

**Background Notes for  
State of the New Brunswick Campus Report to the University Senate  
Dr. Philip Furmanski, January 21, 2005**

**Faculty Awards and Honors, 2004**

**Named Fellows in International/National Academies**

Eva Andrei, physics and astronomy, FAS-New Brunswick, Fellow of the American Physical Society

Bruce Clark, plant biology and pathology, Cook, Fellow of the American Society of Agronomy

Allan H. Conney, Chemical Biology, School of Pharmacy, Honorary Membership in the International Society for the Study of Xenobiotics

Richard Ebright, Waksman/Chemistry and Chemical Biology, FAS-NB, Fellow of the American Association for the Advancement of Science

Israel Gelfand, Mathematics, FAS-New Brunswick, Fellow of the European Academy of Sciences

Alvin Goldman, Philosophy, FAS-New Brunswick, Fellow of the American Academy of Arts and Sciences

Edwin Green, Agricultural, Food and Resource Economics, Cook, Fellow of the American Statistical Association

Susan Jackson, Human Resource Management, SMLR, Fellow of the Academy of Management

Dennis Kent, Geological Sciences, Faculty of Arts and Sciences-New Brunswick, Fellow of the National Academy of Sciences

Randall Schuler, Human Resource Management, SMLR, Fellow of the Academy of Management

**Major Fellowships, Prizes, and Awards**

Kenneth W. Able, Marine and Coastal Science, Cook, 2004 Oscar Elton Sette Award

Emma Amos, Visual Arts, Mason Gross School of the Arts, Women's Caucus for Arts Outstanding Achievement Award

Louise Barnett, English, FAS-New Brunswick, Huntington Library Fellowship

George Carman, food science, Cook, Supelco/Nicolas Pelick-American Oil Chemists Society Research Award for 2004

Indrani Chatterjee, History, FAS-New Brunswick, Frederick Burkhardt Residential Fellowship for Recently Tenured Scholars from the Andrew W. Mellon and Rockefeller Foundations

Ann Coiro, English, FAS-New Brunswick, 2004-2005 American Philosophical Society Sabbatical Fellowship

Thomas J. Cook, Pharmaceutics, School of Pharmacy, Education Opportunity Fund Champion Award from the State of New Jersey Commission on Higher Education

Jacob Feldman, Psychology-FAS-NB, Troland Award of the National Academy of Sciences to recognize distinguished contributions by scientists under 40 to the quantitative and formal determination of mind-world relations

Israel M. Gelfand, distinguished visiting professor of Mathematics, received the 2005 American Mathematical Society's Leroy P. Steele Prize for Lifetime Achievement

Stephen J. Greenfield, Mathematics, New Jersey Professor of the Year, Carnegie Foundation for the Advancement of Teaching and the Council for Advancement and Support of Education (CASE)

David Hughes, Human Ecology, Cook, Mellon New Direction Fellowship

David Hochfelder, Edison Papers, Newcomen-Harvard Special Award

Johannes Khinast, Chemical and biochemical engineering, SOE-NB, Marie Curie Chair appointment from the European Union

Peter Kivy, Philosophy, Faculty of Arts and Sciences-New Brunswick, Guggenheim Fellowship for 2004-05

Doyle Knight, Mechanical Engineering, School of Engineering, Mary W. Raisler Distinguished Teaching Chair in Mechanical Engineering

Carol Kuhlthau, Library and Information Science, SCILS, 2004 Award for Professional Contributions to Library and Information Science Education, from the Association for Library and Information Science Education

Joel Lebowitz, mathematics and physics, Faculty of Arts and Sciences-New Brunswick, will receive the Nicholson Medal for Humanitarian Service from the American Physical Society at its March annual meeting

Richard Lockwood, French, Faculty of Arts and Sciences-New Brunswick, awarded the title of *Chevalier* in the order of *palmes academiques* by the French government

Rick Ludescher, Food Science, Cook College, the Emily M. Gray Award for Promotion of Biophysics from the Biophysical Association

Theodore Madey, Physics and Astronomy, Faculty of Arts and Sciences-New Brunswick, honorary Doctorate *Honoris Causa* in Experimental Physics from the University of Wroclaw, Poland

Joan Marter, Art History, Faculty of Arts and Sciences-New Brunswick, Pollock-Krasner Foundation/Stony Brook Research Fellowship

Tomás Eloy Martínez, Spanish and Portuguese, Honorary Doctorate from Universitat d'Estiu-Andorra

Bonnie McCay, Human Ecology, Cook, lifetime appointment as an Associate of the National Research Council, a section of the National Academies

Carl Pray, Agricultural, Food and Resource Economics, Cook, 2004 Special Service Award from the Association for International Agriculture and Rural Development

Norbert Psuty, Institute of Marine and Coastal Science, Cook, Distinguished Career Award from the Geomorphology Specialty Group of the Association of American Geographers

Joanna Regulska, Women's and Gender Studies, Geography, Knight Cross of the Order of Restitution from the Republic of Poland

Brent D. Ruben, Communication, SCILS, National Communication Association's Gerald M. Phillips Award for Distinguished Applied Communication Scholarship

Michael Saks, Mathematics, Faculty of Arts and Sciences-New Brunswick, Gödel Prize for outstanding paper in theoretical computer science

