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FORT WORTH, TEXAS 76107
volume 2, number 1

Published by the Research Office
Texas College of Osteopathic Medicine

January, 1987

RESEARCH AWARDS RECEIVED - JANUARY, 1987

MICHAEL EMMETT-OGLESBY, PH.D. "Tolerance to the Stimulus Properties of Cocaine" National Institute on Drug Abuse - (first of three year award - total award \$292,521) \$95,339 from 02/01/87 - 01/31/88 (Department of Pharmacology).

NORMAN G. LIESKA, PH.D. "Cytoskeletal Interactions in the Crystalline Lens" National Eye Institute (first of three year award - total award \$151,388) \$56,048 from 01/01/87 - 12/31/87 (Department of Anatomy).

EDWARD L. ORR, PH.D. "CNS-Associated Mast Cells and Experimental Autoimmune Encephalomyelitis" National Multiple Sclerosis Society (first of three years - total award \$112,363) \$36,533 from 04/01/87 - 03/31/90 (Department of Anatomy).

TOTAL FUNDING RECEIVED \$ 187,920

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RESEARCH PROPOSALS SUBMITTED - JANUARY, 1987

- NHLBI** "Mechanism of Action of LCAT" (3 years) **Andras G. Lacko, Ph.D.** (Department of Biochemistry).
- AHA-TX** "Regional Function in the Coronary Vasodilated Isolated Heart" (2 years) **Howard Mass, Ph.D.** (Department of Physiology).
- AHA-TX** "Calcium Handling in Cardiac Subcellular Fractions in Shock" (1 year) **Phyllis Kutsky, Ph.D.** (Department of Physiology).
- AHA-TX** "Interaction of Adenosine and Angiotensin II on Renal Arteries" (1 year) **Richard Sinclair, Ph.D.** (Department of Physiology).
- NIGM** "Kinetic and Chemical Mechanisms of Enzymes" (RCDA - continuation 1 year) **Paul F. Cook, Ph.D.** (Department of Biochemistry).
- WHO** "Control Mechanisms in Filariar Energy Metabolism" (3 years) **Ben G. Harris, Ph.D.** (Department of Biochemistry)

- NIAID "Regulation of Metabolism in Parasitic Helminths" (1 year - continuation) Ben G. Harris, Ph.D. (Department of Biochemistry).
- AHA-TX "Opiate Adrenergic Interactions in the Myocardium" (2 years) James Caffrey, Ph.D. (Department of Physiology).
- AHA-TX "ADH, Phospholipids and Epithelial Transport" (1 year) Thomas Yorio, Ph.D. (Department of Pharmacology).
- AHA-TX "Adrenergic Coronary Tone During Stenosis in Conscious Dogs" (1 year) Isabella Liang, Ph.D. and Carl E. Jones, Ph.D. (Department of Physiology)
- AHA-TX "Cardiovascular Responses to Changes in Pedal Frequency" (2 years) R. Donald Hagan, Ph.D. (Department of Public Health/Preventive Medicine)
- AHA-TX "Exercise Training Changes in Baroreceptor Reflex Function" (2 years) Patricia Gwartz, Ph.D. (Department of Physiology).
- AHA-TX "Regulation of Cardiac Function by Muscarinic Receptors" (1 year) Eugene Quist, Ph.D. (Department of Pharmacology).
- NIDA "Characterization of Nicotine Withdrawal" (5 years-FIRST AWARD) Cynthia Harris, Ph.D. (Department of Pharmacology).
- NHLBI "Visceral Reflexes Affecting the Coronary Circulation" (4 years) Carl E. Jones, Ph.D. (Department of Physiology).
- Saph-Chem "Skin Sensitivity Testing of SAPH/TAME" (open contract) Lois Allen, Ph.D. (Department of Microbiology/Immunology).
- NEI "Aldose Reductase in Basal Lamina-Eicosanoid Dysfunction" (RCDA - 5 years) Patrick Cammarata, Ph.D. (Department of Anatomy).
- NHLBI "Regional, Non-Ischemic Myocardial Hypoxia" (1 year-continuation) H. Fred Downey, Ph.D. (Department of Physiology).
- Tandy "The Role of Hyperbaric Oxygen Therapy in the Treatment of Neurological and Perfusion Disorders" (2 years) Peter B. Raven, Ph.D. (Department of Physiology).
- NICHHD "Muscle Mediated Transport Mechanism of Rabbit Oviduct" (1 year-continuation) Robert J. Bourdage, Ph.D. (Department of Anatomy)
- NEI "Aldose Reductase in Basal Lamina-Eicosanoid Dysfunction" (Instrumentation Grant Program) Patrick Cammarata, Ph.D. (Department of Anatomy).

