



2016-2017  
**Chancellor's  
Report**



**RUTGERS**

UNIVERSITY | NEW BRUNSWICK



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## A MESSAGE FROM THE CHANCELLOR

Rutgers University–New Brunswick has undergone a dynamic transformation over the past 250 years, growing from a small, sectarian colonial college to the flagship research powerhouse that now serves as New Jersey’s most comprehensive intellectual resource. The desire to meet the educational and research demands of our state and the world has become fundamental to who we are and central to our purpose.

Over the past year we have met those demands in remarkable ways – for example, by using the New Jersey Institute for Food, Nutrition, and Health to help stem the epidemic rise in childhood obesity and obesity-related disorders such as diabetes, heart disease, and cancer; by taking advantage of our locale on the Raritan River as a field laboratory to investigate environmental sustainability through the Rutgers Collaborative for Raritan Education and Observation; and by drawing on new research by a team of students and faculty to develop a clear understanding of our institution’s connection to slavery.

I have watched Rutgers grow and change over more than a decade here. Since joining the Rutgers community in 2005, I have never ceased to be amazed by the unmatched diversity, creativity, and entrepreneurial spirit of our faculty and student body, and the diligence and teamwork of our staff. This year, my last as Chancellor, I have been filled with an especially strong pride in our progress.

In his remarks at our 250<sup>th</sup> anniversary commencement last spring, President Barack Obama declared that, “America converges here. And in so many ways, the history of Rutgers mirrors the evolution of America – the course by which we became bigger, stronger, and richer and more dynamic, and a more inclusive nation.” It is this convergence that is our true strength and makes the exchange of ideas here exciting and unlike any other.

Even as I look forward to the next phase of my academic career, Rutgers will continue to be my home, and I could not be prouder to have been a part of its growth, 250 years in the making.

Sincerely,

Richard L. Edwards, Ph.D.  
Chancellor, Rutgers University–New Brunswick

## Capital Building Project Highlights

### College Avenue Transformation

- Rutgers Academic Building – opened Fall 2016
- The Yard/Sojourner Truth Apartments – opened Fall 2016

### A New Addition on Cook/Douglass

- Kathleen W. Ludwig Global Village Living Learning Center – opened Fall 2016

### Additions on Busch

- Chemistry and Chemical Biology Building – opening Fall 2017
- Busch Campus Infrastructure – completion 2018
- Richard Weeks Hall of Engineering – completion Summer 2018
- Waksman Institute of Microbiology (Addition) – completion Summer 2018



## LEGACY, ADVANCED

### Our storied legacy goes back to our founding in 1766.

For centuries, we have forged leaders and innovators and held true to our mission of teaching, research, and service. As our 250<sup>th</sup> anniversary drew to a close in 2016, we shifted into a higher gear with the funding of more than 70 strategic initiatives at Rutgers University–New Brunswick. Together with a bold vision for the future, a dramatic physical transformation across New Brunswick was evident in new academic space and housing on College Avenue, new additions on the Busch campus, and a spectacular new Institute for Food, Nutrition, and Health on the Cook campus.

Rutgers University–New Brunswick’s investment in the future continues. Across our five campuses, we are improving the classroom experience, building new student housing, and launching initiatives to support our inclusive student body.

The **Rutgers University–New Brunswick Honors College** welcomed its second class in the Fall. Located on the College

Avenue campus, it is home to more than 500 high-achieving students. The Honors College invites students in the sciences, humanities, and Rutgers’ various professional schools to live and work together to examine global issues.

The **Rutgers Collaborative for Raritan Education and Observation (RCREO)** is transforming the Raritan Basin, where Rutgers is located, into an interactive field laboratory that enhances the student experience. The Collaborative links science, engineering, and humanities programs through interdisciplinary classes, projects, and activities that take place both on the banks of and in the Raritan River and its tributaries. As part of the initiative, Rutgers University–New Brunswick has a new Rutgers Raritan River vessel for use in coursework and research.

