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The Beat Newsletter

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4-1998

## The Beat Newsletter

College of Medicine

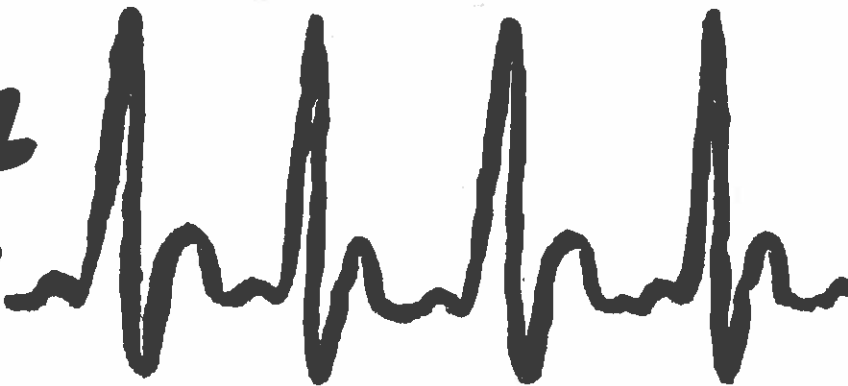
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# The Beat



University of South Alabama  
College of Medicine

APRIL 1998

## ADULT RESPIRATORY DISTRESS SYNDROME AND CONTROL OF THE ENDOTHELIAL CELL BARRIER

Non-cardiogenic pulmonary edema(s) represent a significant clinical complication that increases patient morbidity and mortality. Adult respiratory distress syndrome (ARDS) is the most severe form of these diseases and impacts conservatively 150,000 patients annually. Non-septic ARDS has an estimated mortality rate of 40-60% whereas septic ARDS has an estimated mortality rate exceeding 90%. Clinical management of ARDS patients is supportive, and unfortunately not a single pharmacologic strategy has been utilized successfully to improve patient outcome. The paucity of effective drug therapy and poor prognosis in these patients indicates the mechanisms underlying inception, propagation and resolution of the disease are not well understood.

Leakage of proteinaceous fluid from vascular spaces into interstitial spaces and, in severe forms, into alveoli causes pulmonary edema in ARDS. Such fluid accumulation in the lung parenchyma de-oxygenates blood. Hypoxemia combined with poor tissue perfusion severely compromises organ function.

Disruption of the pulmonary endothelial cell barrier is an initiating event that promotes edema. Endothelial disruption is a regulated process occurring secondary to release of toxic oxygen radicals and proteases by white blood cells, ischemia-reperfusion injury, and/or neuro-humoral inflammatory and vasoactive mediators. These agents act as so-called first messengers to induce endothelial cell contraction and decrease cell-cell and cell-matrix tethering, resulting in gap formation between cells that forms a paracellular pathway for transfer of the proteinaceous fluid. The underlying mechanisms linking the host of first messengers to altered cell shape are unknown. This research represents the focus of work in the laboratory of DR. TROY STEVENS, Assistant Professor of Pharmacology in the College of Medicine.

Cytosolic  $Ca^{2+}$  ( $[Ca^{2+}]_i$ ) and adenosine 3',5' cyclic monophosphate (cAMP) are two intracellular signals importantly dictating endothelial cell-cell apposition, and thus permissiveness of the endothelial barrier for fluid transudation. Increased cytosolic  $Ca^{2+}$  ( $[Ca^{2+}]_i$ ) engages the endothelial contractile apparatus to pull cells inwardly. In addition, increased  $[Ca^{2+}]_i$  uncouples cell-cell and

cell-matrix tethering so that inward contractions produce focal gaps between cells in the vessel wall. Virtually all of these effects depend upon  $Ca^{2+}$  entry, but remarkably not a single gene product encoding a  $Ca^{2+}$  channel has been identified in endothelial cells. Recently a *Drosophila melanogaster*  $Ca^{2+}$  channel called transient receptor potential, or Trp, was shown to mediate  $Ca^{2+}$  entry responsible for light perception in retina. Dr. Stevens laboratory has now demonstrated that human homologues of this gene product are expressed in endothelial cells and ongoing studies seek to determine whether Trp-1 mediates  $Ca^{2+}$  entry that regulates endothelial contraction and cell-cell and cell-matrix detethering.

