

FACULTY SENATE ANNOUNCEMENTS

February 22, 2005

1. We would like to ask that all Senators do the following to **aid in reporting the minutes** correctly:
 - To aid in identification, please stand when recognized to speak on issues.
 - To aid in clarification of motions, forms have been provided near each Senator. When making a motion or amendment, please fill out the form and forward it to the Chair of the Faculty.
2. The Chancellor has **approved the following resolutions** from the January 25, 2005, Faculty Senate meeting:
 - 05-01 Curriculum matters contained in the minutes of the December 9, 2004, and January 13, 2005, University Curriculum Committee meetings.
 - 05-02 Request to change the name of the Department of Industrial Technology to the Department of Technology Systems, within the College of Technology and Computer Science.
 - 05-03 Revised Peer Review Instrument to include Review of Distance Education Courses.
3. The annual **Teaching Awards Ceremony** is scheduled for Tuesday, April 27, 2004, at 11:00 a.m. in the Mendenhall Student Center Great Room. A reception will follow immediately afterwards. Faculty awarded for their teaching achievements will be recognized at this event. All faculty are welcome to attend.
4. Letters concerning unit elections for the **2005-2006 Faculty Senate representation** were mailed to unit code administrators in January. In accordance with the *ECU Faculty Manual*, Appendix A, elections are to be held during the month of February. Please call the Faculty Senate office if you have any questions.
5. Thanks to Faculty Senate Alternates Michele Eble (English) and Martin Bier (Physics) for agreeing to serve as **Tellers** today.
6. The Chancellor will host a **Faculty Senate reception** in the Chancellor's residence on Tuesday, March 22, 2005, from 5:30 – 7:30 p.m. to coincide with the Faculty Senate's 40th Anniversary. Formal invitations will be forthcoming to all Faculty Senators, Alternates, past Chairs of the Faculty, and their guests.
7. The **Scholar/Teacher Awards and Symposium** is scheduled for Tuesday, April 5, 2005, in the Mendenhall Student Center Great Room. There will be an awards luncheon for winners and their guests and then each recipient will have a display on the second floor of Mendenhall and make a 15 minute presentation (two sessions concurrently between 1:30 and 3:30 for a total of ten presenters). Please contact Dot Muller in Academic Affairs at 328-1426 if you have any questions.
8. The following people have been granted **speaking privileges** for today's meeting: Cheryl Estes (Health and Human Performance), Michael Palmer (History), Jonathan Reid (History), and Michael Gross (History).
9. A list of the **funded 2005-2006 Teaching Grants** has been placed at each Senator's seat.
10. Academic deans and other key administrators have been invited to attend two **Administrative Workshops** scheduled for Wednesday, February 23, 2005 (8:30 – 11:30 a.m. in 221 Mendenhall) and Wednesday, March 2, 2005 (8:00 – 10:00 a.m. in 221 Mendenhall). These workshops are being presented by Catherine Rigsby, Chair of the Faculty and Bob Thompson, Director of the Office of Institutional Planning, Research and Effectiveness and will cover accountability for critical processes such as those followed in hiring, evaluation, etc.

2-22-05
Fac. Senate

SUMMARY OF ECU'S FEDERAL PRIORITIES

THE EASTERN NORTH CAROLINA CENTER FOR EXCELLENCE IN TEACHING AND LEADERSHIP

The Center for Excellence in Teaching and Leadership is designed to address critical issues in the Eastern part of North Carolina. Specifically, the concept speaks to the teacher and principal shortages; the need for professional renewal of school, community college, and university personnel; the need for on-site coaching and mentoring services for teachers and administrators; the need for continuous assessment of the professional development needs of educators; the need to prepare education professionals in ways that reflect the real contexts in which they will be employed; and the need to conduct research on teaching and learning relative to P-12 student achievement.