In support of making the student learning experience more collaborative, we launched three new **active learning classrooms**. These classrooms utilize the latest technology to allow students to work with each other or alongside faculty to solve problems. The classrooms were introduced in the Fall – two in the new Rutgers Academic Building on the College Avenue campus and one in Tillett Hall on the Livingston campus – as part of a five-year technology master plan to upgrade instructional spaces.





One of the signature programs under Chancellor Edwards, **RU-1<sup>st</sup>** is focused on expanding services that make substantial positive impacts on the graduation and retention rates for first-generation, low-income, and underrepresented students. For these students, RU-1<sup>st</sup> is expanding access to personal, career, and academic advising; lectures, research opportunities, and courses; and mentoring and graduate school preparation programs.

We dedicated the **New Jersey Institute for Food, Nutrition, and Health (IFNH)**, a University-wide hub for interdisciplinary research whose mission is to make New Jersey the “Healthy State” and a model for the nation. The nearly 80,000-square-foot facility offers research and community space to further connect the University, policymakers, and researchers with parents, children, and students whose lives can benefit from wellness programs and activities.

# FIVE CAMPUSES, ONE COMMUNITY

Rutgers University–New Brunswick is a living, growing community comprised of five campuses, each equipped with everything from spaces to fuel academic discovery, to programs to spark student engagement, to opportunities to connect with the broader community. Each campus has its own personality and identity:

**BUSCH**  
(School of Engineering; Graduate School of Applied and Professional Psychology)  
Our hub of innovation, science, and medicine, Busch is where you'll find high-tech health science schools and research centers. It's also where you hear roaring football crowds at High Point Solutions Stadium.

**COLLEGE AVENUE**  
(Edward J. Bloustein School of Planning and Public Policy; Mason Gross School of the Arts; School of Arts and Sciences; School of Communication and Information; School of Social Work; Honors College; Graduate School of Education; Graduate School–New Brunswick; Rutgers Cancer Institute of New Jersey)  
Historical and architectural milestones dating back to the American Revolution punctuate College Avenue, the heart of Rutgers. Near College Avenue in downtown New Brunswick, you'll find shops, hotels, and restaurants.

**COOK**  
(School of Environmental and Biological Sciences)  
Where the land grant mission of Rutgers began, the Cook campus is home to the New Jersey Institute for Food, Nutrition, and Health; Equine Science Center; Center for Turfgrass Science; and the Institute for Earth, Oceans, and Atmospheric Sciences. It also offers high-tech labs, a working organic farm, open green spaces, and athletic fields.

**DOUGLASS**  
(Douglass Residential College)  
This is where you'll find Douglass Residential College, the nation's only women's residential college at a public university. It's also home to the Eagleton Institute of Politics and the Center for American Women and Politics, and the social and intellectual ferment of the Global Village, a group of living-learning communities, which includes the East Asian House and the Human Rights House.

**LIVINGSTON**  
(Rutgers Business School; School of Management and Labor Relations)  
This campus boasts a first-run movie theater and new dining commons and residence halls. Livingston is home to one of the nation's largest campus solar arrays as well as the Louis Brown Athletic Center (the “RAC”), where Rutgers cheers its basketball teams.



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# EXCELLENCE, PERSONIFIED

*National Medals of Science and Technology. Guggenheim Fellowships. MacArthur “Genius” Awards. Fulbright Scholarships. Professor of the Year.* Our faculty’s knowledge, innovation, and leadership have been recognized by the most esteemed honors and accolades in academia. Not surprisingly, our professors contribute their expertise to national conversations on critical issues.

**Alexander Zamolodchikov**, a renowned physicist at Rutgers University–New Brunswick, has been elected to the National Academy of Sciences. He joins 83 other members and 21 foreign associates from 14 countries elected in 2016. Zamolodchikov has conducted groundbreaking research in theoretical and mathematical physics, focusing on quantum field theories and statistical physics, and in particular in the areas of conformal and integrable quantum field theories.