While increased  $[Ca^{2+}]_i$  promotes disruption of the endothelial cell barrier, increased cAMP enhances endothelial cell barrier function. Indeed, cAMP elevating agents are commonly used in clinical medicine for the treatment of inflammation. Adenylyl cyclase (the enzyme responsible for synthesis of cAMP) activators and phosphodiesterase (the enzyme responsible for breakdown of cAMP) inhibitors have both been utilized to increase cellular cAMP content for the treatment of urticaria and asthma among other conditions. Despite an appreciation for the utility of these pharmacologic strategies in treatment of various forms of inflammation, the influence of inflammation on endothelial cell cAMP content had not been carefully investigated. Studies from Dr. Stevens laboratory indicated that during inflammation cAMP levels decrease in endothelial cells, which permissively increases permeability. Interestingly, endothelial cells express a form of adenylyl cyclase that is inhibited by  $Ca^{2+}$  entry. Thus, when inflammatory first messengers stimulate  $Ca^{2+}$  entry into endothelial cells, cAMP content is reduced. Ongoing studies in Dr. Stevens laboratory seek to further understand the influence of  $Ca^{2+}$  entry on adenylyl cyclase activity and, in turn, the effect of decreased cAMP on endothelial cell contraction and cell-cell and cell-matrix detethering.

On the whole, Stevens work investigates novel molecular targets that integrate signals, both  $[Ca^{2+}]_i$  and cAMP, relevant to control of endothelial cell shape in ARDS. Two specific candidates, the Trp-1

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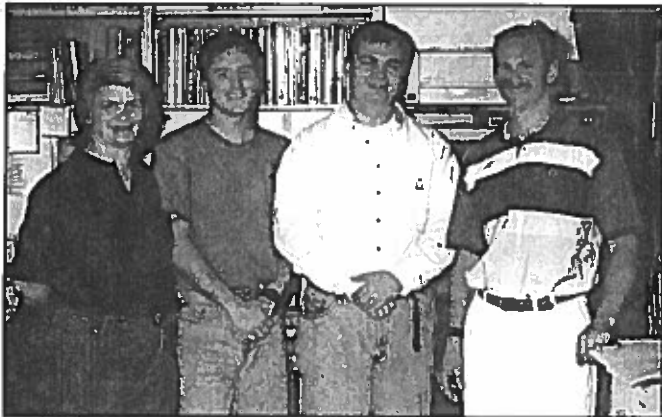
# INSIDE:

"Match Day" Results  
Importance of Folic Acid

Clinical Research Awards  
New Flow Cytometer

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Ca<sup>2+</sup> channel and Ca<sup>2+</sup> inhibited adenylyl cyclase, have been identified and are currently being studied; this work is supported by two independent grants awarded by the National Institutes of Health. Dr. Stevens states "we hope an improved understanding of the basic mechanisms underlying a change in endothelial cell shape during the course of inflammation will unmask rationale targets for pharmacologic therapy that may ultimately prove useful in treatment of ARDS and other inflammatory lung diseases."



Dr. Troy Stevens (far right) and his research team

## NIH CLARIFIES GRANT REVIEW APPEALS PROCEDURE

The National Institutes of Health (NIH) has published a summary of the updated appeals procedure to be used when extramural grant applicants wish to contest a procedural aspect of the review process. Such concerns may include the review was biased, that a conflict of interest existed, that the review group lacked appropriate expertise, or that factual errors entered into the review. Differences in scientific opinion, however, may not be contested through these procedures.

Under the NIH appeals guidelines, a concerned investigator should first contact the program administrator who has been assigned responsibility for the application. If concerns remain after this initial consultation, the applicant should submit a formal letter of appeal to the program administrator specifying the complaint. The program administrator is charged with discussing the issue with the scientific review administrator (SRA) who administered the initial review. If the investigator, program administrator, and the SRA cannot agree on a course of action, the case will then be reviewed by the institute's appeal officer, a senior official not directly involved in peer review. The institute will make the appeal letter and the staff's recommendation available to its council for discussion, review, and possible action. Council options include ordering a re-review of the application.

Individual institutes may have appeal procedures that vary slightly, but each provide a means for an appeal to be given full consideration by staff, and if necessary, by the council.

