NORTH CAROLINA
BOARD OF SCIENCE, TECHNOLOGY & INNOVATION

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GOVERNOR

Lee Lilley
SECRETARY

Sheila Mikhail
BOARD CHAIR

July 1, 2025

Dear Senator Tillis, Senator Budd, and Members of the North Carolina Congressional Delegation:

As members of the statutorily authorized North Carolina Board of Science, Technology & Innovation (BSTI), we write to express our deep concern regarding recent and proposed executive actions and funding reductions that threaten to undermine American global competitiveness and security and compromise North Carolina's leadership in science, technology, and innovation. Since 1963, the nonpartisan BSTI has advised state leaders on how to leverage science and technology for economic growth. We urge you to consider four critical points as you craft our nation's policies and budget in collaboration with the executive branch:

Federal Investments in R&D Have Delivered Long-Term Economic Gains for North Carolina
North Carolina's transformation over the past half-century—from one of the poorest states in the nation to a national and world leader in innovation and business—is the direct result of sustained, intentional, and smart investments to strengthen our R&D capabilities. In the 1950's, North Carolina was experiencing significant "brain drain" and economic stagnation. Today, thanks to a robust public-private science, technology, and innovation ecosystem supported by federal investments, our state ranks among the top in the nation for R&D, high-tech job creation, economic dynamism, economic resilience, and workforce readiness.

This transformation could not have been possible without significant federal funding. As shown in the BSTI's most recent *Tracking Innovation* report, federal funding supports more than two-thirds of the R&D in our public and private universities. Notably, North Carolina's academic R&D relative to state GDP ranks sixth in the nation, is 40 percent higher than the U.S. average, and is increasing at a rate three times faster than the U.S. average. Moreover, North Carolina's average number of startup companies formed from university R&D ranks eighth in the nation and is nearly 50 percent above the U.S. average. Because of these investments, our state has a higher-than-average share of high-tech industries, which are growing at double the U.S. average rate and pay wages twice that for other industries, creating significant demand in other sectors.

Cuts in Federal R&D Funds Are Undermining Discovery and Innovation in North Carolina
Recent federal funding cancellations are having measurable negative consequences in our state. Since the start of this year, North Carolina's research institutions have terminated at least 133 NIH and NSF grants, resulting from the agencies' withholding roughly $580 million in R&D funding, accounting for 25 percent of all federally funded university R&D in our state. These actions have stopped groundbreaking research and innovation, most notably in the Research Triangle region but also across the entire state at our Very High Research Activity "R1" universities—UNC Chapel Hill, NC State and Duke Universities, UNC Charlotte, and East Carolina University—and at other universities such as Appalachian State in Boone, Wake Forest and WSSU in Winston-Salem, NC A&T and UNCG in Greensboro, and UNCW in Wilmington.

These institutions were developing life-saving medical advancements, making AI tools safer, and training our STEM workforce. Projects impacted by funding cuts include an NIH-funded program to improve health outcomes for newborns, infants, and children by identifying clinically actionable inherited genetic conditions before symptoms appear. The NSF-funded Secure and Trustworthy Cyberspace project was utilizing machine learning and computer science to enhance information integrity. And the NSF Engineering Education Office was strengthening the U.S. engineering workforce by enhancing academic and professional development opportunities. Each of these projects, and hundreds of others, have now stopped abruptly and can't be restarted quickly or easily. The ripple effects of these cuts—stalled discoveries, weakened infrastructure, job losses (e.g., the UNC System implemented a personnel cap in June; RTI International and FHI 360 filed WARN notices of 420 permanent job layoffs in May)—threaten our nation's and state's progress.

Cuts in Federal R&D Funds are Jeopardizing Economic Success in North Carolina
Through decades of visionary leadership, academic excellence, and public-private partnerships, North Carolina has earned its place as a model for innovation-led growth. This has resulted in North Carolina being ranked among the top three states to do business for the five most-recent consecutive years. Those rankings specifically cited our top-tier research and innovation ecosystem, highly educated workforce, economic health, and business friendliness. In 2024 alone, companies attracted by our state's R&D capacity announced over 16,956 new jobs and committed $15.2 billion in new investments in our state. Major innovative projects include Natron Energy in Edgecombe County, FUJIFILM Diosynth in Wake County, Johnson & Johnson in Wilson County, Novo Nordisk in Johnston County, and American Titanium Metals in Cumberland County.