Louis Sass, GSAPP, 2004-2005 Fulbright Fellowship

Shirley A. Smoyak, EJBPPP, named a 2004 Living Legend by the American Academy of Nursing

Kathryn Uhrich, Chemistry and Chemical Biology, named one of twelve women scientists honored as Outstanding New Jersey Scientists by the New Jersey Association for Biomedical Research

Alessandro Vettori, Italian, Faculty of Arts and Sciences-New Brunswick, knighted by the president of Italy and awarded the title of Cavaliere. Vettori was honored for his contributions to the spread of Italian culture and literature

Carolyn Williams, English, Faculty of Arts and Sciences-New Brunswick, Guggenheim Fellowship for 2004-05

### **Book/Article Prizes**

Carolyn Brown, History, FAS-New Brunswick, International Association of Labor History Book of the Year 2003

John Chambers, History, FAS-New Brunswick, First Prize for Distinguished Achievement by the League of Historical Societies of New Jersey for his booklet, *George Washington in Cranbury: the Road to the Battle of Monmouth*

Richard Duschl, Learning and Teaching, Graduate School of Education, Journal of Research for Science Teaching for manuscript judged to be the most significant contribution for the year from the National Association for Research on Science Teaching

Brent Edwards, English, Faculty of Arts and Sciences-New Brunswick, 2004 Chinard Prize from the Society for French Historical Studies for the best book published in North America on the history of France and the

Americas. He also received the 2004 John Hope Franklin Prize Best Book in American Studies from the American Studies Association and Honorable Mention for the James Russell Lowell Prize, awarded to a member by the Modern Language Association

David Greenberg, Journalism and Media Studies, SCILS, American Journalism Historians Award for 2003

David Hughes, Human Ecology, Cook, Anthropology and Environment Junior Scholar Award for the best journal article in 2003 by the American Anthropological Association

Tomasz Imielinski, Information and Computer Science, Test of Time award for the most influential paper of the past 10 years by the Association for Computing Machinery Special Interest Group on Management of Data

Suzanne Lebsack, History, FAS-New Brunswick/Piscataway, Francis Parkman Prize from the Society of American Histories for the best book in American history

Gayle Tate, Africana Studies, FAS-NB, Best Book Award from the American Political Association

### **New Brunswick Student Honors/Achievements**

Nine Rutgers undergraduate students were runners up in the Federal Reserve Board's College Fed Challenge in Washington, D.C., losing by only one point, 39-38, to Northwestern University of Chicago. The Rutgers team had to win two competitive rounds in New York before advancing to the Washington Challenge. Coordinated by the FAS-NB Department of Economics, this year's team members included economics majors Mark Klee and Puneet Sondhi; James J. Williamson, a pre-business major; and first-year students, Ravi Bharadwaj, and Alan Gu. Students Alton Worthington, Michael Zarrella, Priya Tandon and Kingkit Cheung assisted in development and research.

Progressive magazine *Mother Jones* named Rutgers one of the Top 10 Activist Campuses this year. Rated number five, it's the third time in the list's 11-year history that Rutgers made the activist grade.

For the second consecutive year, a student from the research group of Thomas J. Cook, assistant professor in the department of pharmaceuticals at the Ernest Mario School of Pharmacy, has received a Pfizer Summer Undergraduate Research Fellowship (SURF). This year's award went to Lemuel Liou. Yvonne Tsao won the fellowship in 2003. The two are fourth-year honors students in the Pharm.D. program.

Sherry White, Labor Studies, SMLR, received the Baltimore City Mayoral Fellowship.

Kristen Block, English, Graduate School-New Brunswick, received a John Carter Brown Library Grant, a Harvard Short Term Grant for Research in Atlantic History, and a Spanish Ministry of Foreign Affairs Research Grant.

Emmanuel Ndiema, Anthropology, Graduate School-NB, was awarded a three-year fellowship from the Wenner-Gren Foundation.

Greg Swedberg, History, Graduate School-NB, received a Fulbright-Hays Fellowship.

Noelle Molé, Anthropology-Graduate School-New Brunswick, and Marc Shur, Anthropology, Graduate School-New Brunswick, were awarded Fulbright Fellowships.

### **New Administrative Appointments/Searches Underway & Completed**

Jonathan Alger was appointed Vice President and General Counsel at Rutgers, effective January 1, 2005. He fills the vacancy created by David Scott's retirement as University Counsel.

Jeffrey C. Apfel was appointed Senior Vice President and Chief Financial Officer, effective September 6. His appointment fills the vacancy created by Joanne Jackson's retirement as senior vice president and treasurer earlier this year.

Dr. Gregory Blimling was appointed as Rutgers' new Vice President for Student Affairs, effective July 12.

After a comprehensive and competitive national search, Professor Richard De Lisi was appointed Dean of the Rutgers Graduate School of Education, effective January 18, 2005. Dr. De Lisi has been the Acting Dean of the GSE since July 2003.

The search process for the Dean of Cook College is nearing an end. It is anticipated that a Dean will be named in the spring semester. Dr. Keith Cooper continues in an Acting capacity.

Dr. Mary Edna Davidson, Professor and Dean of the School of Social Work, has announced her intention to step down as Dean at the end of the 2004/2005 academic year. She will remain on the faculty and serve as Director of the Center for Children and Families on the New Brunswick/Piscataway Campus. A search committee has begun work on finding her replacement.