NIH "Regulation of Cardiac Function by Muscarinic Agonists" (3 years) Eugene Quist, Ph.D. (Department of Physiology).

NIDR "Cytology of Rat Molar Dental Follicles in Eruption" (1 year - Small Grants Program) Gary Wise, Ph.D. (Department of Anatomy).

NCI "Alteration of NAD Metabolism by Chemical Carcinogens" (1 year - continuation) Myron K. Jacobson, Ph.D. (Department of Biochemistry).

NHLBI "Anti-Infarction Effects in the Denervated Heart" (1 year - continuation) Carl E. Jones, Ph.D. (Department of Physiology).

TOTAL FUNDING REQUESTED \$ 2,705,928

PRESENTATIONS AND MEETINGS

Douglas Wood, D.O./Ph.D. degree candidate in Pharmacology, has been selected as a student delegate for the American Osteopathic Association Bureau of Research. Doug has been awarded the AOA/Burroughs Wellcome Research Fellowship for three consecutive years to support his research on cocaine tolerance, and will be presenting two papers at the research meeting in March in Clearwater Beach, FL.

Lois Allen, Ph.D., Associate Professor of Microbiology / Immunology, presented a poster session titled "Antiviral and cytotoxicity and evaluations of 3-deazacytidine and 3-deazuridines" at the 1986 International Symposium on Medical Virology in Anaheim, CA.

Harbans Lal, Ph.D., Chairman of Pharmacology, attended the Winter Gordon Research Conference held in Santa Barbara, CA from February 1-6, 1987.

William Barrow, Ph.D., Associate Professor of Microbiology / Immunology presented a seminar titled "Macrophage processing of AIDS related mycobacterial antigens" at the Texas Woman's University on February 12, 1987.

Gary Wise, Ph.D. and Norman Lieska, Ph.D., Department of Anatomy, attended the 26th Annual American Society for Cell Biology Meeting in Washington, D.C. They made the following poster presentations:

"Ultrastructure of glycoporphin A In vitro" by G.E. Wise, L.X. Oakford and J.K. Dzandu.

"Different distribution of two intermediate filament associated proteins (IFAPs), IFAP-300kD and IFAP-70/280kD, in BHK-21 cells" by H.Y Yang, N. Lieska, and R.D. Goldman.

"In vitro models of intermediate filament-microtubule interaction" by N. Lieska.

Michael Forster, Ph.D., Department of Pharmacology presented a seminar on "Detection of nootropic drug activity using multivariate locomotor activity analysis" at Ayerst Laboratories Research, Inc. in Princeton, NJ. He also made a presentation at the Society for Neuroscience Satellite Symposium in Washington, D.C. titled "Changes in habituation of locomotor behavior over the life span of C57/6Nnia Mice".

PUBLICATIONS

Chapman, M.L., Rubin, B.R., Jahani, M., and Gracy, R.W. "The redox state in lymphocytes from patients with rheumatoid arthritis" J. of Rheumatology (In Press, 1986).

Chapman, M.L., Wood, S.J., Rubin, B.R., and Gracy, R.W. "Evaluation of oxidation-induced modifications in synovial fluid from patients with rheumatoid arthritis. J. of Rheumatology (submitted).

Kulkarni, G., Rao, G.S.J., Srinivasan, N.G., Hofer, H.W., Yuan, P.M. and Harris, B.G. "Ascaris suum phosphofructokinase: phosphorylation by protein kinase and sequence of the phosphopeptide" J. Biol. Chem. 262: 32-34 (1987).

Rao, J.G.S., Kong, C.-T., Benjamin, R.C., Harris, B.G. and Cook, P.F. "Modification of an arginine residue essential for the activity of NAD-malic enzyme from Ascaris suum" Arch. Biochem. Biophys. (in press, 1987).

Park, Y.B., K.U. Yuksel, R.W. Gracy and A.G. Lacko "The catalytic center of lecithin:cholesterol acyltransferase: isolation and sequence of diisopropylfluorophosphate-labeled peptides" Biochem. Biophys. Res. Commun. (in press, 1987).

