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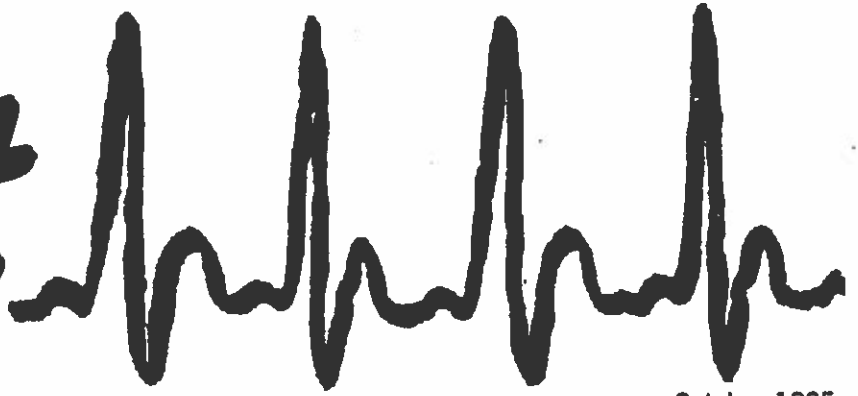
College of Medicine

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The Beat



University of South Alabama
College of Medicine

October 1995

NEW CLASS OF MEDICAL STUDENTS ADMITTED

Sixty-four medical students started classes on August 28, 1995. The first class of twenty-five medical students was admitted in 1973. The class of 1999 will be the 24th graduating class. The charter class was comprised of 24 men and one woman who were selected from 119 applications by Alabama residents and 49 non-Alabama residents. The charter class graduated in June 1976. Since 1973 the college has been accepting 64 entering students per class.

In 1995, 1507 applications were received for the class of '99, 550 from Alabama residents and 887 out-of-state applications. The latter figure includes 56 applicants from the service areas of the Mississippi Gulf Coast and Florida panhandle. The Admissions Committee interviewed 229 applicants, 223 of whom were in-state residents. To fill the class of 64 students, 122 acceptances were proffered, including 12 early decision acceptances. The average GPA of matriculants was 3.6 with an average combined MCAT score of 28. The class consists of 42 male and 22 female students; 8 students are residents of rural counties and 4 are graduates of the BEAR program.

The profile of the entering medical student at the University of South Alabama College of Medicine is diverse. They are married, single, have degrees in art, music, literature, engineering, and the traditional disciplines of biology, chemistry and biomedical science. They are primarily Alabama residents but have completed their undergraduate degrees at 30 colleges and universities throughout the United States but primarily in the Southeast. They are male and female ranging in age from 20 to 40 and come from different socioeconomic backgrounds. A diverse group of people but with a lot in common: academically talented, highly motivated, with excellent communication skills. Other factors considered in the selection process include their emotional maturity, character, stability and extracurricular involvement. Since its inception, the college has sought students with diverse interests who are well-rounded in all aspects. This year's entering class of medical students maintains this tradition.

GRADUATE PROGRAM IN BASIC MEDICAL SCIENCES

The College of Medicine offers, through the University of South Alabama Graduate School, a program leading to the Doctor of Philosophy Degree in Basic Medical Sciences with specialization in one of five basic medical science disciplines. The Ph.D. program began in June 1978 and was developed by Charles M. Baugh, Ph.D. and Edwin R. Hughes, M.D. The initial program required that all students pass a core curriculum followed by three years in discipline oriented course work and research leading to the Ph.D. degree in Basic Medical Sciences with specialization in Anatomy, Biochemistry, Microbiology/Immunology, Pharmacology or Physiology. "The program was designed to produce graduates with training and knowledge in basic human biology equivalent in scope to a physician's but who in addition have in-depth knowledge and research skills in an area of specialization in one of the basic medical sciences equivalent to that of graduates of traditional doctorate programs."

The first graduates of the Ph.D. program occurred in 1983 and since then 79 students have received Doctor of Philosophy Degrees. The breakdown of the graduates with their area of specialization is as follows:

Biochemistry	14
Microbiology/Immunology	22
Pharmacology	16
Physiology	13
Structural & Cellular Biology	14
TOTAL	79

Since 1985, the program has become more traditional and departmentally based. Many of the advantages of the early program are maintained in that the Ph.D. degree is awarded in Basic Medical Sciences, a minimal administration structure remains to maintain standardization, and to coordinate the graduate program. There is a college-wide weekly seminar program that graduate students are expected to attend regardless of topic or discipline and inter-departmental courses are offered.

