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## unc environment

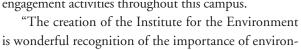
NEWS FROM THE INSTITUTE FOR THE ENVIRONMENT AT THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

VOLUME 6, ISSUE 1

# UNC-Chapel Hill establishes Institute for the Environment

INSTITUTE WILL EXTEND UNC'S COMMITMENT TO STATE AND NATIONAL LEADERSHIP IN ENVIRONMENTAL EDUCATION, RESEARCH AND OUTREACH

ecognizing the growing need for environmental expertise to help guide North Carolina and the country through a myriad of environmental challenges — and this university's unique potential to lead the way in addressing these challenges — the University of North Carolina at Chapel Hill has established the UNC Institute for the Environment. The Institute will coordinate and strengthen environmental research, education and public engagement activities throughout this campus.



ment by UNC-Chapel Hill," stated Doug Crawford-Brown, who has directed the Carolina Environmental Program for four years and will now direct the new Institute. "Chancellor Moeser has personally made a strong commitment to seeing that UNC-Chapel Hill rises to the forefront of public universities in the areas of environment and sustainable community design, so this is clearly a commitment that extends up to the highest levels of the university."



More than a decade ago, university leaders recognized that while Carolina was home to extraordinary environmental expertise, it was spread all over campus, from the College of Arts and Sciences to the professional schools. What was needed, they determined, was a way to bring all of those groups together to begin to tackle large interdisciplinary environmental problems that face society,



DOUG CRAWFORD-BROWN

and to provide a clear, single entry point for people outside the university to gain access to all of the environmental activities on campus.

The Carolina Environmental Program (CEP) was established in 1998 as a virtual organization to bring together all of the environmentally focused faculty and programs on campus and develop environmental education, research and outreach activities. Over the past nine years, hundreds of UNC faculty members have participated in CEP activities. Under the leadership of Crawford-Brown,

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COMMUNITY, THE STATE AND BEYOND."

Bernadette Gray-Little Executive Vice Chancellor and Provost, UNC-Chapel Hill

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aking UNC's environmental commitment to a higher level will require significant resources, far beyond the budget allocated to the Carolina Environmental Program in the past. Institutional support and several major private contributions have provided much of the initial funding to establish the UNC Institute for the Environment. However, one of the most immediate priorities for the Institute is to secure the resources to sustain – and expand – our programs and faculty over time, and to ensure that the Institute is well positioned to meet the needs of our state and our nation.

### Institutional support increases

To help launch the Institute and accelerate the pace of its research activities, UNC-Chapel Hill Executive Vice Chancellor and Provost Bernadette Grey-Little has committed an additional half million dollars a year for four years, beyond the CEP's former annual budget of about \$1.5 million – for a total commitment of \$8 million over the next four years.

In addition, the promise by the College of Arts and Sciences to create a cross-campus environmental curriculum will free some of the Institute's existing budget. Funds that had previously been used toward salaries for faculty teaching in the undergraduate degree program can now be directed toward new activities within the Institute.

To sustain the Institute over time, though, "there's no doubt that we will have to identify another \$1 million to \$1.5 million a year of core budget for the Institute," Director Doug Crawford-Brown said. "This will have to be approved by the General Administration and the others involved,

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then the associate director for educational programs, the CEP created undergraduate degree programs in Environmental Science and Environmental Studies in collaboration with the College of Arts and Sciences, and worked with the School of Public Health to enhance the undergraduate degree in Environmental Health Science; established field sites for undergraduate education at the North Carolina coast and mountains, in the Triangle and internationally in the United Kingdom, Austria and Thailand; and launched a range of research and outreach and public service activities.

With the growth and success of the Carolina Environmental Program, university leaders realized that a virtual program was no longer sufficient to coordinate the wealth of environmental activity on campus. It was time to create a stable, permanent institution with its own physical home at UNC-Chapel Hill that could build upon the foundation laid by the CEP.

#### University leaders make commitment

In 2005, then-Executive Vice Chancellor and Provost Robert Shelton took the first steps to create the UNC Institute for the Environment. (Within this university, an institute is the highest level organization below a school or college). In 2006, his successor, Bernadette Gray-Little, furthered this commitment. To ensure that the Institute would





BERNADETTE

JAMES MOESER

December 1, 2006 and committed initial resources to begin to enhance the research and public engagement sides of the Institute. (See resources article on page 1).

