SUCCESS ABOUNDS AT NC STATE

NC State launched 10 new startups in FY2014. More than 400 products have been commercialized based on NC State inventions. An Office of Technology Transfer survey indicates that our startups have created more than 3,500 jobs in North Carolina and more than 8,100 worldwide, and raised more than $1.6 billion in investments. The majority of NC State’s startups are headquartered in North Carolina, contributing to the economic development of our state.

In the first three years of the Chancellor’s Innovation Fund, 17 projects received funding. From these projects, five startups have launched, five commercial licenses have been executed and $3.9 million awarded in additional development funds. Six additional projects have been selected for funding in FY2015. "cut and replace" gene editing; extreme biofuels; identifying “vulnerable” arterial plaque; a low-cost, aseptic food-processing system; thermoelectric textiles; and a low-cost, aseptic food-processing system; thermoelectric textiles; and variable fuel injectors.

NC State exceeded $300 million in sponsored-research funding for the first time, spurred by success capturing federal awards along with record-setting funding from industry partners. See details on page 32. The total does not include several major projects recently announced to begin in FY2015.

The U.S. Department of Energy selected NC State to lead PowerAmerica, the Next Generation Power Electronics National Manufacturing Innovation Institute, which will work with industry, government and academic partners to develop processes to manufacture wide bandgap power electronics. This $140 million effort could lead to dramatic energy savings for industries and consumers.

NC State entered into a new partnership with the National Security Agency to create the Laboratory for Analytic Sciences, bringing together experts from government, academia and industry to address the most challenging big-data problems.

The Eastman Chemical Company donated its Max A. Weaver Dye Library — more than 100,000 dye and fabric samples — to NC State. After decades as a tool for Eastman scientists and engineers, it is now available to researchers worldwide.

The National Nuclear Security Administration’s Office of Defense Nuclear Nonproliferation Research and Development awarded NC State a five-year, $25 million federal grant to develop the next generation of leaders with practical experience in technical fields relevant to preventing the spread of nuclear weapons around the globe.

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The U.S. Department of Agriculture selected NC State to lead coordination efforts of more than two dozen agencies and organizations to help farmers, ranchers and forest landowners adapt to impacts of climate change. The Southeast Regional Climate Hub is one of seven regional hubs converting basic research into applied practices.

NC State combined research, education and outreach efforts in the physical, chemical, mathematical, statistical, biological and earth system sciences to launch the College of Sciences. With six departments, 4,000 students and 575 faculty, staff and postdoctoral researchers, it is NC State’s third-largest college.

With help from NC State’s marching band, mascots and cheerleaders, Centennial Campus welcomed a new partner in fall 2013. LexisNexis joins other new partners on Centennial Campus: ProteoVec and ShowOps.

The university’s Economic Development Partnership played an integral role in recruiting or retaining companies to North Carolina: Argos Therapeutics, Brooks Brothers, Tyton Bioenergy, Shandong Tranlin Limited, HCL America, 3 Phoenix, Sunstone Water Group, RCF Technologies, 3-C Institute, Immuno Reagents, VX Aerospace and Nutkao.

NC STATE RESEARCHERS HONORED

Dr. Ruben Carbonell was elected to the National Academy of Engineering. He joins 12 faculty members previously elected to this prestigious group: Drs. B. Jayant Baliga, Donald L. Birzer, Jerome J. Cuomo, Joseph M. DeSimone, Keith E. Gubbins, Carol K. Hall, Thom Joel Hodgson, Carl C. Koch, Frances S. Ligler, R. Wayne Skaggs, James A. Trainham III and Paul Zia. Dr. Baliga received the Medal of Honor from the Institute of Electrical and Electronics Engineers and is also a recipient of the President’s National Medal of Technology and Innovation. Dr. Cuomo is also a recipient of the previously named President’s National Medal of Technology.


Dr. Frances S. Ligler was elected as a new Fellow of the American Association for the Advancement of Science. There are now 55 NC State faculty members who hold this honor.

Dr. Reade Roberts was one of only seven recipients this year of the Beckman Young Investigators Award. Dr. Michael Kudenov received a Young Investigator Award from the Office of Naval Research. Drs. Linyou Cao, Owen Duckworth, Andrew Grieshop, James LeBeau and Brinl Starly are recent recipients of the National Science Foundation’s Faculty Early Career Development program. Dozens of NC State faculty have received this recognition.

Drs. Michael Escuti, Jason Haugh, Jacob Jones, Carla Mattos and Veena Misra have received the Presidential Early Career Award for Scientists and Engineers. NC State has three individual winners of the Presidential Awards for Excellence in Science, Mathematics and Engineering Mentoring: Drs. Laura Bottomley, Christine Grant and Winser E. Alexander.

NC State is represented in the American Academy of Arts and Sciences by Drs. William R. Atchley, Joseph M. DeSimone and Trudy Mackay. Dr. Mackay is also a member of the Royal Society of the United Kingdom.
University leaders unveil VISION 2034, a blueprint for developing Centennial Campus into North America’s premier Innovation Destination. The plan calls for the campus to be a proving ground for new technologies and creative ideas.

The Laboratory for Analytic Sciences opens to help the National Security Agency find creative solutions to big data problems.

German filter manufacturer Mann+Hummel opens an innovation center on campus to tap into NC State research expertise in textiles and engineering.

Centennial Campus announces the development of a 155-room hotel and conference center, to be located across from the Lonnie Poole Golf Course. The campus also begins construction of a 145,000-square-foot office building.

Claude McKinney, former dean of the College of Design and the visionary behind Centennial Campus, is named to the Raleigh Hall of Fame.

Centennial Campus: An Innovation Destination