METABOLIC CENTER

The East Carolina University Brody School of Medicine is requesting a federal appropriation for a planning grant of between \$2.5 million and \$4 million to lay the groundwork for the new National Institute for Diabetes, Obesity and Metabolism.

These funds would begin the building process for the institute, whose building costs are estimated at \$73 million.

The result would be more efficient and compassionate clinics, integrated laboratories, and the infrastructure for regional education, prevention and the pursuit of excellence in delivery of care.

RESEARCH OLDER ADULT DRIVING INITIATIVE (ROADI) (Previous title: Elder Driver Initiative)

The aim of the ROADI is to develop an effective protocol for driver screening, evaluation and rehabilitation specific to addressing the three key functions for safe driving for the older adult: vision, cognition, and motor function.

SUPERSTRUCTURAL PARTICLE EVALUATION AND CHARACTERIZATION WITH TARGETED REACTION ANALYSIS (SPECTRA)

The experience of East Carolina University scientists, including collaborations with researchers at several Russian Institutes, indicates the possibility of relatively fast development of a series of "bio-protector" substances. These substances could act to improve human (military and civilian) survivability and, in many cases, alleviate symptoms of:

- exposure to chemical warfare agents (including, particularly, low-level exposures such as those related to Gulf War Syndrome)
- low-doses of radiation such as might occur for many thousands to millions of people in the case of either a dirty bomb or a nuclear bomb, respectively,
- exposure to biological warfare pathogens.

These scientists hope to test efficacy of such substances at the cellular level using Superstructural Particle Evaluation and Characterization with Targeted Reaction Analysis, (SPECTRA) a laboratory research capability which will allow investigations of real-time, micro-scale responses of cells and microbes to the influence of a variety of chemical species, including chemical warfare agents, toxins, or potential protective or therapeutic substances.

SPECTRA combines novel laser tweezers/Raman Spectroscopy with Atomic Force Microscopy and Electron Paramagnetic Resonance.

*** DROP-OUT STUDY**

The proposed study, collaboratively implemented by seven universities from central and eastern North Carolina, will enlist and train youth who have dropped out of school, college students and graduate students to conduct in-depth interviews with former students (who dropped out of high school within the past year). The former students' narratives will be studied through qualitative analysis to identify themes and patterns in the students' reports.

The partner universities include East Carolina University, Elizabeth City State, Fayetteville State, North Carolina A & T, North Carolina State, UNC Pembroke, and UNC Wilmington.

*** RACIAL DISPARITIES IN CARDIO-VASCULAR DISEASE**

The Program in Racial Disparities and Cardiovascular Disease will assemble the patient access and computational resources necessary to solve the problem of racial disparities in cardiovascular disease. This will be a multidisciplinary effort that will require both academic and public sector support. The primary areas of focus will be on the development of the following resources: hardware (a state-of-the-art computer/database platform); "middleware" (specific computer applications for database communications between different data sets, in collaboration with the IBM Life Sciences Research Division); technology development (new tools and "rules" that will allow for the integration and mining of genomic data to crack the code of ethnic and racial disparities in cardiovascular diseases; and human resources (physicians, basic scientists, computer scientists, programmers, database managers, and population scientists).

*** SOUTHEAST CRESCENT AUTHORITY (SECA)**

The purpose of the SouthEast Crescent Authority (SECA) is to promote economic growth and alleviate poverty and unemployment in distressed areas of the southeastern United States. East Carolina University's Regional Development Institute (RDI), in collaboration with North Carolina State University, North Carolina A & T University, UNC-Wilmington and the regional development organizations (RDO) from the seven states in the proposed SECA region have been working together to obtain federal authorization and funding for its creation.

In addition to seeking authorization from Congress to create SECA, a \$1.5 million Congressional earmark to conduct planning and policy development for use by SECA's Governing Board is being requested.

** denotes ECU submission to UNC Board of Governors for consideration as a UNC-system federal priority*



Federal Update

East Carolina University

DRAFT



Washington Initiatives
in the Senate and House

Research for Older Adult Driver Initiative

ROADI: Helping drivers retain freedom, boost safety

Aging is a natural process. It's as natural as life itself.

