSS, 838-0230 EXT. 410; HMOSS@NYAS.ORG.

CONTINUED ON OTHER SIDE WITH ARTS AND OTHER EVENTS.

news&notes
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Address Correction Requested

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MARCH NINTH THROUGH APRIL EIGHTH

THURSDAY, MARCH 22

10:00 A.M. **Spring Biotech Vendor Show.** Weiss 17th Floor. Contact Renita Singh, (800) 662-2566 x7770. Open to RU community and guests.

4:00 P.M. **Thrombotic Events in Mice Lacking Clotting Function: Insights from TFPI-deficient Mice.** Jay L. Degen, Professor of Pediatrics, Children's Hospital Research Foundation, Cincinnati, Ohio. LFKRI Research Seminar. Lower Level Conference Room, New York Blood Center, 310 East 67th St. Tea at 3:45 P.M. Contact Rosanna Martinez, 570-3357.

FRIDAY, MARCH 23

12:00 P.M. **Mimicking Cellular Proteins or Controlled Cell Damage: Alternative Strategies for the Modulation of Cellular Responses by Bacterial Pathogens.** Jorge Galan, Professor and Chairman, Section of Microbial Pathogenesis, Boyer Center for Molecular Medicine, Yale University School of Medicine. Molecular Biology Seminar. 116 Rockefeller Research Laboratories, MSKCC, 430 East 67th St. Tea at 11:45 A.M. Contact Linda Smith, 639-7655. Open to RU/WMCCU/NYPH/MSKCC community and guests.

MONDAY, MARCH 26

1:30 P.M. **MHC-encoded Class Ib Molecules: Recognition Elements for the Innate and Adaptive Immune Responses.** Mark J. Soloski, Department of Medicine, Division of Molecular and Clinical Rheumatology, The John Hopkins University School of Medicine. Immunology Seminar. 116 Rockefeller Research Laboratories, MSKCC, 430 East 67th St.

TUESDAY, MARCH 27

10:00 A.M.–5:00 P.M. **TNF Alpha Signaling Activation and Cell Death.** Symposium. Weiss 17th Floor. Contact Jose Perez, (860) 441-8806.

4:30 P.M. **Beauty Is Skin Deep: Regulation of Epithelial Differentiation in Skin and Hair.** Elaine Fuchs, Amgen Professor, Department of Molecular Genetics and Cell Biology, University of Chicago. MSKCC President's Research Seminar. Auditorium, Rockefeller Research Laboratories, MSKCC, 430 East 67th St. Tea at 4:00 P.M.

5:30 p.m. **A Letter to Thoreau.** Edward O. Wilson, Pellegrino University Research Professor and Honorary Curator in Entomology, Museum of Comparative Zoology, Harvard University. Lewis Thomas Prize: Honoring the Scientist as Poet. Caspary Auditorium.

WEDNESDAY, MARCH 28

11:00 A.M. **Chemical Strategies for Smoking Out the Endogenous Cannabinoid System and Their Application to Functional Proteomics.** Benjamin F. Cravatt, Assistant Professor, The Skaggs Institute for Chemical Biology, and Departments of Cell Biology and Chemistry, The Scripps Research Institute. Seminar. 301 Weiss. Contact Michael W. Young, 327-8645.

12:00 P.M. **Adoptive Transfer of EBV-specific CTLs for the Prevention and Treatment of EBV-Associated Malignancies.** Cliona Rooney, Associate Professor, Center for Cell and Gene Therapy, Baylor College of Medicine. Seminars in Clinical Research. 110B Nurses Residence. Contact Dale Miller, 327-8411.

4:30 P.M. **The Cancer Cell Cycle and Drug Discovery.** Nicholas La Thangue, Cathcart Chair of Biochemistry, University of Glasgow, and Chief Scientific Officer, Prolifix Ltd. MSKCC President's Research Seminar. Auditorium, Rockefeller Research Laboratories, MSKCC, 430 East 67th St. Tea at 4:00 P.M.

7:30 P.M. **Psoriasis Support Group.** Meeting. 110B Nurses Residence. Contact Patricia Gilleaudeau, 327-8333.

THURSDAY, MARCH 29

4:00 P.M. **Getting Chromosomes to the Right Place: Meiosis and Male Infertility.** Mary Ann Handel, Professor, Department of Biochemistry and Cellular and Molecular Biology, University of Tennessee, Knoxville. Endocrinology and Reproductive Biology Seminar. 301 Weiss.