Vice President for Research, James Flanagan, has retired. A search committee has been formed to find the new Vice President for Research and Graduate Education, reflecting a closer alignment between the university's research operations and its education of graduate students.

Kim Manning-Lewis was been appointed vice president for university relations. She will continue to oversee the department's operations, which include presidential communications, media relations, publications, photography, Web programs, trademark licensing, Rutgers Magazine, Campus Information Services, the RU-TV campus cable network, community affairs, advocacy programs and the Focus faculty-staff newspaper.

Isabel Nazario, who has served as founding director of the Rutgers Center for Latino Arts and Culture since 1992, and as executive director of the Office for Intercultural Initiatives since 2002, was been appointed to the newly created position of Associate Vice President for Academic and Public Partnerships in the Arts and Humanities.

### **Undergraduate Initiatives**

Jerome and Lorraine Aresty, longtime supporters of Rutgers, have pledged \$5 million to enhance undergraduate research and Jewish Studies at the university and to improve facilities for honors students and student athletes.

The task force studying the structure and functions of undergraduate education on the New Brunswick/Piscataway campuses has continued its work throughout this year. Part of the Initiative on Undergraduate Learning and Life, the task force consists of 35 members, including faculty, staff, students and administrators. Nearly 40 more have been added to working groups within the task force, which considers every aspect of undergraduate education. Each of the working groups has met with groups of students, staff, and constituents in the State to discuss the issues and challenges facing faculty, staff, and students involved in educating undergraduates.

### **New Centers/Institutes**

A groundbreaking ceremony was held this year for the new headquarters of Rutgers' Center for Advanced Infrastructure and Transportation (CAIT), which initiates the next stage in the growth of Rutgers University as a transportation research leader. The \$4.3 million, 15,000-square-foot, two-story building will rise in an empty area near the Civil Engineering building off Bowser Road on the Busch campus; completion is scheduled for May 2005. Funding is being provided by Rutgers, federal and state departments of transportation, and transportation industry groups.

The State has supported the creation of the Stem Cell Institute of New Jersey. The institute, operated by Rutgers and the University of Medicine and Dentistry of New Jersey (UMDNJ), is the first state-supported research facility of its kind. With the proposed funding, Rutgers and the University of Medicine and Dentistry of New Jersey (UMDNJ) have moved to the forefront of a biomedical research revolution that promises new treatments and cures for a host of devastating diseases and disorders.

Last spring, the university established a new research and training center, the Institute for Advanced Materials and Devices (IAMD). The primary mission of the Institute is to advance interdisciplinary research at the forefront of modern materials and devices. This is a joint initiative of the Faculty of Arts and Sciences-New Brunswick and the School of Engineering. The Institute builds on Rutgers' strengths in materials science and surface chemistry to address issues in multifunctional devices, sensors and nanotechnology as applied to information services, energy systems, defense, the life sciences and environmental protection.

The university has also identified the following areas as centers of excellence at Rutgers: early childhood education and literacy; homeland security and school security; and nutrition, obesity and eating disorders.

### **Academic Excellence Fund**

The Academic Excellence Fund program was continued for a second year. We once again set aside \$3 million to fund a limited number of initiatives directed at advancing academic excellence.

The faculty response to this program has been extraordinary, with requests far exceeding the available resources. Last year, we funded 37 out of 127 submitted proposals (21 in New Brunswick). In the current round, 33 out of 99 submitted proposals were selected to receive funding (22 in New Brunswick + 1 joint project with RU-Newark).

In selecting proposals to be funded, emphasis was placed on projects that seeded development of outstanding new academic initiatives, established vital core resources or facilities that serve multiple groups, or significantly enhanced interdisciplinary activities. Key considerations were whether the project could be

leveraged to lead to sustained new academic programs and research projects, and the extent to which the project could not be otherwise funded through regular institutional resources or external funding mechanisms. Initiatives that cut across the boundaries of schools, colleges, and disciplines and that advance novel multidisciplinary interactions and ways of thinking were encouraged.

Projects receive dollar awards ranging from about \$25,000 to a maximum of \$250,000, and can be carried over multiple years. The full list of AEF projects funded in 2004-05 appears in Attachment 1.

### **Significant Research/Grants/Faculty Projects**

The English department in New Brunswick will undertake significant new initiatives over the next several years thanks to a \$1 million grant from the Andrew W. Mellon Foundation aimed at raising the national stature of the department. The grant will fund three major projects: recruitment of distinguished senior scholars in medieval, Renaissance and African-American literatures; \$4,000 summer stipends over the next four years for 20 graduate students working on their Ph.D. dissertations; and hosting a national conference in fall 2006 on "The Futures of English," inviting scholars from around the world to explore the directions literary studies may take in this new century.

The Ernest Mario School of Pharmacy at Rutgers ranks among the nation's top institutions in research dollars awarded by the National Institutes of Health (NIH), according to the latest rankings released by the American Association of Colleges of Pharmacy (AACP). The association's NIH list for fiscal year 2003, an annual ranking of the 89 accredited pharmacy programs in the United States, puts Rutgers in the top 10 percent in total NIH grants and contracts awarded. The school ranks eighth with \$7.5 million in grants, ahead of such peer Association of American Universities public members as Purdue, the University of Michigan, Ohio State and the University of North Carolina–Chapel Hill, according to the AACP, an Alexandria, VA-based national organization representing pharmaceutical educators.