As the elder population grows, most people will be healthier and more independent for at least 20 years after they retire. There also will be more of them.

In fact, people over 65 accounted for 13 percent of the American population in 2000. That percentage is expected to climb to 20 percent by 2030.

Many of these people rely on personal vehicles to help them live independent and fulfilling lives, and they are accustomed to the convenience and flexibility of cars.

But with aging come physical and mental changes. Reflexes slow, eyes dim, and information gets confusing.

For older drivers, these changes mean difficulty behind the wheel.

That difficulty comes at a time when these drivers need transportation to doctors' offices, pharmacies, grocery stores and family gatherings.

A recent study found the normal aging process, combined with medications for problems associated with aging, acts to make older adults the most vulnerable drivers on the road.

The crash rate for older drivers is directly related to physical and mental changes associated with aging.

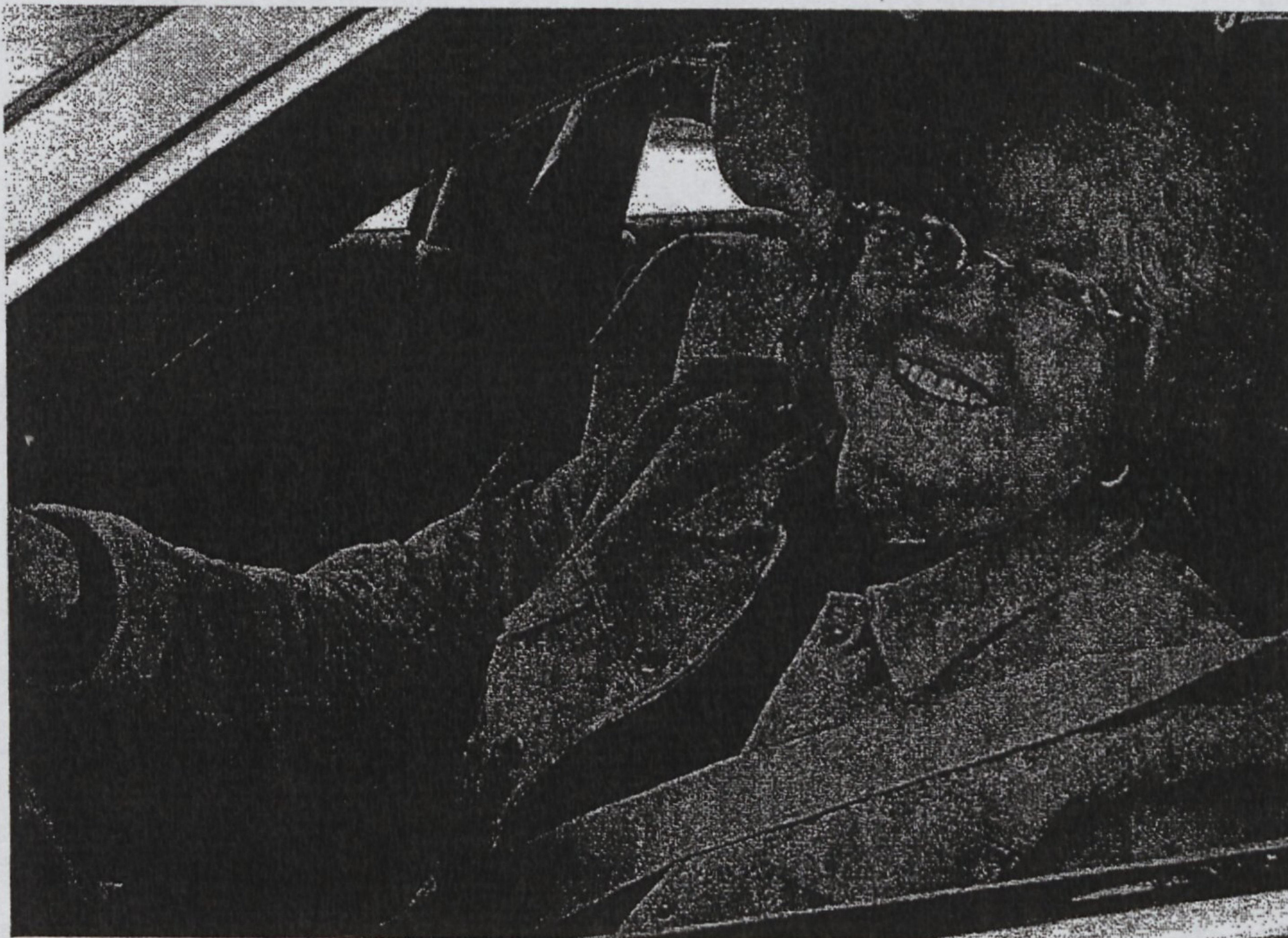
Motor vehicle injuries are the leading cause of injury-related deaths among 65-75-year-olds. They are the second leading cause of death among 75-85-year-olds, second only to falls.