Rutgers professors **Joachim Messing** and **Richard Ebright** are among 213 members elected in 2016 to the prestigious American Academy of Arts and Sciences. Messing, the fourth director of Rutgers’ Waksman Institute of Microbiology, is a Professor of Molecular Biology and the first holder of the Selman A. Waksman Chair in Molecular Genetics. Ebright is a Board of Governors Professor of Chemistry and Chemical Biology at Rutgers

and Laboratory Director at the Waksman Institute of Microbiology.

Rutgers philosopher **Ruth Chang’s** original thinking about human will and decision making – sought by industries from pharmaceuticals to video gaming to the World Bank – is one reason Rutgers’ Philosophy Department ranks among the world’s top three.

Four Rutgers University–New Brunswick professors have been named 2016 fellows of the American Association for the Advancement of Science, chosen by their AAAS peers for efforts to advance science applications. New fellows include **Clinton J. Andrews**, who specializes in environmental management and decision making; **G. Charles Dismukes**, who specializes in renewable solar-based fuel production; **Henry B. John-Alder**, who focuses on evolutionary physiological ecology; and **Pal Maliga**, whose focus is on plastids, organelles found in plant cells that are necessary for essential life processes.

Seven Rutgers University–New Brunswick faculty members were named to the 2016 Thomson Reuters Highly Cited Researchers list. Researchers on the list produce work that is among the top one percent most cited in the world for subject field and year of publication. Faculty on the list include condensed matter physicist **Sang-Wook Cheong**; materials scientist **Manish Chhowalla**; food scientist **Chi-Tang Ho** (also named in 2015); astrophysicist **Saurabh Jha** (also named in 2015); chemist **Jing Li** (also named in 2015); pollination biologist and conservation ecologist **Rachael Winfree** (also named in 2015); and statistician **Cun-Hui Zhang**.



## Enrollment Overview

Nearly **37,000** students applied to Rutgers–New Brunswick for first-year admission in Fall 2016

Current total enrollment is **42,314** students (Fall Semester, 2016)

- Undergraduate – **32,044 full-time, 1,609 part-time**
- Graduate – **4,930 full-time, 3,731 part-time**

First-year out-of-state and international enrollment increased **four percent** compared to the 2015 class

**110** students in **2016** incoming class were valedictorians or salutatorians

Students from **all 50 states and 115** countries



## ACHIEVEMENT, CELEBRATED

Rutgers University–New Brunswick is New Jersey’s most comprehensive intellectual resource. Our students and alumni are smart, diverse, ambitious, and engaged with the world around them. Their hard work and academic achievements have been recognized with major national and international awards.

Rutgers University–New Brunswick students have the chance to pursue study and original research opportunities around the world.

**Chelsie Riche**, a senior, has been named a **2017 Gates Cambridge Scholar**. Riche is one of 36 students nationwide awarded the prestigious scholarship to pursue graduate studies at the University of Cambridge in the United Kingdom. Majoring in Africana studies and history with a minor in women’s and gender studies, Riche has focused her research and activism on providing access to education for marginalized communities.

For the eighth consecutive year, Rutgers University–New Brunswick has earned a spot as one of the nation’s **“Top Producers of U.S. Fulbright Students.”** Fourteen students and recent graduates earned Fulbrights for the 2016–2017 academic year, ranking Rutgers University–New Brunswick 23<sup>rd</sup> in the nation among all research institutions and eighth among the public institutions.

A team of Rutgers University–New Brunswick undergraduates won the 13<sup>th</sup> annual national **College Fed Challenge** held in December 2016 in Washington, D.C. The Rutgers student team included **Karn Dalal** (economics and biomathematics), **Ali Haider Ismail** (economics and mathematics), **Andrew Lee** (finance), **Shivram Viswanathan** (economics and mathematics), and **Ashton Welles** (computer science and economics). The Fed Challenge encourages students to learn about the U.S. economy, monetary policymaking, and the role of the Federal Reserve System.

