

# Research Notes



Volume 7, Number 6

April/May 1992

## Pertusi Searches for Answers to Lupus Puzzle One Piece at a Time



Raymond M. Pertusi, D.O.

For Raymond M. Pertusi, D.O., research is like a giant jigsaw puzzle. "I think it very rarely occurs that one single project results in a breakthrough," he says. "I think everybody

builds on the activities and observations of others, and keeps adding pieces to the puzzle until eventually enough pieces have been placed together so that we have a better understanding. Once enough of the picture is there, you can make the quantum leap resulting in some major advances."

This TCOM Department of Medicine researcher will soon have the opportunity to add another piece to the complex puzzle of systemic lupus erythematosus, also called lupus or SLE. Lupus is a chronic, inflammatory disease that can range in severity from a mild skin rash to a life-threatening disorder. Some 500,000 Americans, mostly women, suffer from the autoimmune disease, which can affect joints, muscles, skin, kidneys, lungs, the heart, the nervous system and bone marrow.

Aided by Bernard R. Rubin, D.O., Elaine Jacobson, Ph.D., and other basic science researchers, Pertusi will spend three years determining what affect non-steroidal, anti-inflammatory drugs and osteopathic manipulative treatment, both alone and in combination, have on the

immune function and quality of life of SLE patients. The American Osteopathic Association Bureau of Research recently gave him a \$150,000 Clinical Investigator Development Award to help fund the project. The award, which is the first ever granted, is part of a new AOA effort to recruit and prepare osteopathic physicians for research and teaching careers in medical science.

Although the project begins July 1, 1992, Pertusi will not start seeing the 60 patients needed for the study until January, 1993. "For the first six months, I'll be getting the background necessary to execute the project," he explains. "I'll take courses in statistics, biochemistry, research design, and osteopathic techniques, and learn how to use instruments that measure quality of life."

Pertusi hopes the SLE project will be used as a model by the AOA for collaborative efforts between basic and clinical scientists. "Ideally, it will give TCOM's basic science and clinical researchers a chance to meld their talents, which can be a rare opportunity at medical schools because of the differences in their training.

"There are many ways that the activities of these researchers can complement each other," he says. "I hope this project is a vehicle by which basic and clinical researchers can see that there are ways to reach each other if they're willing to let their guard down. Granted, crossing over into the other's arena can make one feel vulnerable. Perhaps together we can identify areas that we would never be able to explore separately."

*Continued on next page*

## Barrow Receives Senior International Fellowship

William W. Barrow, Ph.D., (Department of Microbiology and Immunology) has recently received a prestigious Senior International Fellowship award from the National Institutes of Health Fogarty International Center. This award is intended to enhance the exchange of ideas and information about the latest advances in the health sciences, to permit U.S. scientists to participate abroad in ongoing study or research in the health sciences, and to improve the research, education, and clinical potential of the fellow's home institution. The scientific laboratory and research group of Nalin Rastogi, Ph.D., Charge de Recherche, of the Pasteur Institute, Paris, France will serve as host for the exchange of experimental techniques and will foster collaborative publication of research findings during the course of this fellowship. The new emphasis of the National Institute of Allergy and Infectious Diseases is designed to spark efforts to better understand the opportunistic infections associated with Acquired Immunodeficiency Syndrome (AIDS), so that new and effective treatments can be developed.

## New PHS 398 and 2590 Application Kits Available

The long-awaited Public Health Service grant applications (PHS Form 398 and PHS Form 2590) are available from the Research Office. Applicants must use the new form for the June 1, 1992 receipt date for unsolicited research grant and Research Career Development Award applications.



*Continued from previous page*

Pertusi believes there is a fundamental need for broader interaction between clinicians and basic scientists. "If that doesn't happen, we'll miss out on opportunities that are obvious even to people who are not in the field of science," he says. A cooperative spirit must be established between the two groups, he added.

One of Pertusi's goals is to establish a cadre of researchers from immunology, clinical immunology and rheumatology ranks at TCOM. "Once we have people in place, then we could offer our students an opportunity to become involved at various levels. I think this could be a model for students to see how physicians and basic scientists work together, and they could actually become a part of that interaction early in their training."