"Today, we face complex environmental challenges that will require strong, inspired and carefully planned responses," said Executive Vice Chancellor and Provost Gray-Little. "By facilitating interdisciplinary collaboration, the Institute for the Environment will help to engage the campus in research and teaching leading to a deeper understanding of the environment and strategies to address environmental problems. The Institute will build on the foundation created by the Carolina Environmental Program to deepen connections across disciplines as faculty and students work together within the Institute's problem-focused centers."

"Provost Gray-Little has been instrumental in moving this initiative forward," Crawford-Brown

the most pressing environmental issues facing our state, our nation and our world. (See article on centers on page 3).

As part of the creation of the Institute, the College of Arts and Sciences has committed to create an environmental curriculum. College leaders will work with the professional schools to designate faculty members within the curriculum; students in the undergraduate degree programs that the Institute administers (the degrees are actually awarded by the College) will be able to take courses with that cadre of faculty. Through the College's leadership in creating this curriculum, the Institute will gain access to a larger pool of environmental faculty than the CEP had previously been able to tap, which will add stability and strength to these undergraduate programs.

"One of our goals for the Institute is to make sure that the students who emerge from Carolina have engaged in all three facets of our mission: education, research and public engagement," Crawford-Brown explained. "The Institute will be the place to which students can turn during their education to get good research experience, as well as experience in public engagement in the state of North Carolina and elsewhere."

### Working toward a permanent home

The university is committed to providing a physical home for the Institute for the Environment, an element critical to the Institute's ability to physically bring faculty together to build interdisciplinary research, education and public engagement activities. For the short-term, the Provost has secured rental space in the Bank of America building on Franklin Street, which will be home to the Institute's core operations and the research centers currently spread across the campus beginning in July 2007.

Ultimately, however, a dedicated building for environmental study is absolutely necessary for the Institute to serve its three-pronged mission. Therefore, one of the highest priorities within the Institute will be working toward this building. The Office of the Provost has already voiced the university's commitment to build this building. Next, if the appropriate approvals – from the General Administration, the Governor and so on – are obtained, we will need the North Carolina General Assembly to provide funding for this building, as well as significant private gifts to help move the Institute building up the schedule of campus construction priorities.

"AS OUR SOCIETY GRAPPLES WITH ENVIRONMENTALLY RELATED ISSUES SUCH AS SUSTAINABLE DESIGN, NATURAL RESOURCE ALLOCATION AND GLOBAL WARMING, IT IS CRITICAL FOR THE UNIVERSITY COMMUNITY TO BE INVOLVED IN NEW AND DIFFERENT WAYS. THE UNC INSTITUTE FOR THE ENVIRONMENT EXTENDS OUR TRADITIONAL MISSION OF EDUCATION, RESEARCH AND SERVICE BY ENGAGING WITH OTHERS ON THESE CRITICAL ISSUES."

James Moeser Chancellor, UNC-Chapel Hill

serve the needs of all of the environmental programs on campus, Provost Gray-Little created a panel of chairs and deans from UNC, outside partners from other universities, and a representative from the N.C. Department of Environment and Natural Resources to help define the Institute's scope, structure and the most important problems for it to tackle.

"The panel was a very important step for the Provost to take, because it ensured that the College and the schools had input into the creation of the Institute," said Crawford-Brown. "We hope, as a result, that they will feel the Institute is a good place in which to invest, and will encourage their faculty members to participate."

After reviewing the panel's report, the Provost officially elevated the CEP to an Institute on

noted appreciatively. "Our peer institutions are all moving rapidly into the area of environmental studies, and it is the right time for this university to move very aggressively into a leadership role in this area."

The creation of the UNC Institute for the Environment was approved through the UNC-Chapel Hill internal review process. Chancellor James Moeser approved the Institute and sent it forward to Erskine Bowles, president of the UNC System.