According to the Transportation Research Board of the National Academies, people over the age of 75 have more motor vehicle deaths per 1,000 than any other cohort of the population, except for those under the age of 25.

The study, "Transportation in an Aging Society: A Decade of Experience" also found that per mile driven, older drivers have more crashes than all other drivers except teenagers.

East Carolina University has proposed a project that would assess older driver skills through occupational therapy and provide accommodations to compensate for the loss of skills or physical ability.

What is the request?



Older drivers depend on their vehicles to keep their independence while enjoying life.

ROADI would help older drivers stay independent longer

Currently, only evaluation and determination of older impaired drivers takes place in North Carolina.

In eastern North Carolina, the only evaluation center to meet the need in Pitt County Memorial Hospital with one occupational therapist assigned to the driver evaluation program.

The critical need now is to enhance older driver safety and performance while maintaining the freedom of movement for these drivers.

While driving still is a "privilege" granted by the state, many people depend on the flexibility and independence of being able to drive whenever and wherever the need arises.

ECU proposes a project that would highlight the ability of the occupational therapy program to create an assessment of older drivers and to recommend accommodations for them.

The Research for Older Adult Driver Initiative (ROADI) would study and develop an effective way to perform driver screening, evaluation and rehabilitation for three key functions in safe driving: vision, cognition and motor function.

The research would be based on two overarching questions:

- 1) How can we predict when an older driver is unsafe?
- 2) What can be done to improve the older driver when identified as a risk?

The Research for Older Adult Driver Initiative (ROADI) would study and develop an effective way to perform driver screening, evaluation and rehabilitation for three key functions in safe driving: vision, cognition and motor function.

These questions will provide graduate students and faculty members an agenda designed to promote the program as a national leader in the emerging area of research and occupational therapy practice.

There currently are very few centers focusing on older adult drivers, and none is located in North Carolina.

The long-term goal is to develop an older driver research center to evaluate, assess and rehabilitate drivers, modeled after the National Older Driver Research and Training Center (NODRTC) at the University of Florida (UF).

Phase One of the study would focus on evaluating the skills necessary for driving safely. This would include motor skills, cognitive or information processing skills, and visual perception abilities.

Several methods of assessment would be used, including the Assessment of Motor and Process Skills (AMPS), Interactive Metronome, Motor-Free Visual Perception Test and a driving simulator.

Phase Two would use the information gathered to determine how certain changes would affect the outcome.

Once appropriate evaluations and intervention strategies were identified as effective, researchers would move into Phase Three—rehabilitation of the older adult driver.

In this phase, the research would expand to include drivers with disabilities or at-risk drivers.

For this phase of the research, the program would hire a full-time occupational therapist working as a certified driver rehabilitation specialist.