Pertusi's enthusiasm for clinical research comes from a lifelong interest in science. That interest led him to explore medical technology and biology until he decided that "the ultimate challenge would be medicine. I always thought I could get much more fulfillment personally and contribute more by pursuing an academic career and by getting involved in research; by trying to develop new modalities for treatment or a better understanding of the molecular underpinnings of certain diseases."

After receiving his degree from the New York College of Osteopathic Medicine in 1983, Pertusi completed an osteopathic internship at Saddle Brook (N.J.) General Hospital and a medical residency at Saint Michael's Medical Center in Newark, N.J. He took a break from his

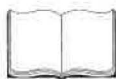
1987-1989 rheumatology fellowship at Seton Hall University in South Orange, N.J., to spend a year at the Roche Institute of Molecular Biology in Nutley, N.J. There he explored his interest in SLE under the tutelage of world-class researchers Nat Brot, Ph.D., and Herb Weisbach, Ph.D.

"After that, I started looking for a career in academic medicine. I felt I owed my profession something because it had given me so much," he says. "TCOM certainly had the most to offer in terms of what I was interested in. It has a very well-developed basic science program with investigators - some with international reputations - who are well-known in their respective fields. I sensed that this was a good atmosphere where there would be enough support, talent and interest available if I felt like pursuing research activities."

"I was right. Support for the project has been fabulous. Sometimes I feel like I have the institution working for me rather than me working for it."

---

## New Publications



### Available in the Research Office

**Public Health Service Profiles of Financial Assistance Programs** is a compendium of PHS Programs compiled from the Catalog of Federal Domestic Assistance. This publication was prepared by the U.S. Department of Health and Human Services Division of Grants and Contracts on June 1, 1991. There is an Agency and Program Index and a Catalog of Federal Domestic Assistance Numbers Index. Anyone searching for funding opportunities at the DHHS should consult this book in the Research Office.

**Orientation to Grants and Contracts for Applicants and Recipients of Awards** is a handbook published by the Department of Health and Human Services - Public Health Service that contains information on the forms and procedures to prepare grants and contracts for this agency. Anyone that has to deal with this agency on a regular basis will find this book very helpful in dealing with operational matters. A copy

is available for consultation in the Research Office.

### **National Center for Research**

**Resources**, November, 1991, has valuable information that identifies and describes Extramural Research Resources (Biological Models and Materials Research Program, Biomedical Research Support Program, Research Facilities Improvement Program, Biomedical Research Technology Program, Comparative Medicine Program, General Clinical Research Centers Program, Research Centers in Minority Institutions Program) and Intramural Research Resources (Biomedical Engineering and Instrumentation Program, Library Branch, Medical Arts and Photography Branch, Veterinary Resources Program). There is also a section on "Types of Grants Sponsored by NCRR and Supporting Publications." A copy is available for consultation in the Research Office.

**Directory of International Grants and Fellowships in the Health Sciences**, October 1991, prepared by the John E. Fogarty International Center for Advanced Study in the Health Sciences, NIH Publication No. 89-3027, color-coded green, is available for perusal in the Research Office. This Directory provides information such as address, telephone and fax numbers, fields of study, purpose, eligibility, financial provisions, duration, number, and deadlines. There are funding opportunities from federal and private sources.

---

## Crandall Receives Graduate Student Award

Congratulations are in order for **Craig Crandall, Ph.D. Candidate**, (Department of Physiology). Crandall was honored by the Council of the American Physiological Society - Environmental and Exercise Physiology Section, as the recipient of the 1992 Proctor and Gamble Graduate Student Award. His research paper titled "Hemodynamic Responses to Graded Lower Body Positive Pressure During Dynamic Exercise" was presented at the national meeting in Anaheim, Calif. Along with the award, a check for \$500 was presented at the meetings.

---

*Research Notes* is published by the Research Office,  
Texas College of Osteopathic Medicine  
3500 Camp Bowie Boulevard  
Fort Worth, Texas 76107-2699  
817-735-2561 FAX 817-735-2486

Editor/ Harold W. Keller, Ph.D.  
Contributing Writer/ Ma'lisa Laidlaw  
Editorial Assistance/ Evelyn Iglesias,  
Debbie Stanley

TCOM is under the direction of the  
University of North Texas Board of Regents.  
TCOM is an equal opportunity/affirmative action  
employer/educator.