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A core-curriculum has been established in each department to which elective courses may be added by the mentor or student's committee as needed. The graduate program has been revised significantly with several new courses offered at the introductory and advanced graduate levels emphasizing contemporary topics in cellular and molecular biology. The ratio of core-courses to elective courses varies widely between departments. It is recognized, with small basic science departments, that advanced courses cannot be taught in all areas and, accordingly, the advanced topics taught reflect the research interests of the faculty. The research portion of graduate training is emphasized. A student's dissertation work is expected to result in one or more publications in a peer-reviewed journal. The student's research is directed by a mentor, usually a faculty member with NIH funding, and an advisory committee which includes two outside departmental members of the graduate faculty that meets with the student every six months. During the 1994-95 academic year, seven students received the Ph.D. degree in Basic Medical Sciences.

TWENTY-SECOND ANNUAL MEDICAL STUDENT RESEARCH DAY

Eleven first year and fifteen second year medical students presented the results of their summer research projects at Student Research Day on Wednesday, August 16, 1995. All students were presented certificates for their participation in the summer research program. The 1995 recipients of the "Clyde G. Huggins, Ph.D., Medical Student Research Awards" were Andrew Velazquez (best poster presentation), sponsored by Dr. Sailen Barik, Department of Biochemistry and Molecular Biology and Amy M. Thompson (best podium presentation), sponsored by Dr. Betty Pace, Departments of Pediatrics and Structural and Cellular Biology. The awardees receive a plaque and check for \$100.

This year's keynote speaker was Dr. Susan P. Perrine, Associate Professor of Pediatrics, Medicine and Pharmacology at Boston University School of Medicine and Director of Hematopoiesis



Dr. Susan Perrine (right) discusses the research of freshman medical student, Ms. Sharon Brom.

Research for A&D Assay in Boston, MA. Dr. Perrine's area of expertise is in sickle cell anemia research. Her seminar was entitled "Reactivating the Fetal Globin Genes in the Beta-Hemoglobin Disorders: Pitfalls and Progress."

The students, their sponsors, and the Student Research Committee are to be commended for the success of the program. The 1995 summer research program was funded by grants from the National Institutes of Health, National Cancer Institute and the Comprehensive Sickle Cell Center.

USA OUTPATIENT DIALYSIS CENTER

The opening of the University of South Alabama Outpatient Dialysis Center was held on June 8, 1995. The Center, located adjacent to the Health Services Foundation Building, will serve as the focal point for the growing End-Stage Renal Disease Program (ESRD) of the University. Since its conception three years ago, over 80 patients with total kidney failure have entered the program. Before completion of the USA Dialysis Center, these patients received care at a number of private facilities spread throughout the city.

The USA Dialysis Center houses 10 hemodialysis "stations" - the dialysis machine and associated equipment required to deliver one hemodialysis treatment. Individual patients receive 4-hour treatments three times each week allowing 20 patients to be treated on a Monday-Wednesday-Friday schedule and 20 additional patients on a Tuesday-Thursday-Saturday schedule. Great care was taken to make the Center cheerful and comfortable in order to provide a positive environment for patients and staff.

The development of the USA Dialysis Center was a cooperative venture between the University of South Alabama and Biomedical Applications (BMA), the largest commercial provider of dialysis services in the country. A joint commitment to providing the highest quality of care to ESRD patients has produced a facility that is equipped throughout with the most technologically advanced dialysis delivery systems. These systems allow for individualization of treatment design and delivery that grants maximal rehabilitation potential to each patient. The nursing and technical staff is dedicated to using their considerable expertise in dialysis to ensure that patients receive the greatest benefits possible from the Center.

An associated unit located in the Health Services Foundation Building provides the services required for peritoneal dialysis. Patients choosing this mode of home therapy undergo intensive training, usually with a family member, that allows them to deliver their own dialysis treatments away from the Center. The peritoneal dialysis unit also provides close back-up support for patients and regular supervision of their care and well-being.

The entire USA Dialysis Center, hemodialysis and peritoneal dialysis together, marks a milestone in the delivery of specialized care to the ESRD patients seen by physicians in the hospitals and outpatient clinics of the University of South Alabama.