The program also would purchase a full-size car with passenger driving controls, and an adapted mini-van with high-technology driving adaptations.

While the goal of ROADI in ECU's Occupational Therapy Department is to make it safe for the older adult to continue driving through appropriate evaluation, training, education and assistive technology, the project also will tap the resources available at other institutions across the nation.

Results of this study will be analyzed, published and used in collaboration with the researchers at UF to seek funding nationally from grant agencies.



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National Institute for Diabetes, Obesity and Metabolism

Fighting epidemic diseases at the cellular level

Two of every three Americans are overweight. Twenty-three million Americans are morbidly obese—that is, they weigh at 100 pounds more than their ideal weight.

These people are limited not only by their bulk, but they also suffer other life-threatening diseases. Many develop diabetes, hypertension, cardiopulmonary failure, crippling arthritis, swelling of the brain, incontinence and infertility.

In only a few years, deaths from obesity rose to 400,000 annually, 10 times the number of deaths from motor vehicle accidents.

For medical experts, the answers may lie in research that focuses on cellular metabolism, or the basic interactions of molecules in the human body.

This approach to research has revealed dazzling biologic networks that function with complex signals, interlocking proteins, functional scaffolds that interact like the most complex computer systems ever built.

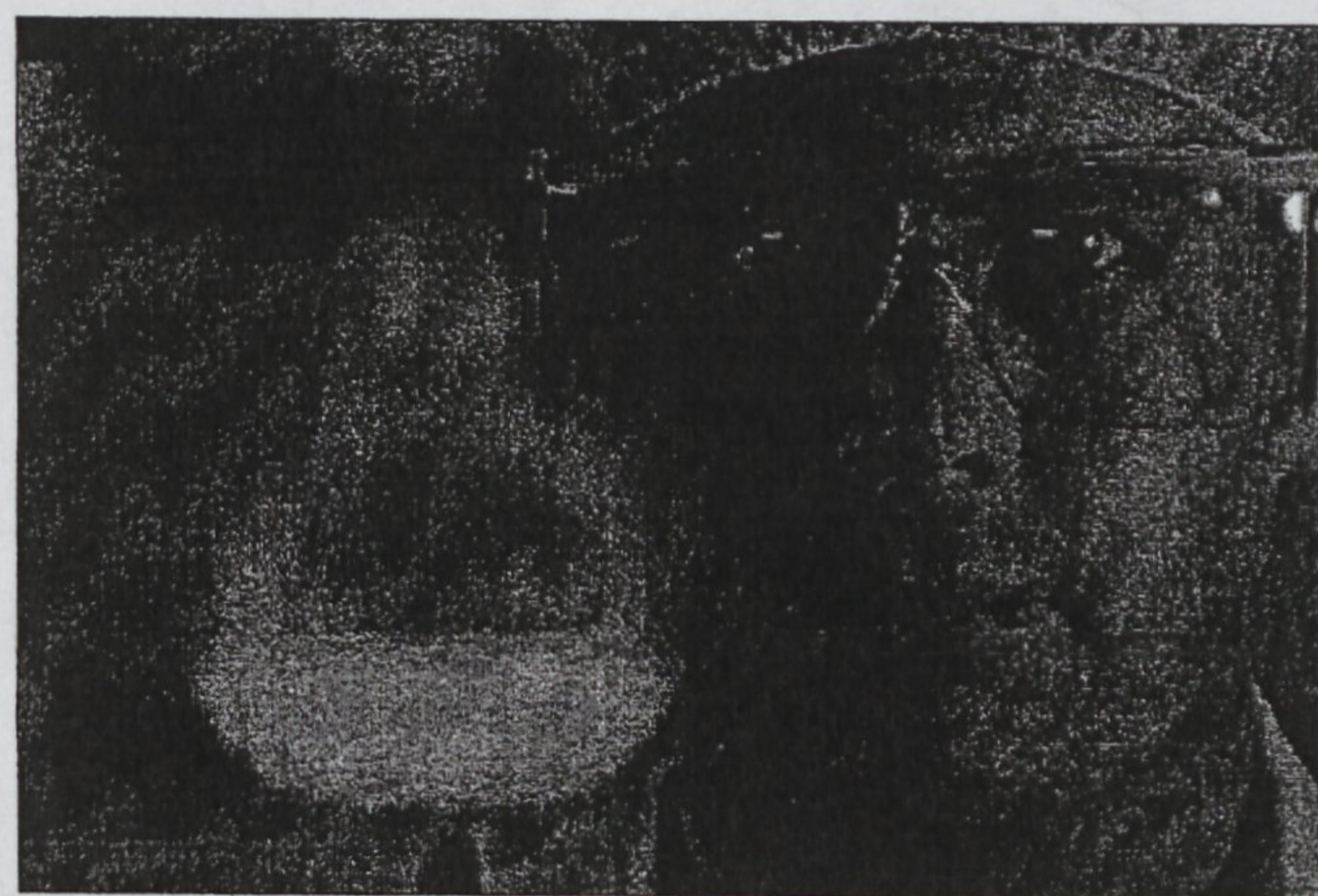
East Carolina University is a leader in this field. The Brody School of Medicine already has earned a reputa-