## RECENT TCOM AWARDS

### Rafael Alvarez-Gonzalez, Ph.D.,

(Department of Microbiology and Immunology), "Chemical and Kinetic Mechanisms of Enzyme Catalyzed Polymerization Reactions," American Chemical Society - Petroleum Research Fund, 03/01/92 - 08/31/92, \$10,500.

**William W. Barrow, Ph.D.,** (Department of Microbiology and Immunology), "Studies on AIDS-Related Opportunistic Pathogens," Senior International Fellowship, National Institutes of Health - Fogarty International Center, 03/27/92 - 08/27/92, \$20,037.

**Paul F. Cook, Ph.D., and Anthony J. Berdis, Graduate Student,** (Department of Microbiology and Immunology), "pH Dependence of the Deuterium and <sup>13</sup>C Isotope Effects on 6-Phosphogluconate Dehydrogenase from *Torula*," Sigma Xi, The Scientific Research Society, 04/01/92 - 08/31/93, \$400.

**Reni Courtney, R.N., Ph.D.,** (Department of General and Family Practice), "TCOM/UTA Community Partnership Primary Care Project," W. K. Kellogg Foundation, 09/01/91 - 08/31/92, \$316,171.

**Reni Courtney, R.N., Ph.D.,** (Department of General and Family Practice), "TCOM/UTA Community Partnership Primary Care Project," Sid W. Richardson Foundation, 09/01/91 - 08/31/92, \$100,000.

**Robert W. Gracy, Ph.D.,** (Department of Biochemistry and Molecular Biology), "Molecular Basis for Abnormal Proteins in Aging Cells," National Institutes of Health - National Institute on Aging, 02/01/92 - 01/31/93, \$5,000.

**Harbans Lal, Ph.D.,** (Department of Pharmacology), "Neurobehavioral and Immunological Markers of Aging," National Institutes of Health - National Institute on Aging, 04/01/92 - 03/31/93, \$124,966.

**John C. Licciardone, D.O.,** (Department of Public Health and Preventive Medicine), "Smoking Cessation Clinic," Ciba-Geigy, 03/01/92 - 02/28/93, \$700.

**Harvey G. Micklin, D.O.,** (Department of Psychiatry), "Multicenter Trial to Evaluate the Efficacy and Safety of Sertraline in the Treatment of Major Depression," Quintiles Pacific, Inc. - Pfizer, 03/01/92 - 02/28/93, \$1,100.

**Ben G. Harris, Ph.D.,** (Research Office), "Minority High School Student Research Apprentice Program," Institutional Award from the National Center for Research Resources - National Institutes of Health, 03/06/92 - 02/28/93, \$17,000.

**Ben G. Harris, Ph.D.,** (Department of Biochemistry and Molecular Biology), "Regulation of Metabolism in Parasitic Helminths," National Institutes of Health - National Institute of Allergy and Infectious

Diseases, 04/01/92 - 03/31/93, \$149,981.

**Peter B. Raven, Ph.D.,** (Department of Physiology), "Aortic Baroreflex Control of Heart Rate During Exercise," American College of Sports Medicine, 04/01/92 - 03/31/93, \$2,500.

**Peter B. Raven, Ph.D.,** (Department of Physiology), "Selective Unilateral Carotid Stimulation in Humans: Effects of Exercise Testing," American College of Sports Medicine, 04/01/92 - 03/31/93, \$2,500.

**Konrad W. Scheel, Ph.D.,** (Department of Physiology), "Mechanism of Coronary Vascular Adaptation," National Institutes of Health - National Heart, Lung, and Blood Institute, 04/01/92 - 03/31/93, \$161,452.

**Tom Yorio, Ph.D.,** (Department of Pharmacology), "Vasopressin Receptor Signaling and Cycling of Water Channels in Renal Epithelia," U.S. Army Medical Research Acquisition Activity, 08/01/91 - 07/31/92, \$3,100.

**Tom Yorio, Ph.D.,** (Department of Pharmacology), "Student Training in Cellular and Endocrine Pharmacology," Department of Army - United States Army Laboratory Command, 06/01/92 - 05/31/93, \$24,068.