(Article reprinted from the *Washington Highlights*, Vol. 8, no. 45)

## THE RITHA BALIGA MEMORIAL WOMEN'S MEDICAL SCHOLARSHIP

The first Ritha Baliga Memorial Women's Medical Scholarship was awarded to *third-year medical student Ms. Rupa Kothandapani* during a presentation held at the USA Children's and Women's Hospital. The award was presented by Dr. Surendra Baliga, Associate Professor of Pediatrics and Biochemistry and Dr. William A. Gardner, Jr., Interim Dean and Vice President for Medical Affairs, College of Medicine.

Ms. Kothandapani received her undergraduate degree in Biology from the University of North Carolina at Chapel Hill and plans to specialize in pediatric medicine.

The Baliga Memorial Scholarship was established in 1996 by Dr. Surendra Baliga and his daughters, Rekha and Rajani, in memory of their wife and mother. Donations for the scholarship were made through many sources including the India Student Organization and the faculty and staff of the Department of Pediatrics. The primary purpose of the award is to further the education of deserving female medical students. Dr. Baliga has been a researcher in the Department of Pediatrics for more than 20 years. Rajani Baliga is a graduate of the College of Allied Health and Rekha is presently a student in the College of Nursing. Dr. Baliga and his daughters decided that the scholarship should reflect the family's ideals of furthering the area of medicine and medical education.

The criterion for nomination of the Ritha Baliga Memorial Women's Medical Scholarship include female students with an interest in pediatric medicine, and entering their junior year in medical school. Selection criteria also include academic performance and financial need. The scholarship is awarded yearly by the Awards and Scholarship Committee of the College of Medicine.

## EXPERT STRESSES IMPORTANCE OF FOLIC ACID FOR HEALTHY BABIES

Dr. Godfrey Oakley has an unlikely wedding present for brides; a bottle of folic acid. Oakley, a birth defects expert from the Centers for Disease Control and Prevention in Atlanta, visited Mobile last week to talk about how research shows folic acid can prevent certain types of birth defects, including spina bifida. He carries his messages - and his vitamin bottles - to science centers and wedding receptions across the country.

With the folksy humor of his native North Carolina, Oakley spoke to a variety of groups during his two-day trip to Mobile as the guest speaker at the Lawrence E. Fetterman Memorial lecture, an annual talk in honor of the late radiologist.

As director of the Division of Birth Defects and Developmental Disabilities at the Clinical Diseases Center (CDC) in Atlanta, Oakley divides his time between birth defects with known causes and mystery problems, he said. Research over the past several years has shown how folic acid can protect fetuses from serious neural tube defects.

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"It's really just a wonderful, wonderful finding," Oakley said during media conference at Providence Hospital.

And one that could be good news for Alabamians, the state with the highest infant mortality rate in the country. For more than 20 years, national statistics have shown birth defects are the leading causes of infant mortality.

A reduction in the number of birth defects would mean babies born in Alabama would have a better chance of making it to their first birthday party.

Oakley and other scientists are working to spread the word that folic acid works. Surveys show that only one in four women knows about the benefits of folic acid and takes the recommended 400 milligrams each day.

Experts say all women of childbearing age should take folic acid, which does its job as a protector early during pregnancy. Because about half of all American pregnancies are unplanned, scientists are suggesting that every woman of childbearing age get into the habit of taking the vitamin rather than waiting until after conception. The recommended amount of the water-soluble vitamin is usually included in multivitamins. Folic acid, a B vitamin, can be purchased for pennies, but it can prevent problems that cause thousand of dollars in medical expenses and emotional pain. Some research suggests that the vitamin might do more than just prevent birth defects. The vitamin could also protect the arteries and heart from damage, Oakley said.

"We're in the middle of a revolution," he said, but it's difficult to find the funds to spread the word about the research.

Oakley compared folic acid's potential to the Salk vaccine's impact on polio. The difference between the two campaigns, however, is public opinion. Americans supported the polio vaccine, but they have yet to embrace folic acid.

Oakley said it's a classic case of people not thinking ahead.

"They don't like to spend the money on the roads until they can't get to work."

In order to get the word out, Oakley works with local doctors to track birth defects and consider their causes. This data must be gathered slowly and carefully so scientists can use it to make connections between a defect and its cause.

Oakley's two-day visit was a busy one. After Tuesday's media conference, he led a public forum on folic acid. That night, he addressed medical professionals of Mobile and Baldwin counties at the Fetterman lecture at the Country Club of Mobile.