PROFILE OF THE DEPARTMENT OF PHYSIOLOGY

For the past 18 years, a tall Texan, Aubrey E. Taylor, Ph.D., has reigned over the Department of Physiology in the College of Medicine. Taylor was a student of another famous physiologist, Dr. Arthur C. Guyton, who chaired the Department of Physiology for more than thirty years at the University of Mississippi. After completing a postdoctoral fellowship at the Harvard Medical School, Taylor joined the faculty at Jackson Mississippi where he quickly rose to the rank of full professor. In 1977, Dr. Taylor succeeded the late Dr. Charles W. Urschel as the second chair of the Physiology Department. During his tenure at South Alabama, Dr. Taylor has received numerous awards for his pioneering studies on the hydrodynamic properties of the pulmonary micro-circulation and served as President of the American Physiological Society. Perhaps, as importantly Dr. Taylor has exerted enormous influence on the career development of several graduate students, postdoctoral fellows and junior faculty that have worked in the department. A former physiology student, Dr. Joseph Benoit was recruited recently to South Alabama as an Associate Professor of Physiology. A second faculty member, Dr. L. Britt Wilson also joined the Department this summer as an Assistant Professor. They are expected to contribute to a rich departmental tradition of scientific productivity, extramural research support and serious commitment to medical and graduate education and committee service. These two new members join six other full-time faculty and several clinical faculty members who hold joint appointments and maintain laboratories in the Department.

JOSEPH N. BENOIT, Ph.D., (*Associate Professor*) joins the faculty after a successful eight years in the department of Physiology at the LSU School of Medicine in Shreveport. Dr. Benoit received his Ph.D degree from the University of South Alabama in this department in 1986. The major focus of Dr. Benoit's research is to elucidate the factors involved in the regulation of vascular contractile function in health and disease. His ongoing research projects focus on three major areas: 1) vascular responses to chronic portal hypertension, 2) vascular responses to ischemia/reperfusion injury and 3) regulation of lymphatic smooth muscle pumping.

He brings to the department an in-depth knowledge of the microcirculation of the intestine and liver, especially in regard to chronic portal hypertension, and the functional aspects of the lymphatic system. He currently holds an Established Investigator Award from the AHA and an R01 from the NIH on the hyperdynamic blood flow state occurring in the intestinal circulation in portal hypertension. In addition, he studies the mechanisms responsible for producing the impairment of arteriole control of vascular resistance following brief periods of ischemia. Dr. Benoit uses microscopic techniques to evaluate how the lymphatic system actively pumps lymph towards the blood circulation in health and disease. Current emphasis is on the role of inflammatory mediators in modulating contractile activity of collecting lymphatics. Dr. Benoit also has an interest in the use of computer assisted microscopy to study cellular processes. Dr. Hong Gao is a post-doctoral fellow in Dr. Benoit's laboratory. A toxicologist, she received her M.D. and Ph.D degrees from Beijing Medical University. She is presently involved in research directed towards understanding the mechanism of oxidant mediated reductions in calcium mobilization from the sarcoplasmic reticulum in vascular smooth muscle.

L. BRITT WILSON, Ph.D., (*Assistant Professor*) joins the faculty after completing a post-doctoral fellowship in Dr. Jerry Mitchell's research group at Southwestern Medical School in Dallas. Dr. Wilson received his Ph.D from LSU in New Orleans in 1988. His research interests are related to the neural control of the circulation especially in regard to stress and behavior. Dr. Wilson has developed a unique system to study the involvement of the various neural transmitters in the spinal cord that are responsible for transmitting information to various systems relative to skeletal muscle contraction. Dr. Wilson recently received a five year NIH First Award. He has also held AHA research and training awards during his post-doctoral training at Southwestern.

MARY I. TOWNSLEY, Ph.D., (*Professor*) is the current Director of the Basic Medical Sciences Graduate Program and heads an active research program to evaluate the factors responsible for controlling the pulmonary circulation. She works closely with a neonatologist, Dr. Beverly Roy and two graduate students, Ron McMillon and Allen Lee. Mr. McMillon has received a prestigious minority pre-doctoral fellowship award from the American Physiological Society. Dr. Townsley is an Established Investigator of the American Heart Association, and holds an NIH RO1 grant to fund her research on the pulmonary circulation. Studies in her laboratory are focused on both physiological and structural changes in the pulmonary circulation in an animal model of chronic left heart failure.