A Cook College program that supports natural products research and development in Africa has been awarded a \$2.5 million, 5-year contract from the United States Agency for International Development (USAID). The contract will support partnerships that provide expertise in developing value-added food products and establishing safety and quality standards in production of food products for African and international markets. The contract funds a new program, "Partnership for Sustainable Economic Growth in Africa through Natural Products Development." This program will initially focus on both Western Africa (Ghana and Senegal) and Southern Africa (South Africa, and Zambia), with an additional satellite program in Rwanda. It will help develop products that are based upon the region's unique ethnic and traditional natural products, teas, spices and flavorings, aromatic oils, medicinals, and plant based cosmetic ingredients.

Rutgers University's Food Innovation Center has received a \$497,906 grant from the United States Department of Agriculture (USDA) to establish a Training and Education Center and a food and agribusiness network. The network will originate from the center's planned business incubator facility in Bridgeton to satellite sites in rural communities in Atlantic, Burlington, Cape May, Gloucester, Mercer and Salem counties. This is the first time that New Jersey has received a grant from the USDA's Distance Learning and Telemedicine (DLT) program, which has awarded funding to assist rural residents in 45 states and two US territories.

The U.S. Environmental Protection Agency (EPA) awarded \$900,000 to a coalition of Rutgers University and Cornell University experts and the New Jersey Department of Environmental Protection (DEP) to improve

water quality in the upper Passaic River. The grant will be used to develop, implement and evaluate a pollution trading program in the non-tidal portion of the Passaic River. The program will establish a trading system geared toward achieving water quality standards for phosphorous in the Passaic Watershed.

Ecologists at Rutgers' Cook College and New Jersey Agricultural Experiment Station (NJAES) and botanists from Brooklyn Botanic Garden have been selected as the winning team in the international competition to design the new Forest Park for the 2008 Beijing Summer Olympic Games. The ecologists and botanists are affiliated with the Center for Urban Restoration Ecology (CURE), a collaboration between Rutgers ecologists and Brooklyn Botanic Garden botanists. Working in partnership with Sasaki Associates, the eminent landscape architecture and planning company, the CURE team formulated the ecological basis of the new park, including lake, stream, meadow, and woodland habitats. They received the Award of Excellence in the competition for the natural landscaping of the 2,200 acre site--about three times the size of New York City's Central Park. There were 51 competitors, worldwide, judged by a jury reporting to the Beijing Municipal Commission of Urban Planning. Presently, the landscape design plan is being implemented on the vast site.

Michael Littman, Computer Science, FAS-NB, received a \$1.4 million award from the Defense Advanced Research Projects Award (DARPA) for "Learning to Create Knowledge: Bridging the Representation Gap."

Dimitris Metaxas, Computer Science, FAS-NB, was awarded a \$1.6 million ITR award from NSF, "ITR: Advances in Recognition and Interpretation of Human Motion."

Joseph Rosenstein, Mathematics, FAS-NB, was awarded \$10 million grant from the National Science Foundation to create "MetroMath: The Center for Mathematics in America's Cities."

**Research and External Funding Summary**

In 2004, grants awarded to faculty and programs at the University reached \$257.1 million; 89% of these grants were awarded to the New Brunswick campus, which played a major role in achieving this extraordinary level of support. The large number of significant awards in highly competitive areas testifies to the excellent research, scholarship, and intellectual leadership of the faculty.

**TABLE 1  
EXTERNAL FUNDING BY SECTOR, UNIVERSITY-WIDE**

	FY2003	FY2004
FEDERAL	\$151.6	\$159.7
STATE OF NEW JERSEY	\$ 39.3	\$ 39.3
CORPORATIONS	\$ 18.9	\$ 15.5
FOUNDATIONS/OTHERS	\$ 48.8	\$ 42.6
<b>TOTAL</b>	<b>\$258.6</b>	<b>\$257.1</b>

Federal support for research and development rose to \$159.7 million from \$151.6 million in the previous year. State support for research and development remained constant in FY2003 and 2002. Foundation support rose dropped this year, from \$48.8 million in FY2003 to \$42.6 million this year. Table 1 shows the



comparisons for each year. As in past years, public funding remained the mainstay of support for academic research and development. Overall, 82% (\$130.9 of 159.7 million) of Federal support derived primarily from the National Institutes of Health (NIH), the National Science Foundation (NSF), and the Department of Defense (DOD). Table 2 indicates the amounts awarded by these three organizations university-wide.

**TABLE 2  
THREE HIGHEST SOURCES OF FEDERAL FUNDING, UNIVERSITY-WIDE  
FY 2004**

<u>SOURCE</u>	<u>FUNDING LEVEL</u> (in millions)
NIH	\$70.1
NSF	\$49.8
DOD	\$11.0

A significant number of faculty members receive large awards from Federal Agencies and corporations every year. Among the list of the 20 largest single awards to PIs in 2004, 18 were awarded to New Brunswick faculty (see Table 3).

