Dr. Jeffrey Schom, NCI, Gains New Research Honors

Dr. Jeffrey Schom, chief, NCI Laboratory of Tumor Immunology and Biology, Division of Cancer Biology and Diagnosis, recently received two honors for his work on monoclonal antibodies.

Dr. Schom delivered the annual George Gross Memorial Lecture June 16 at the Beth Israel Medical Center in Newark, N.J. His lecture was entitled "Monoclonal Antibodies: Their Potential in Prognosis, Diagnosis, and Therapy of Cancer." NCI Director Dr. Vincent T. DeVita, Jr., is a previous George Gross lecturer.

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Play It Safe With Electricity

"In view of the recent tragedy that occurred on the NIH campus, we feel it is an important time to discuss electrical safety hazards and precautions with all NIH employees," said Roland Corsey, Biomedical Engineering and Instrumentation Branch, Division of Research Services. Mr. Corsey runs the electrical safety program for patient-related electrical equipment in the Clinical Center and is the Chairman of the Clinical Center Safety Committee.

Mr. Corsey has outlined for NIH employees some of the things that require attention when dealing with electrical equipment.

- A tingling sensation when touching

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AIDS Research Sponsored by NIAID, NHLBI

AIDS, a recently recognized condition of unknown cause, is a severe suppression of the body's immune system leading to disorders that include Kaposi's sarcoma, which is a rare tumor of the blood vessel walls, and opportunistic infections such as Pneumocystis carinii pneumonia.

AIDS occurs primarily among homosexual or bisexual men with multiple sex partners, intravenous drug abusers, recent Haitian entrants into the U.S., and hemophiliacs. As of Aug. 15, there had been 2,084 cases of AIDS reported in the U.S., with 858 deaths. So far, the immune suppression has not been reversed in any AIDS patient.

The cause of the disease and mode of transmission are unknown but it appears to be primarily transmitted through sexual contact, to a lesser degree, through contaminated needles used by intravenous drug abusers and, rarely, through a blood component given to hemophiliacs. An infectious agent—a new virus, for example, or one that has mutated from a known virus—is a major suspect.

NIAID

A 3-year, $1.7 million contract with the New York Blood Center and Memorial Sloan-Kettering Cancer Center in New York City to collect specimens of blood and other body secretions from patients affected by acquired immune deficiency syndrome (AIDS) has been announced by the National Institute of Allergy and Infectious Diseases.

Infectious agents are used to infect the healthy volunteers who have a disease, and the secretions are collected several months before studies. NHLBI has proposed a specific blood screening test to identify HIV carriers before AIDS appears and a 5-year study to develop the association between the use of blood and blood products and the spread of AIDS.

NHLBI

Requests for Proposals (RFP) for two new research initiatives on acquired immune deficiency syndrome (AIDS) have been announced by the National Heart, Lung, and Blood Institute. NHLBI's proposed projects are aimed at developing a specific blood screening test to identify HIV carriers before they develop symptoms, and a 5-year study to determine the relationship between the use of blood and blood products in the spread of AIDS.

Estimated funding for these projects is $4.4 million.

The Institute invites the scientific community to submit applications for research grants and contracts on these projects to the NHLBI Division of Blood Diseases and Resources.

The RFP seeks grant proposals aimed at developing a specific test to identify carriers of AIDS with no symptoms. Scientists have speculated that a person who contracts AIDS may spread the disease to others before symptoms appear.

Presently no such screening test exists, but once found, it could help identify carriers and allow physicians to begin treatment before the victim enters advanced stages of the disease.

The RFP is to solicit contract proposals for a 5-year study to determine if there is any association between use of blood products and development of AIDS. The study will examine alterations in immune function and other biological functions among patients receiving blood transfusions to see if these alterations are related to susceptibility to AIDS.

Patients in this study will include certain individuals with sickle cell disease or Cooley's anemia (thalassemia), hemophiliacs who use blood products to control
DR. SCHLOM
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The AMC Cancer Research Center in Denver also presented an award to Dr. Schlam for “his innovative and distinguished work that has placed him in the forefront of research.” At the March 23 presentation, Dr. Schlam delivered a paper on “Monoclonal Antibodies to Breast Tumor Associated Antigens.”