STEPHEN T. BALLARD, Ph.D., (*Associate Professor*) has been funded for three years by the Cystic Fibrosis Foundation. In June, he received a five-year First Award from the NIH. His research has shown that airway glands, not small airway epithelium, are responsible for producing airway fluid and alteration of their function may lead to the pathophysiological events observed in cystic fibrosis. In addition, Dr. Ballard also conducts extensive research on the airway circulation in order to understand its involvement in airway inflammation with Dr. Michel Corboz, a post-doctoral fellow from the University of Grenoble in France. Dr. Sarah Inglis, a native of Scotland, is also a post-doctoral fellow in Dr. Ballard's laboratory. She was trained in transport techniques at the medical school in Dundee Scotland. Her findings indicate that in small airways, ion transport is absorptive, not secretory as previously believed. In addition, a graduate student, Mark Taylor is also working in Dr. Ballard's laboratory on the functional aspects of airway glands as related to the development of cystic fibrosis. This year Dr. Ballard served on an NIH study section and was invited as a symposium speaker at the annual meeting of the Cystic Fibrosis Foundation.

AUBREY E. TAYLOR, Ph.D., (*Professor and Chair*), and Dr. Pavel Khimenko a post-doctoral fellow from the Ukraine, continue to study the cellular mechanisms responsible for producing endothelial damage in lungs exposed to ischemia/reperfusion. The studies are funded by an NIH Merit Award and evaluate how c-AMP levels in endothelial cells can reverse the damage, and how various leukocyte and endothelial adhesion and rolling factors, oxygen radicals, xanthine oxidase system, calcium/ calmodulin, adenosine A₂ receptor activation, platelet activating factor, endothelin type A receptors, and protein kinase A are involved in producing and/or reversing the endothelial damage associated with periods of ischemia followed by

NEW COLLEGE OF MEDICINE FACULTY

We welcome you to the University of South Alabama and to the Mobile area



Craig



Dannelley



Greenberg



Brody



Zweifler



Sauter



Bartholomew



Busowski



Rizk



Boudreaux



Roveda



Sendelbach



Eyal



Hackman



Wierzbicka



Benoit



Wilson



Figarola



Rice

MEDICINE

Alan S. Craig, Jr., M.D., (*Associate Professor*) received a B.S. in Mathematics from Auburn University at Montgomery and a M.D. from the University of South Alabama College of Medicine. He completed an internship and residency in internal medicine from the University of Alabama at Birmingham. Dr. Craig will head the Division of General Internal Medicine.

Julia M. Dannelley, M.D., (*Assistant Professor*) received a B.S. in Biology and a M.D. from the University of South Alabama College of Medicine. She completed a residency in internal medicine at the University of South Alabama Medical Center.

Stephen H. Greenberg, M.D., (*Associate Professor*) received a B.A. from Brooklyn College and a M.D. from Tufts University School of Medicine. He completed an internship and residency at Hartford Hospital. Dr. Greenberg is also the Clinical Medical Director for the Mobile VA Ambulatory Outpatient Clinic.

NEUROLOGY

Mark L. Brody, M.D., (*Assistant Professor*) received a B.S. from the University of Western Ontario and a M.D. from the University of Calgary Medical School. He completed an internal medicine residency at Akron General Hospital and a cerebrovascular disease fellowship at UCSD Medical Center.

Richard M. Zweifler, M.D., (*Assistant Professor*) received a B.S.E. in Bioengineering from the University of Pennsylvania and a M.D. from Tulane Medical School. He completed a residency in neurology and a cerebrovascular disease fellowship from the University of California, San Diego.

NEUROSURGERY

Kent L. Sauter, M.D., (*Assistant Professor*) received a B.S. in Biology and Medical Technology and a M.D. from the University of South Alabama. He completed a residency in surgery and neurosurgery at West Virginia University Hospital.

OBSTETRICS/GYNECOLOGY

Deborah A. Bartholomew, M.D., (*Associate Professor*) received a B.S. in Biological Sciences from Northern Illinois University and a M.D. from the Medical College of Virginia. She completed a residency in anatomic pathology from the University of California-Davis and a fellowship in obstetric and gynecologic pathology from the University of California-Davis.