### Research centers provide focus

The UNC Institute for the Environment, like the Carolina Environmental Program before it, will have a research, education and public engagement mission. All activities will be directed through a series of research centers that focus on some of

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# NEW RESEARCH CENTERS TO GUIDE INSTITUTE'S ACTIVITIES

he UNC Institute for the Environment will be composed of a series of research centers that will coordinate all research, education and public engagement activities of the Institute. These will include:

- The Center for Environmental Modeling for Policy Development, directed by Research Professor Adel Hanna, will develop the advanced models needed for municipalities, the state and the nation to predict the impact of different policies on a range of environmental and public health measures.
- The Center for Landscape Change and Health, led by Associate Professor of Geography Martin Doyle, will look at the ways in which major landscape changes influence both human health and ecosystem health. The UNC School of Public Health, under the leadership of Dean Barbara Rimer, and the Center for Environmental Medicine, Asthma and Lung Biology in the UNC School of Medicine, directed by David Peden, will play important roles in the activities of this center.
- The Center for Sustainable Community Design will explore how communities throughout North Carolina and the nation can redesign their buildings, transportation systems and other infrastructure in order to reduce their ecological footprints. Phil Berke, UNC professor of City and Regional Planning, will lead this center.
- The Center for Sustainable Energy, Environment and Economic Development will help North Carolina and the nation transition energy systems to reduce carbon dioxide emissions and other environmental impacts. The Center is part of an exciting collaboration between the Institute for the Environment and the UNC Institute for Advanced Materials, Nanoscience & Technology, headed by nationally respected UNC Chemistry professor Joe DeSimone, a member of the National Academy of Engineering and the American Academy of Arts and Sciences. Institute Director Doug Crawford-Brown and Lambeth Distinguished Professor and Chair of Public Policy Pete Andrews are the 2007 Progress Energy Faculty Fellows of the Center.



ADEL HANNA



BARBARA RIMER



DAVID PEDEN



PHIL BERKE



JOE DESIMONE



MARTIN DOYLE IN THE FIELD



PETE ANDREWS



### FACULTY LEADERS, ON THE IMPORTANCE OF THE INSTITUTE:

"UNFETTERED DEVELOPMENT HAS CAUSED LOSS OF OPEN SPACE AND BIODIVERSITY, INCREASED AIR AND WATER POLLUTION AND ENERGY CONSUMP-TION, AND OTHER MAJOR CONCERNS. SOLVING THESE PROBLEMS REQUIRES DEEPER PUBLIC ENGAGEMENT, BETTER PLANNING AND FUNDAMENTAL RE-CASTING OF HOW TO CREATE FUTURE PLACES FOUNDED ON VISIONS OF SUSTAINABLE COMMUNITY DESIGN. TO TACKLE THESE ISSUES, THE CENTER FOR SUSTAINABLE COMMUNITY DESIGN BRINGS TOGETHER AN INTER-DISCIPLINARY GROUP OF FACULTY, PROFESSIONALS AND STUDENTS IN THE SOCIAL SCIENCES, NATURAL SCIENCES, URBAN PLANNING AND ENVIRONMENTAL POLICY TO CONDUCT CUTTING-EDGE RESEARCH ON SUSTAINABLE COMMUNITY DESIGN AND DISSEMINATE THAT KNOWLEDGE THROUGH INNOVATIVE TEACHING AND OUTREACH."

> Phil Berke, Director, Center for Sustainable Community Design

"THE CENTER FOR SUSTAINABLE ENERGY, ENVIRONMENT AND ECONOMIC DEVELOPMENT (C-SEEED) IS ONE OF THE MOST USEFUL WAYS THAT WE HAVE TO INFORM GOVERNMENT AND PUBLIC POLICY ABOUT THE IMPORTANT ENERGY AND ENVIRONMENT ISSUES OF THE DAY. IT GIVES US THE OPPORTUNITY TO CONTRIBUTE SIGNIFICANTLY TO THE CHANGES THAT ARE NEEDED AS WE ENTER A NEW ENERGY ECONOMY. WE ARE FORTUNATE TO HAVE SUCH AN OUTSTANDING GROUP OF STUDENTS AND FACULTY AT UNC-CHAPEL HILL WITH INTERESTS IN THIS AREA."

Tom Meyer, Arey Distinguished Professor of Chemistry

### THREE JOIN INSTITUTE BOARD

he UNC Institute for the Environment is pleased to welcome three new members to its Board of Visitors. We appreciate their willingness to volunteer their time to serve the Institute.