4:00 P.M. **Insights into the Genetic and Physiological Basis of Chloroquine. Resistance in *Plasmodium falciparum*.** David Fidock, Assistant Professor, Department of Microbiology and Immunology, Albert Einstein College of Medicine. LFKRI Research Seminar. Lower Level Conference Room, New York Blood Center, 310 East 67th St. Tea at 3:45 P.M. Contact Rosanna Martinez, 570-3357.

6:00 P.M. **Bringing the Power of Science to Bear on Drug Abuse and Addiction.** Alan Leshner, Director, National Institute on Drug Abuse, NIH. Centennial Lectures on Science and Society. Caspary Auditorium. Contact Bobbie Larraga, 327-7240.

FRIDAY, MARCH 30

12:00 P.M. **Ras and Rho GTPases and Oncogenesis.** Channing Der, Professor, University of North Carolina, Chapel Hill. Cell Biology Seminar. 116 Rockefeller Research Laboratories, MSKCC, 430 East 67th St.

WEDNESDAY, APRIL 4

12:00 P.M. **Mpslp Kinase Family Control of Centrosome Duplication.** Mark Winey, Associate Professor, Department of Molecular, Cellular and Developmental Biology, University of Colorado. Student-Sponsored Seminar. 301 Weiss. Pizza Luncheon at 1:00 P.M. in the Weiss 17th Floor. Open to RU/WMCCU/NYPH/MSKCC community and guests.

12:00 P.M. **Persistence, Pathogenesis, and Protection in Tuberculosis.** John McKinney, Assistant Professor, RU. Seminars in Clinical Research. 110B Nurses Residence. Contact Dale Miller, 327-8411.

4:30 P.M. **Inheritance of Chromosomes.** Bruce Stillman, Director and Chief Executive Officer, Cold Spring Harbor Laboratory. MSKCC President's Research Seminar. Auditorium, Rockefeller Research Laboratories, MSKCC, 430 East 67th St. Tea at 4:00 P.M.

THURSDAY, APRIL 5

3:00 P.M. **Brain and Language in Children and Adults.** Elizabeth Bates, Professor, Department of Cognitive Science, University of California, San Diego. Systems Neuroscience Seminar. 305 Weiss. Open to RU/WMCCU/NYPH/MSKCC community and guests.

4:00 P.M. **HCV Clearance.** David L. Thomas, Associate Professor, Division of Infectious Disease, Johns Hopkins University School of Medicine. Center for the Study of Hepatitis C Seminar Series. 301 Weiss. Contact Patricia Holst, 327-7047. Open to RU/WMCCU/NYPH/MSKCC community and guests.

FRIDAY, APRIL 6

12:00 P.M. **Chimeras for Dissecting Complex Phenotypes.** Andras Nagy, Senior Staff Scientist, Samuel Lunenfeld Research Institute, Mount Sinai Hospital. Molecular Biology Seminar. 116 Rockefeller Research Laboratories, MSKCC, 430 East 67th St. Tea at 11:45 A.M. Contact Linda Smith, 639-7655. Open to RU/WMCCU/NYPH/MSKCC community and guests.

12:00 P.M. **National Library Week Open House.** Christine Fleming, Beilstein; Scott Bard, Institute for Scientific Information; and Kevin Monaco, Chemical Abstract Services. Vendor Demonstration. Welch Hall. Refreshments at 12:00 P.M. Open to RU community and guests.

The Arts and Other Events

FRIDAY, MARCH 9

12:00 P.M. **Tri-Institutional Noon Recitals.** Lara St. John, violin, and Ilan Rechtman, piano. In commemoration of International Women's Day, performing Beethoven: *Sonata No. 7;* Sarasate: *Zigeunerweisen;* Rechtman: *Czardas Caprice;* Waxman: *Carmen Fantasie.* Caspary Auditorium. Open to RU/WMCCU/NYPH/MSKCC community and guests.

FRIDAY, MARCH 16

12:00 P.M. **Tri-Institutional Noon Recitals.** Mykola Suk, piano. Performing Haydn: *Sonata in E-flat major, Hob. 16, No. 49;* Kolessa: *Two Preludes;* Thalberg: *Fantasy on Moses in Egypt, Op. 33,* based on Rossini melodies; Liszt: *Sonata in b minor.* Caspary Auditorium. Open to RU/WMCCU/NYPH/MSKCC community and guests.

WEDNESDAY, MARCH 21

8:00 P.M. **Peggy Rockefeller Concerts.** Trio Fontenay. Caspary Auditorium. Contact Jennifer Goldschlag, 327-8437.