**Michael Johnson**, a doctoral student in plant biology and pathology, has been named to the **2017 Forbes 30 Under 30** list of rising science entrepreneurs. Johnson is CEO of Visikol Inc., a company he cofounded with Ernest Mario School of Pharmacy graduate student Tom Villani, Visikol’s chief science officer. Visikol is developing technology that allows scientists to view plant and animal tissues in a 3D space as opposed to traditional two dimensional slices.

**Jennifer Coulter**, an undergraduate majoring in physics, earned one of the nation’s 252 **Goldwater Scholarships** for the 2016–2017 academic year. The scholarship is awarded for excellence in mathematics, science, and engineering. Coulter has conducted research on solar cells and also on high-energy, heavy-ion nuclear physics, work based on the collision of lead ions at tremendous speeds at the Large Hadron Collider at CERN in Switzerland.



# CAMPUS LIFE



## SUCCESS, SHARED

As a member of the Big Ten Academic Alliance (BTAA), Rutgers University–New Brunswick taps into the power of collaboration, shared knowledge, and pooled resources among the nation’s top research universities. From contributing to leadership development programs to working collaboratively to improve health outcomes for vulnerable children and infants, the benefits of our participation in the BTAA are both extensive and exciting.

BTAA institutions share expertise, leverage the unique knowledge and resources of each campus, and collaborate on innovative programs that create learning and research opportunities for students and faculty. The BTAA is governed and funded by the provosts of the member universities, and the Rutgers University–New Brunswick’s Chancellor’s office coordinates BTAA activities for Rutgers. Following are two research initiatives on which the Rutgers community is working with fellow BTAA members to advance medical science:

The Big Ten/Ivy League Traumatic Brain Injury Research Collaboration draws on the intersection of great medicine, great athletics, and great academics to bring together world-class coaches, athletic trainers, scientists, and team physicians to study the effects of traumatic brain injury in sports. The **Traumatic Brain Injury Research Collaboration** studies the incidence of head injuries in young adults and will enable longitudinal examinations into the health impact of head injuries as student-athletes transition into professional careers both on and off the field.

Rutgers University–New Brunswick is also working with member universities of the Big Ten Academic Alliance on the **Health Equity Initiative**. Along with the respective state health departments, the BTAA universities are collaborating to bolster health equity by understanding and addressing the social determinants of health. The Big Ten Academic Alliance Health Equity Initiative is poised to improve the health outcomes of vulnerable children and infants across the geographic regions represented by the Big Ten Academic Alliance.



**500+**  
student  
organizations



**16,000+**  
undergraduates live  
on campus in one of  
the largest and most  
diverse residential  
student programs in  
the country



**Thousands**  
of Rutgers University  
Dance Marathon  
participants raised  
more than \$912,143  
for families and  
children affected  
by cancer and  
other diseases in  
2016, totaling more  
than \$5.8 million  
since 1999



**6,000+**  
students participate  
annually in one or  
more leadership  
programs through  
the Department  
of Leadership and  
Experiential Learning

# UNIVERSITY RANKINGS



- **#1 – Public National University, U.S. News & World Report: America’s Best Colleges NYC/NJ Metropolitan Region**
- **#22 – Public Universities in the Nation, Wall Street Journal/Times Higher Education**
- **#25 – Public National Universities, U.S. News & World Report**
- **#60 – U.S. News & World Report’s Best Global Universities**
- **#2 – Best for Vets in the Nation (4-year institutions), Military Times Edge**
- **48 graduate programs** ranked in the top 50 in the nation by *U.S. News & World Report*
- **Among the Top 30 LGBTQ-Friendly Colleges and Universities, Campus Pride Index: Best of the Best LGBTQ-Friendly Campuses**
- **#1 graduate Women’s History program in the Nation, U.S. News & World Report**
- **32 majors** ranked in the top 25 in the nation by *USA Today*
- Recognized by *Money* as one of the **Top 20 Public Colleges Most Likely to Pay Off Financially**
- **#33 nationally in Total R&D Expenditures (Academic Institutions), National Science Foundation**
- **#1 – Best Business School in the Nation for Job Placement (Rutgers Business School, Full-Time MBA), Bloomberg Businessweek**
- **#11 – Public Universities in the Nation Doing the Most for Low-Income Students, New York Times: Top Colleges Doing the Most for Low-Income Students**
- Recognized by *Forbes* as one of the **Top 30 Public Colleges**