LaToya Godley is an associate with Cherokee Investment Partners, LLC, focusing on deal analysis, due diligence and asset management. Prior to joining Cherokee in 2006, Ms. Godley was a lending specialist in the Community Development Finance group of the nonprofit Fannie Mae Foundation, where she underwrote and managed debt investments for the creation and preservation of affordable housing nationwide. She began her career as an analyst with Bank of America and later served as an underwriting manager in the Community Development Banking Group. Ms. Godley earned an MBA from UNC-Chapel Hill's Kenan-Flagler Business School.

Virginia McGee Richards practices land use and environmental law at Hagood & Kerr, PA in Mount Pleasant, S.C., where she advises clients on the purchase and sale of manufacturing facilities or potentially contaminated properties, indoor air issues, regulatory compliance, and civil and criminal enforcement actions. Prior to joining Hagood & Kerr, she counseled mining companies, developers, invest-

ment firms, banks, oil companies and manufacturing concerns on domestic and international environmental issues at firms in North Carolina and New York. A UNC Law School alumna, Ms. Richards previously served as general counsel to U.S. EPA in Atlanta and special assistant U.S. attorney to the Middle District of Georgia, where she investigated and prosecuted criminal and civil cases involving hazardous waste, asbestos, pesticides and other toxic substances.

Cathy S. Roche is senior vice president and chief communications officer for Duke Energy, one of the largest electric power companies in the U.S. Ms. Roche, who has more than 25 years of experience in the communications field, joined Duke Energy and served in several roles before being named to her current position in December 2006. Before joining Duke Energy, she served as vice president of corporate communications for Entergy Corporation in New Orleans, and vice president of public and industry communications for the Nuclear Energy Institute in Washington, D.C. Early in her career, Ms. Roche worked as a reporter with the Associated Press and The Charlotte News. She is a graduate of the UNC-Chapel Hill School of Journalism and also serves on that school's board of visitors.

Resources, continued from page 1

and the monies will, ultimately, have to come from the General Assembly. It will be a chance for our lawmakers to invest significantly in an environmental organization so that we can become the kind of resource to which the state can turn – and to which our citizens and the municipalities can turn – for the advice and help that they need to solve North Carolina's environmental problems."

Beyond this institutional and state support, Crawford-Brown noted, "we also must secure a significant number of grants, gifts and contracts from agencies and donors all over North Carolina and throughout the United States. The Provost has challenged us to meet the investment by the university with a significant increase in research grants and contracts coming to this campus. The Institute will pursue a larger portfolio of research initiatives than the Carolina Environmental Program was ever able to do, and we are committed to meeting the Provost's challenge by matching the university's funding commitment many times over."

Meldman is chairman and CEO of the Discovery Land Company, a real estate development firm specializing in the creation of golf and residential communities. One of its projects, the Mountaintop Golf and Lake Club, is in the Highlands-Cashiers area of North Carolina, near the Institute's Highlands Field Site.

In addition, Cherokee Investment Partners has established the Cherokee Distinguished Professorship in Sustainable Community Design which can help support a faculty member associated with the Institute's new Center for Sustainable Community Design. Cherokee is a private equity firm that acquires environmentally impaired assets, remediates them and returns them to productive use. The firm is headed by Thomas F. Darden II, who serves on the Institute's Board of Visitors.

Once these pledges are completed by the donors, each endowed professorship will receive matching funds from the State of North Carolina. Both professorships will provide essential funding

grams relating to rivers and coasts and their relation to landscape change and health.

Bequest established

BILL JOHNSON

The UNC Institute for the Environment has received a generous planned gift commitment from Tim

Toben of Chapel Hill, the

vice chair of the Institute's Board of Visitors, that will eventually create an Institute-owned and administered environmental field site and field study area on almost 150 acres within the Pickards Mountain Eco-Institute community in western Orange County.

### Corporate support

Not long ago, Progress Energy made a generous contribution that allowed UNC, through the Carolina Environmental Program, to create the Sustainable Energy, Environment and Economic Development (SEEED) research and action initiative. The Center for Sustainable Energy, Environment and Economic Development (C-SEEED), the initiative's successor, is now one of the Institute's key research centers. As founding sponsor of this innovative center, Progress Energy's renewed support will help the university continue to develop collaborative solutions to the complex issues of energy supply, environmental protection and economic development.