SUNDAY, APRIL 1

4:00 P.M. **Chamber Orchestra of Science and Medicine.** Spring Concert. Caspary Auditorium. Refreshments at 7:00 P.M. in the Abby Lounge.

Rockefeller high-energy physics lab to participate in new Fermilab collider project

"Our goal is to understand everything about our universe and be able to describe it with a single equation that can fit on a business card," says Professor Konstantin Goulianos, head of the Laboratory of Experimental High Energy Physics at Rockefeller University, describing the lab's involvement in the Collider Detector at Fermilab (CDF) in Batavia, Ill. The Goulianos team has participated in the CDF project since its beginning, nearly 20 years ago, sharing important discoveries with 500 or so physicists from 50 collaborating institutions.

Most prominent of these has been the 1995 discovery of the "top quark," the last and heaviest of the six-member set of the fundamental constituents of matter whimsically named "quarks." This discovery provided additional support for the already extremely successful "Standard Model," the prevailing theory of particles and forces that determine the structure of matter. This theory, first formulated in the 1960s, unifies the seemingly unrelated interactions responsible for radioactivity and electromagnetism and explains the composition of matter, and by extension, the make up of the world around us. However, it is also known to have some weaknesses, such as its inability to account for the effects of gravity.

"At the end of the 19th century," Goulianos continued, "people thought that they knew everything about the laws of nature. But then came quantum mechanics and the world changed. Now, at the click of a mouse billions of electrons around the globe perform a quantum dance that brings information via computers, laser printers, cell phones, MRI machines and thousands of other technologies unimaginable in the pre-quantum era." Detailing the variety of applications of quantum mechanics, he then added: "What is really amazing is that the more compact the equations of our theory, the more we can squeeze out of them. As successful as the Standard Model may be, it doesn't incorporate gravity, nor does it explain some very intriguing phenomena, such as the apparent abundance of 'dark matter' in our universe. Perhaps the root of the trouble with the Standard Model is that it cannot fit on a business card. It just has too many parameters that are not determined by the theory, as for example the masses of the quarks. So, there must be something out there beyond it."

A step towards understanding the origin of mass is the "Higgs force," named after its proponent Peter Higgs. The main goal in the next CDF run is to search for the Higgs, the quantum associated with this force. The next run is scheduled to begin this month with an upgraded Fermilab particle accelerator and an upgraded CDF detector. Within the next two years the accelerator will deliver 20 times more proton-antiproton collisions than in all previous runs. These collisions will occur at a rate of several million per second, and at the end of the run, according to estimates, a handful of them may produce a Higgs particle.

The Higgs decays instantly into b and anti-b quarks, which in turn decay into "jets" of particles. To positively identify the Higgs, one must measure the directions and energies of all these particles and determine the Higgs's mass. This will be done off-line. But how does one pick out the few Higgs candidate events from the trillions of "common" events expected in this run? Certainly, one cannot study a trillion events.

"If you are investigating a robbery in New York, you don't go out and interrogate all the residents of all five boroughs. You have to have information leading to someone; you need a suspect." Goulianos used this edgy analogy to explain the process by which the Higgs candidate events will be selected. As in the past run, there will be a three-level, on-line event selection, performed by sophisticated electronics and software designed exclusively for CDF. At each level events are "interrogated" for increasingly strict requirements that must be satisfied to pass on to the next level. The requirements depend on the type of study being conducted. The Higgs suspects are rounded up simultaneously with the suspects of all the other studies. This process leads to a few events per second passing all three levels of selection. For each such event a "trigger" is then generated, prompting a readout of the over one million electronic channels of all CDF detector components. Among the most sophisticated of these components is the silicon vertex detector, which itself employs about a million channels and is capable of reconstructing the event vertex with a resolution of a few microns. Another high-tech component, designed and constructed in the Goulianos lab, is the "shower maximum detector," which employs optical fiber technology to measure the position of particle showers initiated by electrons or gamma rays in a "calorimeter," a device that measures particle energies. The information provided by all detector components is used in the off-line event analysis.

Accurate reconstruction of the energy of the jets of particles emanating from Higgs decays is essential to a Higgs discovery in the upcoming run. Assistant Professor Stefano Lami, working with Graduate Fellow Andrea Bocci, has devised a new technique to improve the jet energy measurement, resulting in a more precise determination of the Higgs mass in the presence of the 100 or so extraneous particles produced in a typical event. The improvement achieved so far will more than double the Higgs discovery potential.

The top quark discovered in the last run, which confirmed the Standard Model expectation of the existence of six quarks, will be used in the next run to answer some important questions. Assistant Professor Luc Demortier, who was instrumental in the top quark's discovery, will study single top production—events in which a top quark is produced without an anti-top partner. The single top production rate can tell us about the possible existence of quarks heavier than the top and provide information about various theoretical schemes for physics beyond the Standard Model.