tion as a pioneer in robotic heart surgery, in research involving change in muscle fibers due to obesity, in studies that look at signals from the intestines that cause diabetes, and differences in obesity among races.

But to continue to probe these critically necessary medical fields, ECU faculty need access to new technologies that allow molecular modeling, testing of concepts in a clinical research center, sophisticated computer resources, and an ability to translate academic advances into clinical realities.

These tools will allow ECU to improve health, expand education and create new jobs in eastern North Carolina.

A national Institute for Diabetes,



A proposed National Institute for Diabetes, Obesity and Metabolism at East Carolina University Brody School of Medicine would serve as a central resource for disease-oriented health care initiatives.

Obesity and Metabolism at ECU Brody School of Medicine would go far beyond the support of the current successful research program.

It also will fill a critical need: providing outpatient facilities that provide for the health care needs of the people of North Carolina, as well as modern facilities to educate health care professionals.

What is the request?

East Carolina University Brody School of Medicine is requesting a federal appropriation for a planning grant of between \$2.5 million and \$4 million to lay the groundwork for the new National

Institute for Diabetes, Obesity and Metabolism.

These funds would begin the building process for the institute, whose building costs are estimated at \$73 million.

The result would be more efficient and compassionate clinics, integrated laboratories, and the infrastructure for regional education, prevention and the pursuit of excellence in delivery of care.

Components of the Institute for Diabetes, Obesity and Metabolism

Teaching and research

- A central laboratory core with:
 - ⇒ Real-time RT/PCR (reverse transcription/polymerase chain reaction machine)
 - ⇒ A proteomics laboratory with trained technicians
 - ⇒ Hologic DEXA scanner
 - ⇒ Radiologic equipment, including CT/MRI scanners to support patients who weigh more than 350 pounds, currently the limit for most equipment
 - ⇒ Laboratories
 - ⇒ Offices
 - ⇒ Facilities for specimen storage
- Facilities with advanced computer technologies, including:
 - ⇒ High-volume servers to manage large clinical data bases
 - ⇒ Equipment for three-dimensional modeling of protein molecules and their interactions
 - ⇒ Programmers and computer science engineers to support and advance these technologies
- A center for epidemiologic and statistical investigation and support
- Educational resources, including:
 - ⇒ Classrooms and at least one auditorium large enough for 500 attendees
 - ⇒ Study carrels with computers for students and fellows
 - ⇒ Educational laboratories for learners in minimally invasive surgery, computer development, and learning programs such as Blackboard
 - ⇒ Funding and faculty to support regional, state and national seminars
- An endowment that eventually will support:
 - ⇒ Endowed chairs to recruit national funded scientists
 - ⇒ Fellowships
 - ⇒ Pilot studies to be done by students, residents and young faculty members
- Annual funding for patient educational programs for four sessions, such as "Winning with Diabetes," the program that attracts more than 400 people each year
- Administrative offices to house:
 - ⇒ Administration of the various programs
 - ⇒ Grants management
 - ⇒ Institutional Review Board activities
 - ⇒ Support for grants applications
 - ⇒ Activities for the consideration of ethics
 - ⇒ Public relations, publications
- A clinical research center with beds for the study of patients in a controlled environment