Rutgers is the sole university in the United States that is a colonial college, a land-grant institution, and a public university. The University draws on a storied legacy of innovation and strong ties to a complex and diverse state to serve the public through education, research, and community engagement.

## TOP RANKING WORLDWIDE AND AT HOME

Our academic excellence and leading edge research are recognized both locally and globally. Among the world’s 1,000 universities, Rutgers University–New Brunswick ranks 43<sup>rd</sup> in the world, 27<sup>th</sup> among all universities in the United States, and 12<sup>th</sup> among public universities in the United States as measured in 2016 by the Saudi Arabia-based Center for World University Rankings. Rutgers ranks in the top 25 public universities in the nation and is among the world’s most innovative universities according to such global rankings as:

- Academic Ranking of World Universities (China)
- Reuters Top 100 Most Innovative Universities
- Times Higher Education, World University Rankings (UK)

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# KNOWLEDGE, EXPANDED

Whether looking outward four billion light years or inward to the workings of the human mind, Rutgers students and faculty are expanding the frontiers of knowledge to document the past, illuminate the present and chart a course for the future. Beyond rewriting the textbooks of the world, our research success stories are playing a valuable role in the University's partnerships with the nation's public and private sectors.

## **MOST POWERFUL SUPERNOVA TO DATE DISCOVERED WITH HELP FROM A RUTGERS PROFESSOR**

Thousands of supernovae – exploding stars – have been spotted in our vast universe, but one that's nearly four billion light years away really stood out. Dubbed ASASSN-15lh for the All-Sky Automated Survey for Supernovae, which found the object, it's by far the brightest supernova detected to date. Rutgers professor Saurabh W. Jha, an Associate Professor in the Department of Physics and Astronomy, and two of his former students helped with this discovery.

## **RUTGERS STUDY FINDS EXERCISE AND MEDITATION – TOGETHER – HELP BEAT DEPRESSION**

Meditation and aerobic exercise done together helps reduce depression, according to a Rutgers study that was published in *Translational Psychiatry* in February 2016. Brandon Alderman, Assistant Professor in the Department of Exercise Science and Sports Studies, and Tracey Shors, Professor in the Department of Psychology and Center for Collaborative Neuroscience, discovered that a combination of mental and physical training enabled students with major depressive

disorder not to let problems or negative thoughts overwhelm them. This mind and body combination – done twice a week for only two months – reduced depression symptoms for a group of students by 40 percent.

## **RUTGERS BOTANIST NAMES NEW FLOWER SPECIES**

Lena Struwe, Professor of Botany, has discovered that two flowers found encased in amber for at least 15 million years belong to none of the known 200 species of the genus *Strychnos*. Therefore, they represent a newly discovered species, *Strychnos electri*. Struwe coined the species name in honor of its amber origin, since *elektron* is the Greek word for amber.

## **RUTGERS RESEARCHERS DEBUNK "FIVE SECOND RULE"**

Rutgers researchers have disproven the widely accepted notion that it's okay to scoop up food and eat it within a "safe" five-second window. Donald Schaffner, Professor and Extension Specialist in Food Science, found that moisture, type of surface, and contact time all contribute to cross-contamination. In some instances, the transfer begins in less than one second.