Key inputs powering North Carolina's innovation economy include 58 community colleges and 52 colleges and universities (collectively employing over 160,000 statewide), nationally-ranked levels of R&D, university-based innovation hubs throughout the state, a highly-educated workforce, and one of the fastest-growing populations in the country. While these factors make innovation-driven economic growth and prosperity possible, the extent to which we realize that growth and prosperity depends, ultimately, on how well we catalyze those factors. Federal funding has been—and is—that critical catalyst, helping to launch new initiatives and build bridges across sectors and between upstream and downstream activities. As representatives of one of our nation's leading innovation states, you are uniquely positioned to champion the federal investment needed to sustain and accelerate this economic momentum for North Carolina.

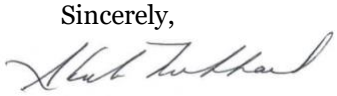
Federal Investments in R&D Equip the U.S. and North Carolina To Compete Globally
Science and technology—advanced and applied through sustained innovation—have long enabled humanity to generate continued greater value from a fixed set of natural resources. Now more than ever, international competitiveness is defined by leadership in research-based innovation. As recent as 2021, the U.S. led the world in R&D spending, outpacing China by $150 billion. That same year, high-tech industries, many benefitting from federal funding, contributed $10.6 trillion globally and $2.6 trillion in the U.S. Yet, as the U.S. is scaling back federal funding, other countries are accelerating their investments. China is rapidly closing the gap on R&D spending and now leads in science and engineering publications (27% of total vs. 14% in the U.S.), international patent applications (69,000 in 2022 vs. 58,000 in the U.S.), and high-tech manufacturing outputs ($2.4 trillion vs. $1.4 trillion in the U.S.).

A strong majority of Americans support global leadership and federal investment in scientific research, but at the same time, few say the U.S is gaining ground relative to other countries (38% say the U.S. is losing ground; 47% say the U.S. is staying about the same). With your continued support, we can ensure that the United States and North Carolina remain at the forefront of scientific discovery and technological advancement. We are in a global race to define the long-term future of our world, nation, and state. Now is the time to bolster what North Carolina does best: Invest in our greatest natural resource—our scientific and technological human capital—to develop solutions to our greatest challenges, grow our economy, and boost our competitiveness in the process. North Carolina's advancement and successes to date illustrate what long-term, significant investment can achieve. Going forward, North Carolina's continued economic vitality—and our nation's global standing and security—will be shaped by decisions made now.

We urge you to be a champion for robust, predictable federal investment in science, technology, and innovation. Faced with a dynamic and competitive world, the best approach is to shape it rather than be shaped by it. In today's global economy, a high-productivity, high-employment, high-income, growing, and globally competitive economy must be a high-technology, innovation-driven economy fueled by strong federal support for R&D.

Thank you for your service to North Carolina and your attention to this critical issue.

Sincerely,



Sheila Mikhail, Board Chair and Serial Entrepreneur

Members of the North Carolina Board of Science, Technology & Innovation

Yonnie Butler, *CEO, Butler Counseling & Consulting, LLC*

Manwell Bynum, *Vice President, Head of Business Acceleration, Atrium Health*

Philip Cardinale, *Intellectual Property and Technology Transactions Partner, Smith Anderson*

Gregory P. Copenhaver, *Associate Provost and Chancellor's Eminent Professor of Convergent Science, University of North Carolina at Chapel Hill*

Michael Cunningham, *Principal, Trailing Seas Institute, former Executive Vice President, Red Hat, Inc.*

John Daniels, *Vice Chancellor for Research, University of North Carolina at Charlotte*

Christopher Davis, *Engineer and Fayetteville Public Works Commission Board Chair*

Scott Dorney, *Executive Director, North Carolina Military Business Center*

Genevieve Garland, *Acting Vice Chancellor for Research and Innovation, North Carolina State University*

Gagan Gupta, *Partner, Tin Fulton Walker & Owen PLLC*

James Hunter, *Vice President, Government Relations, RTI International*

Sean GL Johnson, *Director, Center of Excellence in Entrepreneurship & Innovation, North Carolina Agricultural and Technical State University*

Jerome P. Lynch, *Vinik Dean of Engineering, Duke University*

Lee Lilley, *Secretary, North Carolina Department of Commerce (Ex Officio)*

Richard Kristof, *Chief Operating Officer, TriHelix Investments*

Mike McBrierty, *Director, State Public Policy and Government Affairs, Biogen Inc.*

Vijendra Nalamothu, *Founder & CEO, ApoStrata, LLC*

Will Quick, *Partner, Brooks Pierce LLP*

Michael Quillen, *Vice President of Academic Programs, Rowan-Cabarrus Community College*

Antwan Thornton, *Patent Attorney and Partner at Brooks, Cameron & Huebsch*

Claudia Walker, *Multi Classroom Leader–Math, George C. Simkins Jr Elementary School, Guilford County Schools*

Thomas J. Williams, *President, Strategic Educational Alliances, Inc.*