And on Wednesday morning, he talked to medical students at the University of South Alabama.

Dr. Wladimir Wertelecki started the Alabama Birth Defects Surveillance and Prevention Program in 1994 to gather data from local birth defects to compare to information across the state and the world. This year, Wertelecki's efforts received support from the newly formed Alabama Alliance for the Prevention of Birth Defects, a group of public activists and health professionals who support the research.

(Article reprinted from the Mobile Register, March 29, 1998 -- Staff Reporter : J.C. Zogby)

## NEW FACULTY MEMBERS



Mikhail Alexeyev, Ph.D., *Assistant Professor of Microbiology and Immunology*, received a B.S. in biochemistry from Kiev State University and a Ph.D. degree in molecular biology from the Institute of Molecular Biology. He received post-doctoral training in gene therapy at Texas Heart Institute, and in microbiology at Louisiana State University.



Desiree A. Soter-Pearsall, M.D., *Assistant Professor of Medicine*, received a B.A. in biology from Northwestern University and a M.D. degree from Rush Medical College. She completed an internal medicine internship at Louisiana State Medical Center and residency training at Duke University.



Mark D. Perry, M.D., *Assistant Professor of Orthopaedic Surgery*, received a B.S. in engineering from Tulane University and a M.D. degree from Johns Hopkins School of Medicine. He completed an internship in surgery and a residency in orthopaedic surgery at John Hopkins School of Medicine. Prior to joining the faculty, Dr. Perry had a private orthopaedic practice.

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## CULPEPER FOUNDATION SEEKS APPLICATIONS FOR MEDICAL SCIENCE SCHOLARSHIPS

The Charles E. Culpeper Foundation is now accepting applications for its 1999 Scholarships in Medical Science, which support the career development of academic physicians. Up to four awards of \$100,000 per year will be made to U.S. medical schools on behalf of young physicians with clear potential for making substantial contributions to science as academic physicians. Institutions may nominate one candidate each. If interested, contact Dr. Samuel J. Strada, Senior Associate Dean, 460-6041, CSAB 180.

Applications are due August 14, 1998, and awards will be announced in January 1999. For information, applications forms, and instructions, contact: the Culpeper Foundation 203-975-1240 or visit <http://www.culpeper.org>

## RESEARCH CYTOMETRY CORE TO ACQUIRE A NEW FLOW CYTOMETER

The College of Medicine has been awarded an NIH Shared Instrument Grant (SIG) of \$211,550 for the purchase of a new flow cytometer. Sixteen investigators representing seven departments within the COM including Biochemistry and Molecular Biology, Internal Medicine, Microbiology and Immunology, Pediatrics, Pharmacology, Physiology, and Structural and Cellular Biology, participated in the SIG application. The new instrument, a Becton Dickinson FACS Vantage, will replace a FACS 440.

The FACS Vantage has several advantages over the FACS 440. Doublet discrimination makes possible the detection and exclusion from analysis of cell doublets. Projects involving cell cycle analysis will benefit from this feature since it enables more accurate quantitation of cells in different stages of the cell cycle.

Analysis of the modulation of intracellular calcium using emission ratioable dyes such as Indo 1 will also be possible with the Vantage instrument. In this area, the Vantage will complement our ACAS image analyzer: the ACAS provides for intracellular localization of changes in  $Ca^{2+}$  but only in small numbers of cells. The Vantage does not provide information as to the intracellular localization of  $Ca^{2+}$  changes but is capable of analyzing thousands of cells from each sample.

A refrigerated heater system on the Vantage will permit temperature control of the sample. Another accessory will provide for rapid injection of the sample into the path of the laser beam so that analysis of the sample can begin almost immediately after any additions, e.g., factors, antibodies, or other compounds of interest, are made to the sample tube.

The autoclone accessory makes it possible to select cells and deposit them singly into wells of a 96-well plate.

The Vantage is capable of the simultaneous analysis and display of five parameters: three-color fluorescence plus forward and right-angle light scatter.

It is anticipated the FACS Vantage will be operational by the first of June. For additional information about the possibilities offered by the FACS Vantage, please contact Dr. Ray Hester at 460-6029. The Research Cytometry Laboratory is located in CSAB 357.