**TABLE 3  
FY 2004 TOP INDIVIDUAL AWARDS  
BY NEW BRUNSWICK PRINCIPAL INVESTIGATORS**

<b>Montelione, G.</b> Center for Advanced Biotechnology & Medicine, “Structural Genomics in Eukaryotic Model Organisms”	DHHS-PHS-NIH-NIGMS	\$8,993,411
<b>Berman, Helen M.</b> FAS-NB/Chemistry & Chemical Biology, “Macromolecular Structure Database (MSD)”	NSF	\$5,126,617
<b>Tischfield, Jay</b> NBFAS/Life Sciences/Genetics, “NIMH Center for Collaborative Genetic Studies”	DHHS-PHS-NIH-NIMH	\$4,576,583
<b>Reinhard, Susan</b> Institute for Health, Center for State Health Policy “National State to State Technical Assistance Program for Community Living”	DHHS-PHS-CMS	\$4,399,959
<b>Tischfield, Jay</b> FAS-NB/Life Sciences/Genetics, “NIDA Center for Genetic Studies”	DHHS-PHS-NIH-NIDA	\$3,807,853
<b>Rosenstein, Joseph G.</b> Center for Math Science & Computer Education, “Mathematics in America's Cities: Children, Teachers, and Communities”	NSF	\$3,661,624
<b>Barnett, William S.</b> GSE-ETPA, “The National Institute for Early Education Research”	Pew Charitable Trust	\$3,600,000

<b>Holm, Robert E.</b>	USDA	\$2,813,800
Agriculture Experiment Station/IR-4, "Office of Clearance of Chemicals & Biologics for Minor Uses/Pesticides"		
<b>Keenan, Debra P.</b>	SNJ-DHS	\$2,624,445
Agriculture Experiment Station /Crop Science, "Food Stamp Nutrition Education Program"		
<b>Berman, Helen M.</b>	NSF	\$2,430,399
FAS-NB/Chemistry & Chemical Biology "Macromolecular Structure Database"		
<b>Firestone, William A.</b>	NSF	\$2,401,000
GSE-ETPA, "New Jersey Mathematics, Science Partnership"		
<b>Tischfield, Jay</b>	DHHS-PHS-NIH-NIDDKD	\$2,007,091
FAS-NB/Life Sciences/Genetics, "NIDDK Genetics Repository"		
<b>Cizewski, Jolie A.</b>	Department of Energy	\$1,949,669
FAS-NB/Physics and Astronomy, Center of Excellence for Radioactive Ion Beam Studies for Stewardship Science		
<b>Kato, Naohiro</b>	NSF	\$1,760,573
Biotechnology Center for Agriculture & Environment, "Chromatin Charting: Organization and Dynamics of Plant Nuclear DNA in situ"		
<b>Raychaudhuri, Dipankar</b>	NSF	\$1,693,973
ENG/Electrical and Computer Engineering, "ORBIT: Open-Access Research Testbed for Next-Generation Wireless"		
<b>Danforth, Stephen C.</b>	SNJ-CHE	\$1,567,296
ENG/Ceramics, Nanomaterials Science and Engineering (NMSE) An Enabling Paradigm Shift for Photonic		
<b>Shatkin, Aaron J.</b>	GRANTS IN AID Various	\$1,561,881
Center for Advanced Biotechnology & Medicine		
<b>Yang, Chung S.</b>	DHHS-PHS-NIH-NCI	\$1,459,410
PHARM/Chemical Biology and Pharmacognosy, "Inhibition of Carcinogenesis by Tea and Tea Constituents - Program Project"		

### **Technology Transfer**

University income from royalties generated by patents can be leveraged by the university to further its research and development efforts. Our office of Corporate Liaison and Technology Transfer (OCLTT) reports that Rutgers ranks high among public AAU institutions in terms of the dollar amount of royalties received. In FY 2003/2004, the University's patenting and licensing activity continued to grow.

174 and 167 new invention disclosures were submitted to OCLTT in FY 2003 and 2004, respectively

114 and 110 U.S. patent applications were filed in FY 2003 and 2004, and 34 and 28 new U.S. patents were issued in FY 2003 and 2004, respectively.

The value of royalties received in FY03 was \$5.4 million and FY04 was \$4.3 million and publicly traded equity acquired through licensing at the end of FY03 was valued at over \$2.2 million. A significant portion of this income was derived from patents and licenses developed by New Brunswick faculty.

19 and 25 patent license and option agreements were executed in FY 2003 and 2004, respectively.

Cumulatively, 46 new companies have been spun off from Rutgers, based on Rutgers technology, and another 2 are in negotiation.

### **New Programs, Nomenclature and Program Changes, New Brunswick Campus**

Rutgers will tackle a projected shortage of librarians by offering an online master's degree in library and information science beginning in the fall of 2005. The degree will be available through the School of Communication, Information and Library Studies (SCILS). The program will be funded by a \$969,773, three-year grant from the federal Institute of Museum and Library Services. Rutgers' graduate library program is rated among the 10 best in the United States by U.S. News & World Report.

The major in Genetics and Microbiology split into two independent programs, B.A. in Genetics and B.S. in Microbiology.

The Department of Family and Consumer Sciences (Rutgers Cooperative Extension) changed to the Department of Family and Consumer Sciences.

The major in Natural Resource Management (Cook College) changed to Ecology and Natural Resources.

The Ph.D. program in BioMaPS (Graduate School-New Brunswick) changed to the program in Quantitative Biology.

The Statistics program (Graduate School-New Brunswick) changed to Statistics and Biostatistics.