Another important topic that will be investigated is the question of whether the quarks themselves have structure. The answer will be sought in a study of events in which two high-energy jets of particles emerge from a proton-antiproton collision at angles close to 90 degrees. This happens when (anti)proton constituents, such as quarks, scatter off like two hard balls and then decay into particle jets. "We can calculate precisely what to expect from quark scattering, and we are looking for deviations that can be attributed to scattering of quark constituents," says Goulianos. This topic is part of a larger study of Quantum Chromodynamics, the Standard Model theory of the "strong" force. The effort is led by Assistant Professor Anwar Bhatti, working closely with Research Assistant Christina Mesropian.

Goulianos's team is also working on a study of events in which no particles are emitted from the collision in certain directions. As Goulianos describes, "if you think of an event as a pie of particles distributed all around the collision point, these events are missing a piece of the pie." How does such an incredible thing happen? "It is probably an interference effect resulting from the quantum mechanical character of the quarks and gluons that make up the (anti)proton. These studies can show us how quarks and gluons are grouped together and perhaps explain why they are confined within the (anti)proton." This work is done almost exclusively by the Rockefeller team under the leadership of Goulianos, working closely with Research Assistants Michele Gallinaro and Koji Terashi and Graduate Fellows Kenichi Hatakeyama and Andrei Solodsky. The project requires two calorimeter-type detectors to measure the directions and energies of particles produced at small angles with respect to the proton and antiproton beams. With the expert help of instrument maker Vadim Sherman, the Goulianos team built these detectors, called "MiniPlugs," in their Weiss Research building machine shop using a unique optical fiber based on a design invented by the team. "The entire lab contributed to this effort," says Goulianos, "including our secretary, Christina Ferraro."

Members of the Goulianos lab work with one of two "MiniPlug" particle detectors built here at Rockefeller for the Collider Detector at Fermilab. From left to right: (standing) Michele Gallinaro and Vadim Sherman, (seated) Andrea Bocci, Stefano Lami, Andrei Solodsky, Kenichi Hatakeyama and Konstantin Goulianos.

A Higgs discovery in the upcoming run will be an extremely significant contribution to the Standard Model, even as the world is increasingly interested in what lies beyond it. "This doesn't make it a bad theory," says Goulianos. "Newton's laws of motion, for example, aren't the whole story, but we still use them. They work, we just know there's more out there. Reaching beyond Newton's mechanics was our ticket to a magnificent quantum show that changed our vision of the universe and transformed our lives in a way we could never imagine a mere 100 years ago. One may try to imagine what lies beyond the Standard Model, but judging from the past, the truth may once again defy the imagination."

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Goulianos is head of the Laboratory of Experimental High Energy Physics. The work of Goulianos's lab at Rockefeller and Fermilab in Illinois is supported by the Department of Energy of the U.S. federal government.

ETCETERA

Employee Assistance Program has new Web site

The Employee Assistance Program Consortium is a free, confidential counseling service available to all employees of the five consortium members (Hospital for Special Surgery, New York-Presbyterian Hospital, Rockefeller University and Weill Medical College of Cornell University). The program now has a new Web site (eapc5.com) where you can learn more about this service.

Woodstock Inn & Resort discount

Laurence S. Rockefeller is offering a special discount rate at the Woodstock Inn for 2001 to employees of The Rockefeller University. The discount room rate is $99 (plus Vermont state tax and a housekeeping surcharge) per room. The Human Resources Office has reservation forms available. For reservations, please fax or mail a request to:

Reservations
The Woodstock Inn & Resort
Fourteen the Green
Woodstock, Vt. 05091-1298

Fax: (802) 457-6699

Next Peggy Rockefeller concert features famed trio

The Trio Fontenay will perform at the next Peggy Rockefeller Concert on Wed., March 21.

Since its formation in 1980, Trio Fontenay has been praised by critics for its technical excellence, richness of tone and depth of interpretive imagination. Inspired by their early study with the Amadeus Quartet, the ensemble performs throughout Europe, North and South America, Australia, and the Far East.

They are regularly welcomed in London, Munich, Hamburg, Berlin and Amsterdam, and they were named Trio-in-Residence at Paris's Théâtre Chatelet. In the 1995-1996 season they performed the complete Beethoven cycle at Paris's Théâtre Chatelet, London's Wigmore Hall, Berlin's Schauspielhaus, Amsterdam's Concertgebouw, and in Munich, Cologne and Hamburg.