*If you would like to submit an article for publication, please forward it to:*

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FAX (334) 460-6073

Visit "The Beat" at  
<http://southmed.usouthal.edu/com/thebeat.htm>

## NIH LAUNCHES NEW CAREER DEVELOPMENT AWARDS FOR CLINICAL RESEARCH

The NIH has announced three new types of career development awards that are aimed at increasing the participation of clinical researchers in medical research, and at enriching the pipeline of people properly trained to do clinical research. The new awards were created in response to recommendations of the NIH Director's Panel on Clinical Research, chaired by David G. Nathan, M.D. Two of the new awards support career development in patient-oriented research (POR): the Mentored POR Career Development Award (K23), for investigators following completion of their specialty training, and the Mid-Career Investigator in POR Award (K24), developed for mid-career clinical scientists. The third new offering, the Institutional Curriculum Award (K30), will be granted to institutions with a substantial clinical research portfolio and a critical mass of individuals in clinical research training and career development.

The NIH estimated that beginning in FY 1999, it will fund 80 new Mentored (K23) awards, 50 to 80 Mid-Career (K24) awards, and about 20 Institutional Curriculum (K30) awards. These core awards will be used by every NIH Institute.

For more information about the awards, go to <http://www.nih.gov/news/pr/mar98/od-06.htm>

## HIGH BLOOD PRESSURE?



The University of South Alabama Division of Clinical Research in the Department of Emergency Medicine is conducting a research study for African-Americans with HYPERTENSION. Medication, lab testing, and follow-up will be free of charge. Compensation for time and travel available. For more information call (334) 660-5243.

## PRIMARY CARE RESIDENCIES TOP MEDICAL SCHOOLS GRADUATES' CHOICES

For the fourth year in a row, more than half of the graduating seniors at U.S. medical schools matched to a first-year residency position in one of the generalist specialties, according to data from the National Residency Matching Program (NRMP), the primary route by which applicants to residency programs obtain training positions at U.S. teaching hospitals. At 11:00 a.m. on March 18, 1998, as part of the annual Match Day event, the 13,656 medical school seniors successfully matched to a first-year training position learned which residency program they will enter. There are at least an additional 3,000 more first-year positions available in residency programs that do not participate in the Match. According to the NRMP, 26,360 individuals participated in the 1998 Match, up slightly from 26,323 in 1997.

In 1998, 93.5 percent of the 14,610 U.S. medical school seniors participating in the Match received a first-year position, a slight increase over the 92.7 percent matching last year. The number of U.S. seniors not receiving a match was 6.5 percent, the lowest percentage since 1987. The percentage of U.S. international medical graduate (IMGs) matching to U.S. residency programs increased to 45.5 percent from 43.5 percent last year. U.S. IMGs are U.S. citizens who graduate from medical schools outside the United States and Canada. The match rate for non-U.S. IMGs dropped, by contrast, from 34.5 percent in 1997 to 31.4 percent in 1998.

### "MATCH DAY" RESULTS University of South Alabama Seniors — RESIDENCIES RECEIVED BY DISCIPLINE —

	Class of 1994		Class of 1995		Class of 1996		Class of 1997		Class of 1998	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
<b>PRIMARY CARE:</b>	40	58%	36	60%	47	73%	42	65%	41	65%
Internal Medicine	18	26%	14	23%	26	41%	12	18%	16	25%
Family Medicine	12	17%	16	27%	15	23%	22	34%	12	19%
Pediatrics	7	10%	5	8%	4	6%	7	11%	8	13%
Med/Peds	3	4%	1	2%	2	3%	1	2%	5	8%
Anesthesiology	7		3		2		3		1	
Emergency Medicine	1		1		2		2		0	
Neurology	2		1		0		0		0	
Neurological Surgery	0		2		0		0		1	
Ob/Gyn	3		2		4		5		5	
Ophthalmology	2		2		1		1		2	
Orthopedics	0		1		0		0		3	
Otolaryngology (ENT)	1		0		0		1		0	
Pathology	4		4		2		4		0	
Psychiatry	2		1		4		0		1	
Radiology	0		2		2		1		2	
Surgery	7		2		0		5		6	
Transitional	0		2		0		0		0	
Undersea Medicine	0		0		0		0		1	
Urology	0		1		0		1		0	

## USA KNOLLWOOD PARK HOSPITAL SLEEP DISORDERS CENTER REACCREDITED

The University of South Alabama Knollwood Park Hospital Sleep Disorders Center has been granted reaccreditation for five years from the American Sleep Disorders Association (ASDA). The reaccreditation was effective in December. "We are especially pleased to have met the high accreditation standards of the ASDA for a second time," said Broughton, medical director of the USA Knollwood Sleep Disorders Center. "Although accreditation is an arduous process, the distinction assures patients they are being treated in a full service sleep lab that has consistently met the high standards set by the nation's only recognized accrediting organization for sleep medicine."