The major in Industrial Engineering changed to Industrial and Systems Engineering (School of Engineering).

The Teaching Excellence Center has been renamed the Center for the Advancement of Teaching (CAT), which better reflects its mission and purpose. This new name went into effective with the spring 2005 semester. Professor Gary A. Gigliotti will be the Executive Director of this office, and will work closely with Dr. Charles Hedrick of the Office of Instructional and Research Technologies. The Center has three divisions: the Division of Faculty Development and Educational Assessment; The Division of Instructional Technology is directed by Joe Delaney and includes the Enhanced Classroom Support office, which is managed by Matt Wilk. Marcie Anszperger directs the Division of Technology Training. All three divisions report to the Executive Director.

## **Other**

### **External Reviews**

A new process for external reviews has been instituted this year, with focused global reviews replacing regular departmental reviews.

### **Rutgers Response to the Tsumani Disaster**

Rutgers has established a fund to help members of the university community affected by the disaster. Donations to the Rutgers University Tsunami Relief Fund are providing assistance with tuition, late fees, books, rent, international telephone charges and travel. After the immediate financial needs are met for Rutgers students, faculty, and staff, the fund will offer support to educational institutions in south Asia that may have been seriously damaged or destroyed. The fund may also offer modest grants to Rutgers students who wish to implement reconstruction projects in the affected areas.

Rutgers is participating in a videoconference dialogue with victims of the South Asian tsunami to strengthen public awareness of the need for development in South Asia and to ensure that the generosity inspired by the disaster continues even after the region leaves the headlines. The videoconference is open to all and will take place from 8 to 10 a.m. in the Janice H. Levin Building, Room 219, on the Livingston campus, and the Labor Education Center, Room 133, on the Douglass campus. Other participants include University of Colombo (in Sri Lanka), Indiana University, Northwestern University, Earlham College, Yale University, Tulane University, University of Pennsylvania, University of Texas, the World Bank, and Oxford University.

In addition, Rutgers is planning a major university-wide academic conference focused on the tsunami. Rutgers faculty experts in geology, geography, Southeast Asian studies, natural disasters, and economics will engage in dialogue aimed at increasing our collective understanding of both the physical and human aspects of the disaster and its multiple impacts.

## **Background Data**

### **Student Data** (See Attachment 2)

In fall 2004, the total number of students in the New Brunswick/Piscataway campuses was 34,696, with 26,813 undergraduates and 7,883 graduate students. This reflects a decrease in number of 622 since 2003 (552 fewer undergraduates, 70 fewer graduate students). This is the third year in a row that undergraduate enrollments have declined since the record high undergraduate enrollment in fall 2001 (28,352). (5 year comparison chart appears in Attachment 2)

In fall 2004, 90.1% of undergraduates were in-state students and 9.9% were out of state. Among graduate students, 61.9% were in-state and 38.1% out of state. In fall 2003, 89.9% of undergraduates were in-state, 10.1% out of state. Among graduate students, 61.7% were in-state and 38.3% were out of state.

Full-time/part-time student breakdowns follow.

New Brunswick Undergraduates: Full-time: 24,416; Part-time: 2,397

New Brunswick Graduate Students: Full-time: 3,991; Part-time: 3,892

The fall 2004 average SAT scores of enrolled first-year New Brunswick students follow.

Verbal: 593

Math: 621

Composite: 1214

**Degrees Conferred** (See Attachment 3)

In 2003-2004, 7,310 degrees were awarded in New Brunswick, 5732 bachelor degrees and 1578 advanced degrees. In 2002-2003, 7240 degrees were awarded in New Brunswick, 5848 bachelor degrees and 1392 advanced degrees.

**Faculty** (see Attachment 4)

In fall 2004 there were 1537 full-time faculty on the New Brunswick/Piscataway campuses.

During the 2003-2004 academic year, 98 new faculty members were appointed university-wide, 67% (66 of 98) of them were in New Brunswick (including Cook extension and the Libraries).

Among these 66 new faculty members in New Brunswick, 31 (46%) were male and 35 (52%) were female; 49 (74%) were white, 12 (18%) were Asian, 3 (5%) were African American, and 2 (3%) were Hispanic.