Dr. Schlam came to the NCI Division of Cancer Cause and Prevention in 1973 to do research in viral oncolgy and the Breast Cancer Virus Segment of the Virus Cancer Program. In 1976 he became head of the Tumor Virus Detection Section, Laboratory of Viral Carcinogenesis, and in 1980 was made chief of the Experimental Oncology Section, Laboratory of Cellular and Molecular Biology. In 1982 he was named chief of the new Laboratory of Tumor Immunology and Biology in the Division of Cancer Biology and Diagnosis.

Dr. Schlam says that his recent appointment brings his research career full circle. He started as a molecular biologist-virologist, but moved into immunology when the hybridoma technology opened new horizons for that discipline. Now, as chief of the new Laboratory of Tumor Immunology and Biology, he is once more working in molecular biology, but this time in close conjunction with immunology.

The laboratories under Dr. Schlam’s direction have clarified a number of molecular and immunologic aspects of viruses and cancers in animals and humans. Under his direction, research in the laboratory have characterized the nucleic acids and protein structure of type-B mouse mammary tumor viruses and the type-D retroviruses of primates. The group has also demonstrated that both of these virus groups can be transmitted not only through the germ line, but also through nongenetic means such as air, milk, and the placenta.

Dr. Schlam, with Drs. David Colcher and Patricia Horan Hand, developed a series of radioimmunoassays that identify the specific molecular structure of the proteins in both mouse and primate virus groups. These assays revealed that a single virus group may consist of many more types of viruses than scientists had suspected at the time. Dr. Schlam and his colleague Dr. Robert Callahan also discovered three genetic regions of cloned human DNA that are similar to analogous regions in the mouse mammary tumor virus.

Under Dr. Schlam’s leadership, scientists in the Laboratory of Tumor Immunology and Biology are developing groups of monoclonal antibodies that react with antigens in breast or colon cancers. In experiments using several monoclonal antibodies, the group discovered that, instead of containing a single cell type, most carcinomas have evolving cell populations that change their antigenic profiles. Understanding of this cellular heterogeneity is important if hybridoma technology is to be used in the diagnosis or treatment of breast and colon cancer.

After receiving his Ph.D. in molecular biology from Rutgers University in 1969, Dr. Schlam joined the faculty of the College of Physicians and Surgeons at Columbia University, where he remained until 1973.

Dr. Schlam is an adjunct professor of genetics at the George Washington University in Washington, D.C. He has written more than 100 scientific publications and serves on several scientific editorial boards. In addition to many other awards, Dr. Schlam earned the Director’s Award of the National Institutes of Health in 1977.

More AIDS References Added on NLM Search

A new bibliography on AIDS, with over 200 references from recent medical literature on Acquired Immune Deficiency Syndrome, is available without charge from the National Library of Medicine’s reference section.

The bibliography (LS83-5), updates and supplements NLM Literature Search No. 83-1. It was produced through NLM’s computer based system MEDLARS; an addendum contains references drawn from other sources.

A list of the nine Literature Searches produced so far for 1983 appears below. A complete list of available titles appears in each issue of Index Medicus and Abridged Index Medicus.

When requesting Literature Searches, please include title and number, enclose a self-addressed gummed label, and mail to: Literature Search Program, Reference Section, National Library of Medicine, Bethesda, MD 20205.

LS83-1 Acquired Immune Deficiency Syndrome (AIDS). January 1980 through April 1983; 179 citations, including addendum.


LS83-3 Krypton (Chloride). Toxicology. January 1977 through March 1983; 90 citations and addendum.


LS83-7 Nuclear magnetic resonance imaging. January 1980 through August 1983; 191 citations.


SPECIMENS
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At the beginning of the study, each volunteer will be evaluated for possible risk factors for AIDS such as types of sexual practices and numbers of different sex partners. Approximately 14,000 specimens will be collected each year, including samples of blood (serum, plasma, and leukocytes), semen, feces, saliva, and urine. The individuals will be examined regularly for clinical and immunological abnormalities and for other signs of AIDS.

BLOOD TESTS
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bleeding tendencies, and some trauma or surgical patients who may require many units of blood in a short period of time.

A blood serum and blood cell repository that can be used in future research efforts will also be set up.

Authorities emphasize that the number of AIDS cases associated with blood transfusion is extremely small. The actual incidence probably is not greater than one in a million transfused patients per year.

The only thing to do with good advice is to pass it on. It is never of any use to oneself.—Oscar Wilde

The way out of trouble is never as simple as the way in.—E.W. Howe