A word about a new building: Ultimately, to fulfill our mission, the Institute must have a dedicated building for environmental study. To make this building a reality, we will ultimately need, after appropriate approvals are obtained, funding from the North Carolina General Assembly, as well as significant private gifts. In fact, a major commitment from an individual, corporation or foundation could help move the Institute building up the schedule of campus construction priorities.

"WE RECOGNIZE THAT SUSTAINABLE ENERGY, THE ENVIRONMENT AND ECONOMIC DEVELOPMENT ARE CLOSELY LINKED. C-SEEED AND THE INSTITUTE ARE KEY PLAYERS IN RESEARCH AND COLLABORATIVE EFFORTS TO ADDRESS THESE ISSUES, WHICH ARE VITAL TO DEVELOPING BALANCED SOLUTIONS FOR OUR FUTURE ENERGY NEEDS."

Bill Johnson President and Chief Operating Officer, Progress Energy, and member of the Institute Board of Visitors.

### Endowed professorships established

Through the generosity of Michael S. Meldman, of Scottsdale, Arizona, the Michael S. Meldman Distinguished Professorship in Conservation has been established to attract or retain a distinguished teacher and scholar in the area of ecology, conservation and biodiversity to the university, and to support this area of study within the Institute. Mr.

for the Institute above and beyond the institutional support provided by the university.

In addition, in 2004 Mrs. Mary L. Hill established two Mary and Watts Hill, Jr. Distinguished Professorships in honor of her late husband, Watts Hill, Jr. One of these two professorships will be used to strengthen connections between the UNC Marine Sciences Program and the Institute's pro-

# will the Institute B E N E F I T North Carolinians?

ationally, there is growing recognition that environmental issues – particularly those related to energy and climate change – have an increasing impact on our lives and our world, and must be addressed to ensure the preservation of natural resources and quality of life for future generations.

Universities are being asked to step forward and help the nation with these issues; campuses everywhere are moving to create environmental programs. The University of North Carolina at Chapel Hill, a leader in environmental study with the UNC School of Public Health, the Department of City and Regional Planning, and others to help state officials understand the need to create different development patterns in order to maintain the health of North Carolinians.

We are also helping the state move forward on its climate change strategies. The CEP already has brought together UNC researchers from many disciplines across the campus to shed light on how climate change will occur in North Carolina. These experts share diverse, important perspectives, from

" AS A PUBLIC UNIVERSITY, OUR FIRST PRIORITY IS
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AT THE NATIONAL AND INTERNATIONAL
LEVEL IS BROUGHT TO BEAR IN OUR STATE, TO
HELP NORTH CAROLINA AND ITS PEOPLE MAKE
PROGRESS IN THESE ENVIRONMENTAL AREAS."

Doug Crawford-Brown Director, UNC Institute for the Environment

for decades, has established the Institute for the Environment to take our ability to serve as a resource for our state and our nation to the next level.

The State of North Carolina is working to address environmental issues such as climate change and sustainability that impact the state's economy, its vaunted natural beauty and its citizens' health and quality of life. Through the Carolina Environmental Program, UNC experts have already been helping the state work through these issues. The resources of the Institute will enable us to expand our involvement.

Carolina faculty members are working with the N.C. Department of Environment and Natural Resources to strike a balance between land conservation and development, so that the natural services the environment provides for humans and other species can be maintained and the qualities that make North Carolina such a great place to live can be sustained, even as the state's population continues to grow. UNC scholars have helped develop the *Virtual North Carolina* project, which enables community organizations and municipalities around the state to view the current condition of their environment and to predict the impact of different patterns of development on that environment.