Outpatient services

- Services will emphasize the management of patients afflicted with the "Metabolic Syndrome," i.e., those diseases that threaten the basic metabolic health of individuals, including diabetes, obesity, hypertension and the inflammatory diseases.
- The facility will be able to manage 6,000 patient visits each week.
- Patient examination rooms will be arranged with sufficient adjoining spaces to allow both students and researchers to participate in patient visits, further enhancing the missions of health care, learning and research.



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ECU Center for Excellence in Teaching and Leadership



Why ECU?

ECU's demonstrated track record positions the school to make such a model fully functional so that it serves as a powerful engine of change in the eastern part of the state.

- ECU prepares more professional educators than any other institution in North Carolina (2004 IHE Report)
- ECU delivers the largest distance-education teacher preparation program in North Carolina (University of North Carolina Office of the President, 2004)
- ECU garnered two national awards for designing "cutting-edge programs" and demonstrating "powerful partnerships with public schools (U.S. Department of Education, 2000 and the American Association of State Colleges and Universities, 2002)
- ECU has received more than \$4 million in grant, corporate and private funds to support its professional preparation programs in the past two years.

The primary goal of education is student achievement.

By most accounts, a student's success is directly affected by the quality of classroom instruction.

If students are to know more and be able to skillfully use their knowledge, teachers must become their models.

Similarly, teacher education programs must be systemic in their efforts to prepare high-quality educators. Programs must be holistic in design, addressing a range of activities in the continuum of the professional educator's evolution.

Programs also must be flexible, focusing on solutions to current critical issues while simultaneously preparing teachers for the future

Building on the university's excellent reputation in teacher education, ECU proposes to design and deliver the East Carolina University Center for Excellence in Leadership and Teaching as a model to raise the standards of success in supporting professional educators in eastern North Carolina.

Specifically, the concept tackles:

- Shortages in teachers and principals
- The need for professional renewal of school, community college, and university personnel
- The need for on-site coaching and mentoring services for teachers and administrators
- The need for continuous assessment of the professional development needs of educators
- The need to prepare education professionals in ways that reflect the real contexts in which they will work
- The need to conduct research on teaching and learning as they relate to P-12 student achievement.

