

SUMMER RESEARCH PROGRAM FOR MEDICAL STUDENTS

The Twenty-Seventh Annual Medical Student Research Day was held on Friday, August 11, 2000. Fourteen first and second year medical students spent approximately ten weeks during the summer working on research projects with basic science and clinical faculty in the College of Medicine. The program aims to bridge the relation between scientific discoveries and their application in clinical medicine.

Dr. James Yankaskas, Professor of Medicine in the Division of Pulmonary and Critical Care Medicine at the University of North Carolina, was the keynote speaker. Dr. Yankaskas's research interests involve the pathogenesis and treatment of Cystic Fibrosis and the development of pharmacological, surgical, and gene therapy approaches for the treatment of Cystic Fibrosis. His seminar was entitled "*Cystic Fibrosis: Clinical Advances from Sagacious Research.*"

Dr. David Gremse chaired the Student Research Advisory Committee. Other committee members included: Drs. David Dean, Richard Honkanen, Steven Goodman, Randall Powell, Samuel Strada, and Mary Townsley. Administrative support for the program was provided by Ms. Dusty D. Layton, of the Office of the Senior Associate Dean.

Culmination of the summer's work was the presentation of four oral and ten poster presentations on Student Research Day. Student presentations and their faculty sponsors were as follows:

ORAL PRESENTATIONS

"Characterization of Serine/Threonine Protein Phosphatases Associated With Fostriecin Mediated Protection to Ischemic Cardiac Tissue." **Beth Miller**, sophomore medical student. Sponsored by Richard Honkanen, Ph.D., Department of Biochemistry and Molecular Biology.

"Investigation of Ectopeptidase Expression in Epithelial Cell Lines." **Alicia Logue**, sophomore medical student. Sponsored by Jane Funkhouser, Ph.D., Department of Biochemistry and Molecular Biology.

"CD⁴⁺ T Helper Cells and Specific Cytokines in Lung I/R Injury." **William Bradley Shirah**, freshman medical student. Sponsored by Aubrey Taylor, Ph.D., Department of Physiology. (Recipient of Clyde G. Huggins Medical Student Research Award, best oral presentation)

"Profiling Heart Failure in Aged Squirrel Monkeys." **John Watford**, sophomore medical student. Sponsored by Alan Brady, DVM, Department of Comparative Medicine, and Clara Massey, M.D., Department of Medicine.

POSTER PRESENTATIONS

"Clearance of Albumin Solution From Piglet Lungs Using Perfluorocarbon Liquid Ventilation." **Tasha Barnett**, freshman medical student. Sponsored by James Parker, Ph.D., Department of Physiology.

"Identification of Genes of Human Lung Epithelial Cells Regulated by Respiratory Syncytial Virus Infection." **Naghma Khan**, sophomore medical student. Sponsored by Sailen Barik, Ph.D., Department of Biochemistry and Molecular Biology. (Recipient of Clyde G. Huggins Medical Student Research Award, best poster presentation)

"Use of Non-Viral Gene Transfer to Alter Vascular Contractile Function in Mesenteric Arteries." **Travis Rutland**, sophomore medical student. Sponsored by Joseph Benoit, Ph.D., Department of Physiology.

"Comparison of Miralax to Lactulose for Treatment of Chronic Constipation in Children." **Alysia Crutchfield**, sophomore medical student. Sponsored by David Gremse, M.D., Department of Pediatrics.

"Pulmonary Barotrauma: A Murine Model." **James Welden, III**, sophomore medical student. Sponsored by Mark N. Gillespie, Ph.D., Department of Pharmacology.

"Immunofluorescence Localization of Iron Transport Proteins." **Matt Barber**, sophomore medical student. Sponsored by Marcel Conrad, M.D., and Jay Umbreit, M.D., Ph.D., Department of Medicine.

"Isolation of Endothelial Cells From Canine Lung: A New Application of Cytodex Beads." **Deborah Weiss**, sophomore medical student. Sponsored by Mary Townsley, Ph.D., Department of Physiology.

"The Use of the Yeast One-Hybrid System to Isolate γ -Globin Promoter Transcription Factor Altered by Butyrate." **John Burch**, sophomore medical student. Sponsored by Betty Pace, M.D., Department of Cell Biology and Neuroscience.

"The Role of Cholesterol in Amyloidogenesis." **Tina Creekmore**, sophomore medical student. Sponsored by Miguel Pappolla, M.D., Department of Pathology.

"Factors Contributory to Delayed Presentation of Breast Cancer." **Druhan Howell**, sophomore medical student. Sponsored by Donna Lynn Dyess, M.D., Department of Surgery.