**Total funding awarded : \$939,475**

## EXTERNAL GRANT PROPOSALS SUBMITTED

### Rafael Alvarez-Gonzalez, Ph.D.,

(Department of Microbiology and Immunology), "ACS PROJECT SEED - Summer Educational Experience for the Disadvantaged," American Chemical Society, 06/10/92 - 08/31/92, \$4,000.

**Harbans Lal, Ph.D.,** (Department of Pharmacology), "Pharmacologic Treatment of Ethanol Withdrawal," National Institutes of Health - National Institute on Alcohol Abuse and Alcoholism, 10/01/92 - 09/30/97, \$1,300,549.

**Sue G. Lurie, Ph.D.,** (Department of Medical Humanities), "Prevention Education Program for Health Life-Style Decision-Making," American Association of Colleges of Osteopathic Medicine, 09/01/92 - 08/30/93, \$24,000.

**Raymond M. Pertusi, D.O.,** (Department of Medicine), "The Effect of Manipulation on Measures of Immune Function and Quality of Life in SLE," The John E. Fetzer Institute, 07/01/92 - 06/30/93, \$56,308.

**Michael W. Emmett-Oglesby, Ph.D.,** (Department of Pharmacology), "Tolerance to the Stimulus Properties of Cocaine," National Institutes of Health - National Institute of Drug Abuse, 06/01/92 - 05/31/93, \$167,765.

**John C. Licciardone, D.O.,** (Department of Public Health and Preventive Medicine), "Smoking Cessation Clinic," Ciba-Geigy, 03/01/92 - 02/28/93, \$700.

**Robert R. Luedtke, Ph.D.,** (Department of Pharmacology), "Characterization of Human Dopamine Receptors Expressed Using the Baculovirus System," Theodore and Vada Stanley Foundation, 09/01/92 - 08/31/94, \$90,000.

**Wayne L. Nicholson, Ph.D.,** (Department of Microbiology and Immunology), "Enzymatic Probes for Detection of Ultraviolet Radiation (UV)-induced DNA Damage and Its Repair," March of Dimes Birth Defects Foundation, 09/01/92 - 08/31/94, \$59,950.

**Total funding requested: \$1,703,272**

## POSTER AND PAPER PRESENTATIONS

**Sue G. Lurie, Ph.D.,** (Department of Medical Humanities), and Peggy Higgins, UNT graduate student in sociology, recently attended the Southwestern Social Science Association Meeting in Austin and presented a paper titled "Fort Worth Adolescent Health Survey: Preliminary Report," which was co-authored with Douglas Fabio, M.H.A., Fort Worth Health Department and Tabiri Tabasuri, Ph.D., John Peter Smith Hospital.

## RECENT PUBLICATIONS

**Robert J. Wordinger, Ph.D.,** (Department of Anatomy and Cell Biology), Wordinger, R. J., E. L. Orr, F. L. Jackson, 1991. Is Endometrial Histamine Required for Implantation? *Reprod. Toxicol.* 5: 526-528. Wordinger, R. J., A. E. Moss, I. F. Chang, T. L. Jackson, 1991. Changes in the Immunolocalization of Basic Fibroblast Growth Factor (bFGF) in the Mouse Endometrium During Implantation in *The Fibroblast Growth Factor Family*. Eds. A. Baird and M. Klagsbrun. Annals New York Acad. Sci. 638: 491-493.

**Robert T. Mallet, Ph.D., H. Fred Downey, Ph.D., Shang-Chiun Lee, Ph.D., Yukitaka Shizukuda, Ph.D., Arthur G. Williams, Jr.** (Department of Physiology), Bunger, R. N., N. Mukohara, Y.-H. Kang, and R. T. Mallet. 1992. Combined Glyceraldehyde-3-phosphate Dehydrogenase/Phosphoglycerate Kinase in Catecholamine-Stimulated Guinea-pig Cardiac Muscle. *Eur. J. Biochem.* 202: 913-921. Lee, S.-C., R. T. Mallet, Y. Shizukuda, A. G. Williams, Jr., and H. F. Downey. 1992. Canine Coronary Vasodepressor responses to Hypoxia are Attenuated but not Abolished by 8-Phenyltheophylline. *Am. J. Physiol.* 262: H955-H960.