Components of ECU Center for Excellence in Teaching and Leadership

Recruitment		
<p>To recruit traditional students who have just graduated from high school, the Center will focus on:</p> <ul style="list-style-type: none"> • Collaboration with the state's community colleges via the 2 + 2 programs • Teacher academies and teacher cadet clubs • Alumni teacher network • Legislators' School • AmeriCorps grant—Project HEART 	<p>To recruit non-traditional students, the Center will emphasize:</p> <ul style="list-style-type: none"> • ALEC (Alternative Licensure at East Carolina), which consists of Project ACT, NC TEACH and Master of Arts in Teaching • Intensive work with non-declared majors on the ECU campus. 	<p>To recruit more teachers to become principals, the Center will:</p> <ul style="list-style-type: none"> • Continue to enhance the Principal Fellows' Program • Continue to deliver the master's degree in school administration at convenient sites off campus and/or through electronic means.
Retention		
<p>New Teacher Induction This model involves in-depth, on-site coaching and mentoring for all new teachers. Components will include:</p> <ul style="list-style-type: none"> • Using National Board Certified Teachers as mentors • A warranty program that allows school systems to ask for help from ECU for a teacher education graduate who is having difficulty on the job • The integration of arts and sciences faculty to help with content knowledge and understanding • An instructional design team to work closely with new teachers on strategies that work within specific classrooms • An ongoing assessment of the effect of particular teaching approaches on P-12 student achievement. 	<p>Principals' Leadership Academy Induction processes begin with the delivery of the master's degree in school administration, followed by mentoring and coaching for assistant principals as they come out of the formal preparation program into their first two years of employment.</p> <p>Also incorporated is ongoing, on-site delivery of professional development to principals and other personnel in leadership positions.</p>	<p>Tele-distance education These approaches will be used to provide accessible "any time/anywhere" support to teachers and school administrators.</p> <p>These approaches will be blended with face-to-face contacts and on-site visits.</p>
Enrichment		
<p>For in-service educators, the ECU Center for Excellence in Teaching and Leadership will provide ongoing professional development services that are designed to align with the particular needs of school systems</p>	<p>Examples of enrichment and innovative models include:</p> <ul style="list-style-type: none"> • Collaboratively designed professional development that aligns with school improvement plans • In-depth professional development for the clinical teachers who supervise pre-service interns 	<ul style="list-style-type: none"> • Partnerships with community college faculty to enhance teaching skills, linked eventually to a master's degree in college teaching • New entrepreneurial projects, such as early college, learning disabilities support program, and Cyber Campus

Program Title: SPECTRA Studies on Protective and Therapeutic Substances-
Improving Human Survivability against Chemical, Radiological, Nuclear and Biological Attack

Researchers: East Carolina University – Center for Security Studies and Research, and Department of Physics

Funding: Year 1 - \$1.85M, Year 2 - \$3.2M, Year 3 - \$4.5M

Concept Summary

The experience of East Carolina University scientists, including collaborations with researchers at several Russian Institutes, indicates the possibility of relatively fast development of a series of "bio-protector" substances. These substances could act to improve human (military and civilian) survivability and, in many cases, alleviate symptoms of:

- exposure to *chemical warfare agents* (including, particularly, low-level exposures such as those related to Gulf War Syndrome)
- low-doses of *radiation* such as might occur for many thousands to millions of people in the case of either a dirty bomb or a nuclear bomb, respectively,
- exposure to *biological warfare pathogens*.

These scientists hope to test efficacy of such substances at the cellular level using **SUPERSTRUCTURAL PARTICLE EVALUATION and CHARACTERIZATION with TARGETED REACTION ANALYSIS (SPECTRA)** a laboratory research capability which will allow investigations of real-time, micro-scale responses of cells and microbes to the influence of a variety of chemical species, including chemical warfare agents, toxins, or potential protective or therapeutic substances.

SPECTRA combines novel laser tweezers/Raman Spectroscopy with Atomic Force Microscopy and Electron Paramagnetic Resonance. The first aspect, a specially-developed technique, involves a circularized beam from a wavelength-stabilized diode laser, spatially filtered and then introduced in an inverted microscope equipped with an objective to form a single-beam optical trap. The same laser beam excites Raman scattering from the trapped particle. The collimated backwards Raman-scattering light, after being spatially and spectrally filtered, is focused onto the entrance slit of a spectrograph and detected by a liquid-nitrogen-cooled charge-coupled detector. The use of lasers operating in the infrared region ensures continued viability of cells during analysis, unlike many other techniques which use radiation of energies which can harm or kill the cell. Standard Atomic Force Microscopy and Electron Paramagnetic Resonance techniques are used after being adapted to this research environment.

This means mitigation methods against the four important current terrorist attack threats – chemical, radiological, nuclear, and biological – may all be investigated at the cellular level using one laboratory capability.

Research directions to be pursued include the testing of an initial array of 4 types of experimental chemical protectors with 5 classes of single-cell units from the body, coupled with investigation of reactions and cellular response via Ames testing, membrane structure analysis, DNA effects, and pattern recognition.

DRAFT