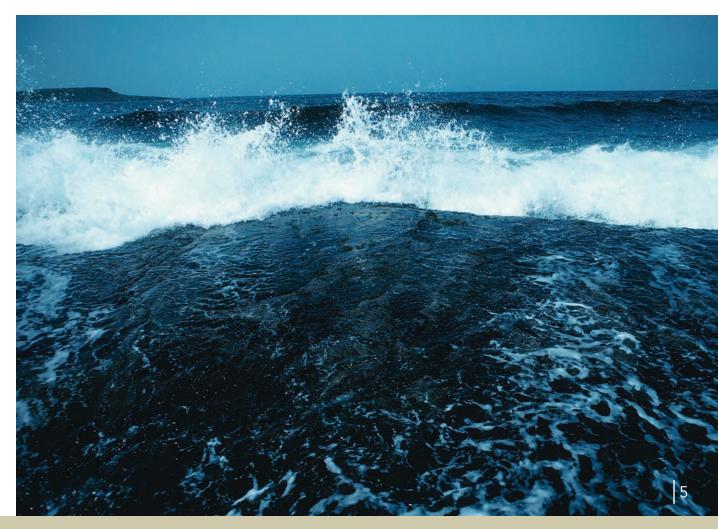
UNC-Chapel Hill also has significant expertise in the ways in which different development patterns influence air quality, water quality and other environmental factors, and the resulting impact on public health. The CEP has already been working the social scientists who help us understand the kinds of laws and policies that need to be created to counteract the adverse effects of climate change, to the business school faculty members who help North Carolina businesses develop new practices that will reduce carbon dioxide emissions and encourage the growth of new companies that share

responsibility for carbon dioxide reduction.

"We intend for this Institute to become *the* major resource to which the state will turn as it tries to solve these problems," said Crawford-Brown. "The additional resources that will be invested in the new Institute will allow us to conduct the fundamental research needed to inform these issues, and to create the institutional infrastructure by which we can engage with the state and bring that research forward to help the people of North Carolina."

UNC experts are also working on projects throughout the United States, and on international collaborations such as a groundbreaking *Carbon Reduction Project* (CRed) with the United Kingdom. UNC's environmental engineering/health, environmental policy and management, and environment and business programs rank among the top ten programs in the country. With the creation of the Institute and the resources it will provide, Carolina is poised to emerge as the top-ranked campus in the country for bringing together *all* of the disciplines needed for interdisciplinary environmental study.

"We will measure our success partially on how well the United States moves forward in solving its environmental problems," Crawford-Brown noted. "But even as we help the nation, we recognize that as a public university, we have a special responsibility to the State of North Carolina and its citizens. Therefore, our first priority is to make sure that everything we learn at the national and international level is brought to bear in our state, to help North Carolina and its people make progress in these environmental areas."



### **UNC** environment



### FACULTY LEADERS,

ON THE IMPORTANCE OF THE INSTITUTE:

" A RECENT ISSUE OF SCIENCE PRESENTS A HUGE GLOBAL CHALLENGE THAT INVOLVES HEARTBREAK, ADAPTATION, THE NEED FOR MORE KNOWLEDGE AND EVIDENCE ABOUT THE RELATIONSHIPS BETWEEN GLOBAL CLIMATE CHANGE AND HUMAN AND ANIMAL HEALTH, AND THE SEARCH FOR SOLUTIONS THAT WILL PRESERVE OUR QUALITY OF LIFE WHILE PROTECTING THE EARTH FOR FUTURE GENERATIONS. UNC-CHAPEL HILL HAS ACCEPTED THE CHALLENGE OF GLOBAL CLIMATE CHANGE AND HAS A TREMENDOUS RESOURCE IN THE INSTITUTE FOR THE ENVIRONMENT AND ITS DIRECTOR, DOUG CRAWFORD-BROWN; IN PARTICULAR THE CENTER FOR LAND-SCAPE CHANGE AND HEALTH. I CAN THINK OF FEW ISSUES THAT ARE MORE IMPORTANT OR MORE APPROPRIATELY CROSS-SECTORAL, CROSS-UNIVERSITY AND INTERDISCIPLINARY THAN CLIMATE CHANGE AND HEALTH. THE EXPERTISE OF OUR DEPARTMENT OF ENVIRONMENTAL SCIENCES AND ENGINEERING WILL LEND SUBSTANTIAL STRENGTH TO THE INSTITUTE'S EFFORTS, AS WILL MANY DEPARTMENTS ACROSS UNC."

> Barbara Rimer Dean, UNC School of Public Health

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