The ASDA is a medical and scientific society dedicated to the ideal of quality medical care for patients with sleep disorders and service to its members through education, research and development of practice standards relating to the field of sleep medicine.

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### CONGRATULATIONS.....

Betsy Bennett, M.D., professor of pathology, has been appointed to the United States Medical Licensing Examination Step One Test Material Development Committee for Anatomy. The committee gives a common evaluation system for measuring the knowledge and cognitive competence of applicants for medical licensure in the United States.



Joseph H. Coggin, Jr., Ph.D., professor and chair of microbiology and immunology, passed the first National Registry of Microbiologist (NRM) certification examination as a Specialist Microbiologist in Biological Safety. The biological safety exam was developed through a joint effort by the NRM and the American Biological Safety Association. The NRM is a voluntary certifying body which was founded in 1958 and is the only organization in the U.S. which offers certification in both clinical and non-clinical microbiology areas. The exam is a relevant measure of what biological safety professionals should know in order to effectively perform their jobs.



Jack A. DiPalma, M.D., professor of medicine and director of the division of gastroenterology, was elected a trustee of the American College of Gastroenterology during their recent annual meeting. The American College of Gastroenterology is a national organization that represents specialists in digestive health.



Stan Hammack, administrator of USA Children's and Women's Hospital, was named administrator of the year by the Nurses Association of Alabama. He received the D.O. McClusky Award in recognition of his support of nursing during his tenure at USA Knollwood Park Hospital.



Jorge L. Herrera, M.D., associate professor of medicine, division of gastroenterology was elected to the Board of Directors, Alabama Chapter of the American Liver Foundation. The American Liver Foundation is a national voluntary organization dedicated to preventing, treating and curing hepatitis and other liver and gallbladder diseases through research and education.



Arthur Manoli, II, M.D., professor and chair of orthopaedic surgery, published a paper entitled "Foot and Ankle Severity Scale (FASS)" in *Foot and Ankle International* in December 1997. Dr. Manoli led a team of nationally-known trauma surgeons in developing a relative severity and impairment scale for foot and ankle trauma.



John A. Vande Waa, assistant professor of internal medicine - division of infectious diseases, received the Upjohn Award in Infectious Diseases for the top-scoring paper "Outcome of HIV-1 Infected Patients with High Viral Load Treated with Combination Anti-retroviral Therapy" at the regional meeting of the Southern Societies in New Orleans. The co-authors are Dr. Elizabeth Vande Waa, associate professor of adult health nursing; Dr. Charles Hoff, professor of pediatrics, and Dr. Keith Ramsey, associate professor of internal medicine.

Dr. Keith Ramsey, also the Director of the Division of Infectious Diseases, was elected to the officers' nominating committee for the Southern Societies of Clinical Investigation.

Dr. Ernesto Umana, co-chief resident, won the SAFMR/SSCI training award for his paper "The Muir-Torre Syndrome: Sebaceous Gland Tumors and Internal Malignancies." Co-authors include Dr. Jack DiPalma and Dr. J. Graham Smith, professors of internal medicine.

"People often say that good research strengthens good teaching. That is probably so, but what people often overlook is that the relationship also goes the other way: teaching strengthens and nourishes research. Teaching forces one to think and rethink the very foundation of one's discipline, year after year. Good teaching infuses good research, just as good research infuses good teaching"

Robert Curl  
1996 Nobel Prize in Chemistry

## INFOFAIR '98 PLANNED

The Biomedical Library and Media Production Services is sponsoring an InfoFair to be held on Wednesday and Thursday, May 6-7, 1998 from 10:00am-4:00pm each day. All USA faculty, staff and students are invited as well as all area medical and educational personnel. InforFair '98 will be held at the campus site of the Biomedical Library. Special tours will be available.