## **SEA LEVEL RISE IN 20<sup>TH</sup> CENTURY WAS FASTEST IN 3,000 YEARS**

Global sea level rose faster in the 20<sup>th</sup> century than in any of the 27 previous centuries, according to a Rutgers University-led study published in *Proceedings of the National Academy of Sciences* in February 2016. "The 20<sup>th</sup>-century rise was extraordinary in the context of the last three millennia – and the rise over the last two decades has been even faster," said Robert Kopp, the lead author and an Associate Professor in the Department of Earth and Planetary Sciences.

## **SCARLET AND BLACK, VOLUME 1: SLAVERY AND DISPOSSESSION IN RUTGERS HISTORY**

In November 2016, Rutgers released the findings of eight months of research that reveal an untold history of some of the institution's founders as slave owners and the displacement of the Native Americans who once occupied land that was later transferred to the college. The work, contained in the book *Scarlet and Black, Volume 1: Slavery and Dispossession in Rutgers History*, brings out of the shadows the story of Will, a slave who laid the foundation of Old Queens, the University's first and most iconic building. The research, which spans the mid-18<sup>th</sup> through mid-19<sup>th</sup> centuries, also reveals that abolitionist and women's rights activist Sojourner Truth and her parents were owned by the family of Rutgers' first president, Jacob Hardenbergh.

## **"SQUISHY" MOTORS AND WHEELS GIVE SOFT ROBOTS A NEW RIDE**

A small, squishy vehicle equipped with soft wheels can roll over rough terrain and run under water. Future versions of the versatile vehicle might be suitable for search and rescue missions after disasters, deep space and planet exploration, and manipulating objects during magnetic resonance imaging (MRI). Aaron Mazzeo, Assistant Professor in the Department of Mechanical and Aerospace Engineering, coauthored the study on the vehicle motor, noting its most important innovation is a soft motor that provides torque without bending or extending its housing.

## **RUTGERS TURFGRASSES FEATURED AT PARKS AND EVENT SITES AROUND THE WORLD**

Turfgrasses bred at Rutgers are widely used at golf courses, sporting fields and parks around the world, now including the Baltusrol Golf Club, host of the 98<sup>th</sup> PGA Championship. Along with many PGA tournaments, Rutgers turfgrasses have been or will be used at the 2020 Tokyo Olympics golf course; Major League Baseball parks, including Yankee Stadium; football stadiums, Super Bowls, and college bowl games; World Cup soccer stadiums; Central Park in New York City; and the White House, Washington Monument, and National Mall in Washington, D.C. To date, Rutgers has developed more than 400 varieties of turfgrasses and licensed them to more than 20 companies.

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# PRESIDENT OBAMA: *America Converges at Rutgers*

President Barack Obama visited Rutgers University–New Brunswick to speak to more than 50,000 people gathered at our historic 250<sup>th</sup> Anniversary Commencement Ceremony in May 2016. The first sitting president to speak at a Rutgers' commencement, the President told students and their families that the world is more interconnected than ever before and needs to work globally to solve problems.

***America converges here. And in so many ways, the history of Rutgers mirrors the evolution of America – the course by which we became bigger, stronger and richer and more dynamic, and a more inclusive nation.***

President Obama urged the students to gear themselves for the long haul, not rush their success, and to endure any setbacks that may arise.

*Today, you join a long line of Scarlet Knights whose energy and intellect have lifted this university to heights its founders could not have imagined. Two hundred and fifty years ago, when America was still just an idea, a charter from the Royal Governor – Ben Franklin's son – established Queen's College. A few years later, a handful of students gathered in a converted tavern for the first class. And from that first class in a pub, Rutgers has evolved into one of the finest research institutions in America.*

*Is it any wonder that I am optimistic? Throughout our history, a new generation of Americans has reached up and bent the arc of history in the direction of more freedom, and more opportunity, and more justice. And, Class of 2016, it is your turn now to shape our nation's destiny, as well as your own. So, get to work. Make sure the next 250 years are better than the last.*





**RUTGERS**

UNIVERSITY | NEW BRUNSWICK

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Principal photography: Nick Romanenko.  
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