**RUTGERS UNIVERSITY  
ACADEMIC EXCELLENCE FUND AWARDS 2004-05**

<p><b>Advancing Rutgers' Mathematical Leadership: The Bridge to the Future</b> (Richard Falk, FAS-NB) To help advance the department's position as a leader in mathematics education and research and aid in the pursuit of academic excellence by providing for new faculty hires in strategically developed areas in advance of the faculty retirements anticipated over the next 5 years.</p>	<b>\$250,000</b>
<p><b>Aerodynamically-Enhanced Plasma Processing of Nano-Coatings/Powders/Energetics</b> (Stephen Tse, SOE) To support multidisciplinary research and increased collaboration in synthesis, design, characterization, and modeling of nanostructured coatings, powders and energetics, establishing Rutgers as a premier center for both specific applications and scalable, high-throughput reactors.</p>	<b>\$50,000</b>
<p><b>A BIAcore Biosensor for Biomolecular Interactions</b> (Longqin Hu, Pharmacy) and <b>Surface Plasmon Resonance Biosensor Technology to Support Proteomics Research</b> (Nilgun Tumer, Cook College) (cooperative proposal) To purchase a state-of-the-art Biacore SPR biosensor for analysis of biomolecular interactions, providing detailed information on binding events for use as a shared instrument by multiple faculty across disciplines, departments and schools.</p>	<b>\$250,000</b>
<p><b>Bio-Math Connect Institute</b> (Fred Roberts, DIMACS) To support research into the impact of a multidisciplinary program that explores connecting the mathematical and biological sciences at the high school level. The program will run an experimental summer program in 2005, establishing Rutgers as a national leader in pre-college bio-math.</p>	<b>\$100,000</b>
<p><b>Camden Early Childhood Research Learning Academy</b> (Gloria B. Santiago, Center for Strategic Urban Community Leadership) To support establishment of a facility that will serve as a model for preparing children younger than 5 years old for success in education.</p>	<b>\$75,000</b>
<p><b>Center for Analysis and Design of Social Institutions</b> (Barry Sopher, FAS-NB) To support the establishment of an interdisciplinary Center to study decision-making processes. Particular focus will be given to formal mechanisms with specific rules, such as a stock market or an electoral system.</p>	<b>\$120,000</b>
<p><b>Center for Engineering On-Line Diagnostics to Control Advanced Materials Manufacturing</b> (Timothy Wei, SOE) To initiate research and outreach activities related to mechanical and aerospace engineering sciences' project GOLDCAMP, Generating On-Line Diagnostics to Control Advanced-Materials</p>	<b>\$50,000</b>

Manufacturing Processes and enhance its viability for ongoing federal funding.

**Center for Health Services Research on Pharmacotherapy, Chronic Disease Management and Outcomes** **\$140,000**

*(Stephen Crystal, IHCPAR)*

To support planning and development for a Center that will bring together existing strengths throughout Rutgers to address the mismatch of health treatment development and delivery. Objectives include quality improvement and more-effective use of medications, particularly for chronic health conditions.

**Childhood Studies Program Development** **\$125,000**

*(Margaret Marsh, FAS-C)*

To help create a program that will provide advanced theoretical and methodological study of children and childhood within historical, contemporary, interdisciplinary, multicultural, state, national, and global contexts.

**Climate Change: deforestation, agricultural productivity and the interface between the results of scientific research and its users in government, business, and private institutions** **\$90,000**

*(Richard Langhorne, Center for Global Change and Governance – Newark)*

To enhance data collection, recording and public dissemination, resulting in a better understanding of deforestation and its global effects.

**Collaborative Initiative to Promote Global/International Education at Rutgers** **\$50,000**

*(Barbara Cooper, FAS-NB)*

To support Rutgers faculty in building a community of researchers engaged in global inquiry into issues normally studied by individuals in a more local context (e.g., ethnic conflict, integrating women in democracy, global migration and national identity). The goal is to both strengthen research collaboration and to build a coherent curricular program, particularly at the graduate level.

**Conference on Free Speech in Wartime** **\$50,000**

*(Raymond Solomon, School of Law-Camden)*

To help fund a two-day conference on this topic in January. The timeliness of the topic and exceptional caliber of the twenty speakers are expected to attract wide interest nationally and internationally.

**Controllable Wettability of ZnO Nanostructured Smart Surfaces** **\$150,000**

*(Yicheng Lu, LSM/IAMD)*

To support an interdisciplinary research initiative focusing on the synthesis and applications of ZnO nanostructured smart surfaces, and to advance the university's efforts in nanotechnology and materials science.

**Decentralized Collaboratory for Investigative Research in Cancer Biology and Drug Discovery** **\$50,000**

*(Manish Parashar, SOE)*

To advance tissue microarray (TMA) technology through design, development, deployment and evaluation of *OncoMiner*, a peer-to-peer curator for automatically characterizing,

quantifying, indexing, sharing, and associative mining of decentralized cancer databases and digitized specimens. The aim is improved understanding of the underlying mechanisms of disease progression and drug discovery. Researchers from UMDNJ and the Cancer Institute of NJ are project collaborators.

**Department of Classics Visual Studies Teaching Initiative** **\$45,000**

*(Corey Brennan, FAS-NB)*

To support the establishment of a comprehensive slide digitization and meta data markup project, conducted in coordination with RUL Technical and Automated Services. This library of archival quality digitized images will be available to all Rutgers faculty and students, with a subset available for distribution via CD-ROM to public K-12 Latin programs throughout NJ.

**Detection of Non-Palpable Tumors and 3D Reconstruction** **\$50,000**

*(Assimina Pelegri, SOE)*

To establish Rutgers as a premier center for advanced technologies enabling tumor detection, as well as modeling and reconstruction of tumorous tissues. The vehicle for carrying this out this is an efficient method that utilizes profiled pressure waves to develop a safe, non-invasive technology for breast tumor detection.

**Feasibility Study to Establish a Freight Transportation Center of Excellence at Rutgers, The State University of New Jersey** **\$160,000**

*(Martin Robins, Bloustein School)*

To develop a viable and dynamic interdisciplinary freight program that would draw on existing strengths and capabilities, and match them with regional and national freight stakeholders' needs.

**Functional Nanotubes for Nano-bio-engineering** **\$50,000**

*(Manish Chhowalla, SOE)*

To support ground-breaking research into the functionalization for carbon nanotubes and provide A springboard for future interdisciplinary research involving multiple investigators at Rutgers and UMDNJ. The research is expected to attract external funding and underpin a number of activities related to the new IAMD.