The latest innovations in medical information online access, traditional services, media production services as well as many other technical innovations (ie., internet phone, the virtual human, distance learning) will be showcased. For further information, contact Mr. Tom Williams, Biomedical Library Director, at 460-6885 or email [twilliam@jaguar1.usouthal.edu](mailto:twilliam@jaguar1.usouthal.edu)

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## AAMC REPORTS MORE WOMEN FACULTY AT U.S. MEDICAL SCHOOLS

The percentage of women faculty in U.S. medical schools rose from 25.6 percent in 1996 to 26.1 percent in 1997, according to "U.S. Medical School Faculty, 1997," recently published by the AAMC. The 1997 figures represent an increase of 6.8 percent over the past decade.

The book is compiled annually from the AAMC's Faculty Roster System and serves as a reference source for the most frequently asked questions about medical school faculty. It contains figures and tables designed to answer questions about medical school faculty distribution, including data on age, specialty area, department, rank, degree, sex and ethnicity.

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## NIH PUBLISHES NEW POLICY ON INCLUSION OF CHILDREN IN RESEARCH

The NIH has announced a new policy requiring researchers working with human subjects to include children in their clinical studies unless certain conditions are met. This policy was developed in response to directives from the House and Senate appropriations committees as well as from suggestions by the American Academy of Pediatrics. One review of NIH-sponsored clinical studies showed that 10 to 20 percent inappropriately excluded children, one of several findings that prompted the recommendations of these groups.

Under this new policy, applicable to applications received on or after Oct. 2, 1998, investigators must create a section in their research plan titled "Participation of Children." This section should describe how children will be included in the study population or provide a rationale for excluding them. Children may be excluded from clinical studies if:

- ◆ the research is irrelevant to children,
- ◆ there are laws or regulations barring their inclusion,
- ◆ the knowledge being sought is already or otherwise available,
- ◆ a separate age-specific study on children is warranted and preferable,
- ◆ insufficient data are available to judge the risk of participation to children,
- ◆ the study involves follow-up on a previous adult study; or
- ◆ the review groups and institute director approve any other special justification provided by the investigator.

Institutional review boards will be expected to consider the adequacy of pediatric representation in study populations when reviewing protocols, and NIH review groups will consider this criterion when evaluating grant applications. For the purposes of this policy, a "child" is any individual under 21 years of age.

*(Article reprinted from Washington Highlights, March 1998)*

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## BIRTH DEFECTS PREVENTION PROGRAMS UNITE

The Alabama Alliance for the Prevention of Birth Defects and the Alabama Birth Defects Surveillance-Prevention Program, two Alabama organizations pledged to a common goal, were formally inaugurated at a recent meeting of the South Alabama Medical Science Foundation. The Alabama Alliance for the Prevention of Birth Defects was introduced by its president, Gerald Friedlander, while Wladimir Wertelecki, M.D., chair of the Department of Medical Genetics, reviewed the Alabama Birth Defects Surveillance-Prevention Program. The Alliance promotes the goals of the Birth Defects Surveillance-Prevention Program through advocacy and public education programs.

The Birth Defects Surveillance-Prevention Program was organized in the department of medical genetics and is a component of the USA Children's and Women's Hospital. The program is adapted to the recently signed law "Birth Defects Prevention of 1997," which points out that birth defects are the leading cause of infant mortality and are directly responsible for one out of five infant deaths nationwide.

The Alliance will launch a public education campaign in the near future concerning folic acid and other prevention strategies. Folic acid, taken alone or in vitamins before or during pregnancy, is known to prevent 50 percent of open spine defects, as well as some cases of cleft lip, heart defects and limb abnormalities.

Information on birth defects and the prevention of birth defects can be obtained through the Birth Defects Information Center by calling Barbara Russ or Nell Eanes at 1-800-524-1865 or 460-7500.





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**SUMMER RESEARCH PROGRAM  
FOR MEDICAL STUDENTS  
BEGINS IN JUNE**

The Summer Research Program will begin June 8, 1998. First and second year medical students interested in the program will contact faculty sponsors to select a project. The twenty-fifth annual Student Research Day will be held on Friday, August 14, 1998. The keynote speaker will be Dr. Griffin Rodgers from the National Institutes of Health. For further information regarding this program, please contact Ms. Dusy Layton, 460-6041.