Retz, K.C., Forster, M.J., Popper, M.D. and Lal, H. "The NZB/BLNJ exhibits accelerated age-dependent sensitivity to ethanol and diazepam" Alcoholism: clinical and Experimental research 10: 106 (1986).

Lal, H. "Antidiarrheal Agents" in Pharmacology in Medicine: Principles and Practice. Eds. S. Pradhan, R. Maichen and S. Dutta, SP Publishers, Inc., Bethesda, MD, pp. 702-706 (1986).

Benjamin, D., Harris, C.M., Emmett-Oglesby, M.W., and Lal, H.
"Ethanol blocks interoceptive stimuli produced by an anxiogenic drug
(Pentylenetetrazol) and by diazepam withdrawal". Alcoholism: clinical
and Experimental Research 10: 1067 (1986).

La1, H. and Forster, M.J. "Cognitive disorders related to immune dysfunction: Novel animal models for drug development". Drug Dev. Research 7: 1-14 (1986).

Forster, M.J., Retz, K.C., Popper, M.D. and Lal, H. "Age-dependent enhancement of diazepam sensitivity is accelerated in New Zealand Black mice". Life Sciences 38: 1433-1439.

[illegible]

FACULTY PROFILE

ROBERT WAYNE GRACY, PH.D.

Bob Gracy first became interested in science while a high school student in New Orleans. At that time his goal was to become a high school chemistry teacher and he followed that orientation during his first two years of college at LSU. When he transferred to California State Polytech University he was exposed to a biological aspect of chemistry not previously experienced. In his senior year in college he had a part-time job with a company called Space General which at that time had a contract to develop enzymes to detect biologicals which could possibly be used in chemical-biological warfare. This stimulated his curiosity and he chose a graduate program at the University of California, Riverside, which was strong in the enzyme area. Following the completion of his Ph.D. he was invited to be a post-doctoral fellow in the lab of Dr. Bernard Horecker at Albert Einstein College of Medicine in New York City. In the two years that he was there he published six papers in refereed journals and wrote two grant applications (to NIH and NSF) both of which were funded.

In 1970, Dr. Gracy joined the faculty of North Texas State University which was in the process of establishing a biochemistry program. The following six years were a time of both personal and department growth. In 1972, Bob received a Research Career Development Award from NIH which paid his salary for five years. This allowed him to hire another faculty member and to expand the courses offered in Biochemistry. In 1976, he received the Alexander von Humboldt Fellow award which made it possible for him to spend a year as a Visiting Professor in the Department of Physiological Chemistry at the University of Wurzburg, Germany. This experience proved to him the importance of sabbatical leave for faculty to allow them to assess where they are professionally and to gain perspective as to where they want to be.

Since 1976, Dr. Gracy has been Chairman of the Department of Biochemistry at TCOM and in 1986 he was appointed Acting Chairman of Microbiology/Immunology. The grant awards, publications, honors, societal memberships, teaching experience and professional service fill a CV which is almost intimidating in size and scope. He has received 72 grant awards, has presented 57 invited seminars within the United States and 19 abroad, has published 84 research papers and has made 61 presentations at scientific meetings.

Dr. Gracy delineates the most necessary qualities for a researcher to be "a creative, positive attitude and a need to discover and understand things that are not understood." He perceives the same qualities to be necessary in an educator. When he discusses research it is in the context of teaching and the graduate program. As do many others, he sees one of the greatest needs today to be the development of the physician/researcher to bring the closing segment of the circle to the process of medical education.

Bob is currently awaiting receipt of an award letter from NIH for a Merit Award which funds research programs for ten years. He is excited about this prospect because it will afford him the opportunity to attempt projects which one might class as "risky and exciting" and which one could not contemplate if one had to spend months every three years writing a competing renewal application. To hear Dr. Gracy hypothesize about possible new projects is to hear a man who still has an insatiable curiosity regarding things that are not understood and the daring to try to find the answers.

[illegible]

APPLICATIONS DUE FOR BIOMEDICAL RESEARCH SUPPORT GRANT

TCOM is anticipating the receipt of an NIH sponsored Biomedical Research Support Grant award on or about March 1, 1987. This program is designed to provide funds to eligible institutions to strengthen their programs by allowing flexibility to meet emerging opportunities in research; to explore new and unorthodox ideas; and to use these research funds in ways and for purposes which, in the judgment of the institution, would contribute most effectively to the furtherance of their research program. The amount of each BRSG award is based upon a formula that is applied to the total of direct and indirect costs awarded for allowable PHS research grants.