John D. Busowski, M.D., (*Assistant Professor*) received a B.S. in Biology at the University of Pittsburgh at Johnstown in Pennsylvania and a M.S. in Comparative and Experimental Pathology from the Bowman Gray School of Medicine at Wake Forest University. He received his M.D. from Hahnemann University School of Medicine and completed a fellowship in perinatology at the University of South Florida College of Medicine.

Botros Rizk, M.D., (*Assistant Professor*) received a M.D. from Cairo University Medical School. He completed a clinical research fellowship in reproductive medicine at the Middlesex Hospital and Bourn Hallam Medical Center in London, England.

PATHOLOGY

Carole W. Boudreaux, M.D., (*Instructor*) received a B.S. in Biology at Louisiana College and a M.D. at Louisiana State University School of Medicine. She completed a residency in pathology at USA Medical Center.

Mary K. Powers Roveda, M.D., (*Assistant Professor*) received a B.S. from the University of Notre Dame and a M.D. from the University of South Alabama. She completed a residency in pathology at the University of South Alabama Medical Center.

Karla M. Sendelbach, M.D., (*Assistant Professor*) received a B.S. and a M.D. from the University of Illinois. She completed a residency in anatomic/clinical pathology from Loyola University Medical Center and a fellowship in pathology/molecular hematopathology at the University of Texas Systems Cancer Center in Houston.

PEDIATRICS

Fabien G. Eyal, M.D., (*Professor*) received a M.D. from Hebrew University in Jerusalem, Israel. He completed a residency in pediatrics at Hadassah University Hospital in Jerusalem, Israel and a neonatology fellowship at the Memphis Regional Newborn Center of the University of Tennessee. Dr. Eyal previously served as chief of neonatology at F. Scott Keyes Hospital in Baltimore, Maryland.

Anne M. Hackman, M.D., (*Assistant Professor*) received a B.S. in Zoology from Duke University and a M.D. from Indiana University. She completed an internal medicine/pediatrics residency at Baylor Affiliated Hospitals and a fellowship in pediatric cardiology at Texas Children's Hospital in Houston.

Grazyna Wierzbicka, M.D., (*Assistant Professor*) received a M.D. from the Medical Academy in Poznan, Poland. She completed an internship and residency in pediatrics at the Medical Academy in Poznan, Poland and additional training in general pediatrics at USA Medical Center.

PHYSIOLOGY

Joseph N. Benoit, Jr., Ph.D., (*Associate Professor*) received a B.S. in Biology and Chemistry from the University of Southwestern Louisiana and a B.S. degree in Basic Medical Sciences from USA. He received a Ph.D. in Physiology from the University of South Alabama College of Medicine. Dr. Benoit was previously a faculty member at LSU at Shreveport School of Medicine.

L. Britt Wilson, Ph.D., (*Assistant Professor*) received a B.S. in Chemistry from West Texas State University and a Ph.D. in Physiology from Louisiana State University Medical Center in New Orleans. He completed a fellowship in cardiovascular physiology from the University of Texas Southwestern Medical School in Dallas.

RADIOLOGY

Maria S. Figarola, M.D., (*Assistant Professor*) received a B.S. in Mathematics from the University of Alabama in Huntsville and a M.D. from the University of Alabama at Birmingham. She completed a residency in radiology from the Memorial Medical Center and a pediatric radiology fellowship from Arkansas Children's Hospital.

Stephen D. Rice, M.D., (*Assistant Professor*) received a B.S. from Acadia University and a M.D. at Memorial University of Newfoundland. He was Chief Resident in Diagnostic Radiology at Memorial University of Newfoundland and he completed a fellowship in interventional radiology at the University of Arkansas School for Medical Sciences.

DISTINGUISHED SCIENTIST SEMINAR SERIES (1995-1996)

Dr. Charles Baugh began the series several years ago as a way to ensure that faculty in the College of Medicine, particularly in the basic medical sciences stay current on developments in biomedical research. On a rotating basis, the basic science departments invite distinguished scientists from a wide array of institutions to present their latest research findings to an interdisciplinary audience. For example, last year Dr. Michael Garavito, University of Chicago, presented the findings of his group on the crystal structure of the key enzyme involved in prostaglandin synthesis and the site of action for aspirin and other anti-inflammatory drugs. Subsequently, a report of these findings appeared in the August issue of the journal *Nature*, and was highlighted in several newspapers throughout the country.