In North America, the Trio has played at Carnegie's Weill Recital Hall, and has made return appearances in Montreal, Toronto, Buffalo, Kansas City, Houston, and Pasadena. This season, the Trio's performances include concerts in Seattle, Detroit, New Orleans, Houston, Buffalo, New York City, and at Spivey Hall. Last season, the Trio performed in Dallas, Berkeley, and College Park among others, and made return appearances in Ann Arbor, Montreal, Phoenix, Albany and Worcester.

The name "Fontenay" was chosen for two reasons: first, it is the old French translation for "source" and "fantasy"; and second, it is the name of the street near the Hamburg Conservatory where the ensemble first met to practice. The Trio Fontenay has won numerous awards and competitions in Europe.

The concert will take place at 8 p.m. in Caspary Auditorium. Please call x8437 for more information.

The Trio Fontenay features Wolf Harden, pianist; Michael Mücke, violinist; and Jens Peter Maintz, cellist.

Symposium continued

and to facilitate the use of alcohol research findings to improve prevention and treatment. Prior to becoming director of the NIAAA in 1986, Gordis spent 10 years at The Rockefeller University in the Dole laboratory, founded and directed one of New York City's largest and most comprehensive alcoholism treatment programs at Elmurst Hospital and served as professor clinical medicine at Mt. Sinai School of Medicine.

Nora Volkow uses positron emission tomography (PET) to investigate the biochemical changes in the brain associated with drug addiction, alcoholism and aging. Her studies include research on Ritalin and cocaine, which are chemically similar, and their pathways and functioning in the brain. Volkow is focused on finding an effective pharmacological treatment of addiction, and her research could also aid in finding avenues for delaying and counteracting the deleterious effects of aging.

Charles O'Brien's research group has been responsible for documenting the relationship between opioid agonists and alcohol addiction. Drugs such as naltrexone have been developed and approved as treatment as a result of this work. O'Brien's interest in the pharmacology of addiction is always coupled with the development of new behavioral therapies that constitute a full psychopharmacological approach.

Eric J. Nestler studies the molecular adaptations induced in the brain after chronic administration of opiates, cocaine and other drugs. One of his goals is to more completely identify and characterize such adaptations and to relate specific adaptations to drug-induced alterations in neuronal function that define an addicted state. Nestler utilizes methods of viral-mediated gene transfer and genetic mutations in mice to establish causal relationships among molecular, cellular and behavioral levels of analysis.

Chris Evans led one of two teams that concurrently cloned the delta opioid receptor by functional expression in 1992. This accomplishment enabled the molecular characterization of the family of opioid receptors and helped to elucidate the mechanisms by which drugs interact with the opioid receptors in the brain. In ongoing research Evans uses immunochemical techniques in cell lines and in rats to further characterize the properties of the opioid receptor family with the goal of refining treatments and minimizing side effects associated with the opioid class of drugs.

Symposium speaker Mary Jeanne Kreek is a professor and head of the Laboratory of the Biology of Addictive Disease at The Rockefeller University; she also is senior physician of The Rockefeller University Hospital.

Symposium schedule for Fri., March 30

Morning Session on Ethanol Addiction Biology and Treatment

9:30 a.m. – 10:20 a.m.

Alcoholism: Research Progress and Promise

Enoch Gordis
Director, National Institute on Alcohol Abuse and Alcoholism, NIH

10:20 a.m. – 11:10 a.m.

The Addicted Brain

Nora Volkow
Associate Director for Life Sciences, Brookhaven National Laboratory

11:10 a.m. – 12:00 p.m.

Science-based Treatment of Addictive Disorders

Charles O'Brien
Chief of Psychiatry, Veterans Affairs Medical Center, University of Pennsylvania

12:00 noon – 2:00 p.m.

Break for lunch

Afternoon Session on Cocaine and Opiate Addiction Biology and Treatment

2:00 p.m. – 2:50 p.m.

Molecular and Neurobiological Role of Endogenous Opioids in the Addictions

Mary Jeanne Kreek
Professor and Head of the Laboratory of the Biology of Addictive Diseases, The Rockefeller University

2:50 p.m. – 3:40 p.m.

Molecular Mechanisms of Addiction

Eric J. Nestler
Professor and Chairman of Psychiatry, The University of Texas Southwestern Medical Center, Dallas

3:40 p.m. – 4:10 p.m.

Coffee break

4:10 p.m. – 5:00 p.m.

Cloning and Characterization of the Opioid Receptor Family

Chris Evans
Professor, UCLA

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