All faculty members are invited to apply for support from the BRSO program. Deadline for receipt of applications is APRIL 1, 1987.

Dr. Andras Lacko, Professor of Biochemistry, is the Director of the program. Applications are available in the Biochemistry Office, Room 2-402. If you have questions or require further information, please contact Dr. Lacko at x 2134.

SICKLE CELL CONFERENCE TO BE HELD IN ARLINGTON

A conference titled **Sickle Cell Disease: Present and Future Directions** will be held at the E.H. Hereford Student Center of The University of Texas at Arlington on Saturday, March 14, 1987 from 8:30 A.M. - 3:30 P.M. The conference, which is co-sponsored by the Sickle Cell Anemia Association of Texas, Inc. and the UTA School of Nursing, is designed to increase the knowledge of health professionals, SCAAT Volunteers, and interested others who care for or care about sickle-cell clients and their families. The comprehensive needs of sickle cell clients in a variety of institutional, public health and foster care settings will be addressed.

James Dzandu, Ph.D., Assistant Professor of Anatomy and Board Member of SCAAT will present "Research Developments" to the conferees and in a special afternoon program for junior and senior high school students he will present "Microscopic View of Cells". Information regarding registration can be obtained by calling (817) 273-2776 (metro).

ADAMHA POLICY ON PERIOD OF SUPPORT OF RESEARCH GRANTS

ADAMHA is announcing a goal to increase the proportion of their research grants which are awarded for 4-5 years. Concerns have been expressed by a number of scientists and administrators about the cost of application preparation which is associated with the typical 3 year award. In recent years, about 85% of ADAMHA's regular research grants have been made for project periods of 3 years or less. IN FY'85, only 7% of awards were made for 5 year periods. The purpose of this initiative is to reduce the costs for investigators and the agency associated with preparation and review of frequent applications for grants, and in so doing provide established investigators more time to conduct research and to demonstrate meaningful results. It is anticipated that the most frequent project period will continue to be 3 years. However, ADAMHA wants to significantly increase the submission of applications for longer periods of support, and intends to give favorable consideration to such applications. Guidelines are being provided to Initial Review Groups (IRGs) concerning the factors to be considered in recommending projects for 4-5 years. **CONTACT:** (301) 443-4266.

INCLUSION OF WOMEN IN STUDY POPULATIONS

The Public Health Service Task Force on Women's Health Issues published its report in the January 1985 issue of Public Health Reports. One of the Task Force's major recommendations was that biomedical and behavioral research be expanded to assure appropriate emphasis on conditions and diseases unique to, or more prevalent in, women of all age groups. Accordingly, NIH urges applicants for grants and offerers for contracts to consider the inclusion of women in the

study populations for all clinical research efforts. Exceptions would be studies of diseases which exclusively effect males or where involvement of pregnant women may expose the fetus to undue risks. General differences should be noted and evaluated. If women are not to be included, a clear rationale should be provided for their exclusion.

In order to provide more precise information to the medical community, it is recommended that publications resulting from NIH-supported research in which the study population was limited to one sex for any reason other than that the disease or condition studied exclusively affects that sex, should state, in the abstract or summary, the gender of the population studied, e.g., "male patients," "male volunteers," "female patients," "female volunteers." For further clarification and discussion of this issue, contact:

Luz A. Froelich, M.D.
Chairperson
Advisory Committee on Women's Health
National Institutes of Health
Bethesda, MD 20892
(301) 496-7688

MEETINGS OF INTEREST

February 26-28, 1987	12th International Joint Conference on Stroke and Cerebral Circulation in Tampa, FL
March 1-6, 1987	Annual Meeting of the American Society for Microbiology in Atlanta, GA
March 5-8, 1987	American Osteopathic Association Research Conference in Clearwater Beach, FL
March 5-8, 1987	Association for Gerontology in Higher Education Annual Meeting, Boston, MA.
March 9-13, 1987	Tenth Annual Skeletal Symposium in Sun Valley, ID
March 12-14, 1987	Second International Conference on Monoclonal Antibody Immunoconjugates for Cancer in San Diego, CA
March 14-17, 1987	American Society on Aging, 33rd Annual Meeting, Salt Lake City, UT
March 19-22, 1987	Society of Behavioral Medicine, 8th Annual Scientific Sessions, Washington, D.C.