## TCOM Faculty Research Grants Forms in Stock

Application forms for the Faculty Research Grants, 1992-93 Academic Year, are available from the Research Office, Med. Ed. 1, Room 862. **Grant Applications are due by 5 p.m., June 1, 1992.** Any faculty member who holds a tenure track position is eligible to apply for support of an individual research project. Non-tenure track personnel who hold a doctorate may also apply. Faculty members on tenure track will be given preference when all other considerations are equal.

Funds for internally sponsored research projects are extremely limited. In addition, both the competition for the funds and the sophistication of the projects has increased dramatically in the last few years. For these reasons, the Faculty Research Committee believes that further restrictions on funding should apply and the following guidelines on projects with equal scientific merit will be utilized in this year's competition: a high priority will be given to new investigators with little external funding; a high priority may also be given to senior investigators who have experienced a **temporary** hiatus in funding; all investigators with external funding greater than \$50,000 per year will receive a lower priority for funding unless the project represents a **major** change in research direction; a priority will be given to collaborative efforts between basic sciences and clinical sciences faculty; and proposals which overlap with externally funded projects must clearly identify the need for Faculty Research Funds and provide appropriate justification.

## NIH/ADAMHA Review Process Changed

Grant applications are no longer being "approved" or "disapproved." The Initial Review Group will assign applications to one of three categories: 1) Deferred for Additional Information, 2) Not Recommended for Further Consideration

(NRFC), or 3) Receive a Priority Score.

The (NRFC) rating means that an application does not have "significant and substantial merit." The term "disapproved" formerly meant that the application was "lacking sufficient merit to warrant funding." Consequently, the NRFC category can be expected to include a greater number/percentage of applications than did the "disapproved" category.

A new scale of adjectival descriptors for the priority ratings, modified to reflect the new designation of "significant and substantial merit," will also be used.

These descriptors are:

- 1.0 - 1.5 = Outstanding;
- 1.5 - 2.0 = Excellent;
- 2.0 - 2.5 = Very Good;
- 3.5 - 4.0 = Good;
- 3.5 - 5.0 = Acceptable.

Applications that receive the NRFC rating and applications that receive a priority score that falls within the bottom tier (approximately the last third) usually will not be brought to the Advisory Council for funding consideration. However, a complete listing of all applications reviewed by the study sections will be provided to the Council/Board and they may single out any application for individual discussion. The principal investigator will receive a new notice concerning the outcome of the Initial Review Group meeting soon after the group has met.

## 1992 AOA Research Conference Abstract Packets Available

The Annual Research Conference for the American Osteopathic Association will be held November 1-5, 1992, in San Diego, Calif. during the AOA's annual convention. The theme for the research conference is "Osteopathic Research: Agenda for the Future".

Please note that the postmark deadline for abstracts is June 1, 1992. Abstract packets are available from the TCOM Research Office.

## Salary Limits Placed on NIH/ADAMHA Grants and Contracts Recipients

Section 212 of the Appropriations Act of the Department of Health and Human Services for Fiscal Year 1992 (October 1, 1991-September 30, 1992) limits the amount of direct salary of an individual under a grant or contract award issued by NIH or ADAMHA to no more than \$125,000 per year (for 100 percent effort).

This requirement is an increase from the limitation of \$120,000 in FY 1991.

## Texas Department of Health Funding Directory Now Available

A directory of funding opportunities that describes 50 programs funded through federal and state revenue sources is available from the Texas Department of Health. These programs support a wide variety of public health services in Texas.

The directory lists for each grant program the program name, objectives, type of assistance, uses and restrictions, applicant eligibility, application procedure, deadlines, formula and matching requirements, range and average of financial assistance, and TDH office contacts.

Persons interested in this potential source of funding should contact the Research Office at 735-2561 for copies of this publication. We have a limited number of copies that are available on a first-come, first-served, basis.

## Fact Sheet Updated

An updated version of the Institutional Fact Sheet (color-coded goldenrod) is available from the Research Office. Important changes noted here for the first time will have direct bearing on completing the face page of PHS-NIH grant application packets.