The 1995-96 series includes many outstanding scientists. The seminars are presented on Thursday afternoons at 4:00 PM in the first floor auditorium in the Medical Sciences Building. Refreshments are served and interested faculty, students and staff are encouraged to attend. This year's schedule is as follows:

SEPT.	14	Microbiology	Dr. Priscilla Wyrick, University of N. Carolina
	21	Biochemistry	Dr. Nicholas Dean, ISIS Pharmaceuticals
	28	Open	
OCT.	5	Comparative Medicine	Dr. Oliver Garraud, NIH
	12	Physiology	Dr. Aron B. Fisher, University of Pennsylvania
	19	Pathology	Dr. Paul Liu, University of California-Irvine (Annual Cliff Toren Lectureship)
	26	Pharmacology	Dr. Sadis Matalon, UAB
NOV.	2	Microbiology	Dr. Stephen Goff, Columbia University
	9	Biochemistry	Dr. Kris Fisher, Wistar Institute
	16	Structural & Cellular Biology	Dr. Martin Watterson, Northwestern University Medical School
	23	<i>Thanksgiving</i>	
	30	Physiology	Dr. J.H. Widdicombe, UC at San Francisco
DEC.	7	Pharmacology	Dr. Stanley Misler, Washington University
	14	Microbiology	Dr. Steve Kunkel, University of Michigan
	21	<i>Holiday</i>	
	28	<i>Holiday</i>	
JAN.	4	<i>Holiday</i>	
	11	Biochemistry	Dr. Delores Takemoto, Kansas State University
	18	Structural & Cellular Biology	Dr. Stephen Shohet, UC at San Francisco
	25	Physiology	Dr. Daniel Goodenough, Harvard University
FEB.	1	Pharmacology	Dr. Max Costa, NYU (Burroughs Wellcome Lectureship)
	8	Biochemistry	Dr. John Taylor, Fox Chase Cancer Center
	15	Microbiology	Dr. Hiroshi Nikaido, University of California-Berkeley
	22	Structural & Cellular Biology	Dr. George Stamatoyannopoulos, University of Washington
	29	Comparative Medicine	TBA
MAR.	7	Physiology	Dr. Virginia Huxley, University of Missouri
	14	Pharmacology	Dr. Paul Insel, University of California-San Diego
	21	Microbiology	Dr. Dennis Ohman, University of Tennessee
APR.	4	Structural & Cellular Biology	Dr. Philip Hanawalt, Stanford University
	11	Physiology	Dr. Robert Jennings, Duke University
	18	<i>Federation Meeting</i>	
	25	Pharmacology	TBA
MAY	2	Microbiology	Dr. Jorge Galan, SUNY at Stony Brook
	9	Biochemistry	Dr. Frederick Hauscheer, BioNumerik Pharmaceuticals, Inc.
	16	Structural & Cellular Biology	Dr. Flint Beal, Massachusetts General Hospital
	23	Physiology	Dr. Eduardo Marban, Johns Hopkins University
	30	Pharmacology	TBA

DIRECTOR OF BIOMEDICAL LIBRARY APPOINTED



Thomas L. Williams

Thomas L. Williams has been appointed Director of the Biomedical Library. Mr. Williams obtained a B.A. degree in English Literature and M.S. in Library Science from Columbia University. He served as Head, Circulation Department at New York Medical College and Medical Librarian, Veterans Administration Medical Center, Lyons, New Jersey and New

York, NY. He joined the library at the University of Miami School of Medicine in 1985 as Assistant Professor and Head of Reader Services. His most recent position was Associate Director for Systems and Access Services at the Louis Calder Memorial Library and Associate Professor at the University of Miami School of Medicine.

His stated goal as director is to ensure that the resources required to meet the information demands we currently have and those to come are met. He further noted that the emphasis across the country is on electronic access to information and that the "Library Without Walls" concept is now a reality. Much of what one could do only by coming to the library can now be done electronically

from any computer with a network hookup by a modem. This includes perusing card catalogs, searching bibliographic databases, reading full-text journals and books, as well as accessing resources in all corners of the globe via the Internet.

Mr. Williams and members of the Library staff are working closely with the administration to identify the funding necessary to ensure that the USA Biomedical Library adjusts to the electronic age. They are also exploring opportunities for both extramural and community-based funding in order to expand our capabilities and provide additional informational resources to our faculty and students.

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

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