CONSENSUS PANEL PROPOSES EXTENSIVE DIABETES RESEARCH AGENDA

An NIH consensus panel concluded a number of questions related to prevention and treatment of noninsulin-dependent diabetes which need further research. Since the disease is related to obesity, which in turn is linked to nutrition, exercise, social class and heredity, there are sufficient areas of interest to keep scientists from numerous disciplines busy for a long time. All agreed on the extreme difficulty of altering the behavior of obese people so as to maintain a safer body weight over the long period.

Among major topics needing further research are:

- *What is the etiology of insulin resistance in the obese state?
- *What is the etiologic basis of obesity, from genetic, environmental, behavioral, and nutritional aspects?
- *What are the strategies for therapy of the obese state, particularly as it relates to diabetes?
- *What is the etiology of the beta-cell deficiency in noninsulin - dependent diabetes (NIDDM)?
- *What is the pathophysiology of the insulin resistance in the diabetic state without obesity?
- *What is the nature of the inherited component in NIDDM?
- *What is the relative effectiveness of regular physical activity and/or weight control in the prevention and treatment of NIDDM and its complications?
- *What are the predictors for the eventual development of NIDDM and its complications?
- *What are the optimal strategies to improve acceptance of therapeutic regimens?

Many of these questions require a interdisciplinary approach and would provide a stimulating and productive interaction between clinical and basic scientists.

ADAMHA Small Grant Program

The Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) will be increasing to \$25,000 the maximum direct cost limit on small grants after February 15, 1987. Copies of the ADAMHA SMALL GRANT PROGRAM announcement and research program area descriptions may be obtained from:

National Institute of Mental Health	(301) 443-4673
National Institute on Drug Abuse	(301) 443-1887
National Institute on Alcohol Abuse and Alcoholism	(301) 468-2600

AMERICAN FOUNDATION FOR AIDS RESEARCH

The American Foundation for AIDS Research (AmFAR) invites interested investigators to submit a letter of intent for grant awards in biomedical, humanistic and social sciences research relevant to AIDS. Awards are granted up to a maximum of U.S. \$50,000 in direct costs for one year. Applications will be solicited from investigators whose letter of intent is accepted after review by the Foundation's Program Funding Committee. Only 85 complete applications will be solicited by this RFP. To be eligible to receive an application form please send the following: 1) a brief letter of intent [2 pages or less]; 2) a two hundred word abstract of the proposed project; 3) a not more than two page C.V. of the principal investigator including not more than fifteen (15) relevant publications; and 4) the Topic Assignment Sheet. Five (5) collated sets of the above documents must be received prior to MARCH 17, 1987 at 5 P.M. Pacific Coast Time. Awards will be made in August, 1987 after peer-review of applications. For further information, please call Jay Theodore, Grants Officer at (213) 273-5547.

The Topic Assignment Sheet which must accompany the Letter of Intent and policies governing the award of grants are available in the Research Office.

NEUROSCIENCE AND NEUROPSYCHOLOGY (NNA)

A new program on Neuroscience and Neuropsychology of Aging, which will coordinate neurobiological and neuropsychological research on aging and dementias, was established January 27, 1987 by the National Institute on Aging. NNA will develop initiatives to identify and fund distinguished senior researchers in the field, who in turn will train junior investigators. It will also support research in the epidemiology of dementias and risk factors and the development of diagnostic tests.

Specific NNA program areas include: (1) developing and administering extramural activities related to neurobiology, neuroimmunology, neuropharmacology, neurovirology and neuroendocrinology of aging; (2) conducting neuropsychology and psychological studies to differentiate abnormal from normal learning, memory, perception and cognitive processes by age; (3) studying sensory changes with age; (4) examining normal and disordered sleep; and (5) looking at diagnosis, epidemiology, etiology, treatment and management of Alzheimer's disease and other dementing disorders, including clinical trials of new therapeutic models.

The NNA program was set up in compliance with Title IX of the Omnibus Health Bill, signed into law last November. Dr. Andrew Monjan has been appointed acting associate director of the NNa program. Dr. Leonard Jakubczak will become chief of the Section on Biophysiology of Aging. NIA's Office of Alzheimer Disease Research will coordinate

NNA program activities with other programs, agencies and private organizations. The NIA Public Information Office will develop a hotline and clearinghouse.

NIAAA RESEARCH ON ALCOHOL AND IMMUNITY

Virtually no information is available regarding the use/abuse of alcohol by AIDS patients or how alcohol may affect the course and/or treatment of the disease process. The following are some broadly defined areas related to alcohol, immunology, and infectious diseases which are of interest: 1) epidemiologic studies of the incidence and prevalence of the various types of immune deficiencies and infectious diseases among alcohol abusers and alcoholics; 2) basic and applied research related to the effects of alcohol use/abuse on increasing risk for infection, including laboratory studies of immune function and studies of resistance to bacterial/viral challenge; 3) relation between the rate and persistence of alcohol consumption and the degree of immunosuppression. **CONTACT:** Albert Pawlowski, Ph.D., Centers and Special Programs Branch, 5600 Fishers Lane, Parklawn Bldg., Rm. 14C-20, Rockville, MD 20857 (301) 443-1273. **Due date:** 06/01/87.

HRSA ANNOUNCES FUNDING PREFERENCES FOR GERIATRIC EDUCATION CENTER GRANTS

Final funding preferences to be used in distributing FY'87 grants for Geriatric Education Centers (GEC) have been announced by the Health Resource and Service Administration.

Preference will be given to projects that: 1) provide training for faculty from four (4) or more health professions, with respect to the treatment of health problems of the elderly by multidisciplinary teams of health professionals; 2) provide a high degree of area wide collaboration in multidisciplinary activities; 3) offer substantial educational opportunities to a primary medical care manpower shortage area; and 4) demonstrate a commitment to increased minority participation.

GEC grants are awarded under the Public Health Services Act. GECs are area wide organizational arrangements focused on strengthening and coordinating multidisciplinary training in geriatric health care involving several health care professions.

APPLICATION DEADLINE LIST

03/02/87	NIDDKD	Small Grant Program for Crystallization of Membrane Transport Systems Relevant to Inherited Metabolic Disorders"
03/02/87	NIDDKD	Small Grants Program to Facilitate Use of New

Molecular Biologic and Genetic Techniques by
Researchers in Diabetes, Endocrinology and
Metabolic Diseases

03/02/87	NIDDKD	Small Grants on Somatic Cell Gene or Genes Associated with Specific Metabolic and Endocrine Diseases.
03/05/87	NCI	Cancer Prevention and Control Research Small Grants Program.
04/01/87	NIDDKD	Growth Factors of the Kidney, Genitourinary and Hematologic Systems.
04/15/87	NHLBI	Stress, Sodium, and Blood Pressure Regulation.
04/17/87	NHLBI	Ion Channels in Pulmonary Cells
04/17/87	NHLBI	A-1 Protease Inhibitor Deficiency: Vector for Gene Therapy

07/01/87 - American Institute of Cancer Research - "Research" - grants are awarded for research clearly relevant to an understanding of the effects of dietary and nutritional practices on the onset, development, and treatment of cancer. Fundamental laboratory investigators are also welcome if they inquire into the molecular and/or submolecular mechanism(s) of carcinogenesis for specific and important dietary constituents. \$50,000 per year for 1 to 2 years. Contact: Gracelyn Deebo, (703) 237-0159.

09/01/87 - Epilepsy Foundation of America - one year research grants are awarded to support basic and clinical research in the biological, behavioral and social sciences, which will advance the understanding, treatment and prevention of epilepsy. Priority is given to investigators just entering the field. \$25,000. Contact: (301) 459 - 3700.

No Fixed Date - Edna McConnell Clark Foundation - "Tropical Disease Research" - This program has 2 major emphases: 1) prevention of the two major infectious causes of blindness, onchocerciasis and trachoma - research on the immunology of Onchocerca volvulus; studies on immunology and pathogenesis of Chlamydia Trachomatis in order to understand the immune response to infection, develop better diagnostic tests, and develop a vaccine; and studies on the epidemiology of blinding trachoma in order to develop effective control strategies; 2) Schistosomiasis - research on the immunology of the disease to help develop a vaccine and studies on its epidemiology to develop or test cost-effective control strategies. Contact: (212) 986-7050.