**Governor's School of Business** **\$50,000**

*(Milton Leontiades, School of Business-Camden)*

To help create a program for gifted and talented high school students who have completed their junior year and provide them with an enriched educational opportunity. A Governor's School for Business would be the seventh and latest addition to existing Governor's Schools, and the only one dedicated to business education.

**Institute for Computer and Information Security (ICIS)** **\$180,000**

*(Haym Hirsch, FAS-NB)*

To support the creation of one of the world's leading centers for research and education in computer security. The center will channel talent from across the University into a single focus to stimulate research initiatives, improve federal funding, provide educational opportunities, catalyze technology transfer and economic growth, and achieve world wide visibility and excellence for Rutgers in computer and information security.



<p><b>Instruments for Cancer Prevention Research: Mouse colonoscopy system and high-throughput screening system</b></p> <p><i>(Chung Yang, Pharmacy)</i></p> <p>To support the acquisition of a video colonoscopy system (for mice) and a high-throughput screening system to further enhance cancer prevention research. These systems will enable the non-invasive monitoring of cancer development in mice and rats through their lives, and more efficient screening of cancer preventive agents.</p>	<p><b>\$40,000</b></p>
<p><b>Multiphoton Microscopy for Imaging of Microthrough Nanoscale Biosystems</b></p> <p><i>(Prabhas Moghe, SOE)</i></p> <p>To significantly enhance the multiphoton imaging instrumentation to enable investigation of cell-material interactions in real-time and in combinatorial formats. These enhancements will have a major impact on researchers in a wide spectrum of disciplines at Rutgers as the Multiphoton Microscopy facility is being developed into a full-service facility.</p>	<p><b>\$35,000</b></p>
<p><b>Neighborhood Redevelopment in the Georges Road Area through the Institute for New Brunswick Development</b></p> <p><i>(Radha Jagannathan, Bloustein School)</i></p> <p>Continued support for the Institute for New Brunswick Development. Emphasis will be on the implementation of Recommendation II in the George's Road Gateway Planning Project Report: the reclamation of Pine Street Recreation Park for use by neighborhood residents. A model for establishment of neighborhood redevelopment projects.</p>	<p><b>\$50,000</b></p>
<p><b>Newark X-Ray Structure Facility</b></p> <p><i>(W. Phillip Huskey, FAS-N)</i></p> <p>To purchase, with matching funds from NJIT, an X-ray diffractometer for nanomaterial research, training in molecular structure determination, and to promote shared instrumentation projects between NJIT and Rutgers-Newark.</p>	<p><b>\$150,000</b></p>
<p><b>Organizational Collaboration and the Quality of Health Care Delivery</b></p> <p><i>(Saul Rubenstein, SMLR)</i></p> <p>To support a cross-disciplinary study of the organizational components of quality problems in NJ patient care and to develop and test solutions.</p>	<p><b>\$100,000</b></p>
<p><b>Prisoner Reentry Research Planning Initiative</b></p> <p><i>(Mercer Sullivan, School of Criminal Justice – Newark)</i></p> <p>To support the implementation of research and action projects that contribute to a broad and rigorous research base that informs public policy.</p>	<p><b>\$60,000</b></p>
<p><b>Rutgers Ethics Initiative: A Proposal to Establish Rutgers as a Nationally Prominent Center for the Study and Practice of Ethics</b></p> <p><i>(Edwin Hartman, RBS-NB/Newark – Ruth Mandel, Eagleton Institute of Politics)</i></p> <p>Joint Proposal: Eagleton Institute &amp; PBEC</p> <p>To establish Rutgers as a nationally recognized center of excellence for research and teaching in ethics and its applications in business, politics, and other areas. The project will promote greater consideration of ethical issues among faculty and students.</p>	<p><b>\$110,000</b></p>

<p><b>Setting the Stage for Informed, Objective Deliberation on Property Tax Reform in New Jersey</b>  <i>(Paul Tractenberg, Rutgers School of Law – Newark)</i>  To advance scholarly research on education policy issues, and inform public discussion of those issues, in the area where school finance and education reform intersects with tax reform.</p>	<p><b>\$70,000</b></p>
<p><b>Strengthening the Basic Writing and Mathematics Programs in NCAS and UCN</b>  <i>(Annette Juliano, FAS-N)</i>  To assist initiatives designed to support, strengthen, and improve students’ skills and success in English and mathematics. These initiatives are fundamental to the success of the undergraduate curriculum.</p>	<p><b>\$100,000</b></p>
<p><b>Technology NOW: Developing the Technological Expertise and Offerings of the College of Nursing for the 21<sup>st</sup> Century</b>  <i>(Wendy M. Nehring, Nursing)</i>  To increase technological expertise in the form of training in and delivery of additional online instruction, the purchase and use of PDA’s for clinical practice, and development in aspects of use of the human patient simulator.</p>	<p><b>\$60,000</b></p>
<p><b>Towards a Practical Quantum Computer: The Design and Realization of Fault-Tolerant Qubits</b>  <i>(Lev Ioffe, IAMD)</i>  To support a series of studies to develop, model, design and characterize a family of fabrication-friendly fault-tolerant qubits which are indispensable for the practical realization of a working quantum computer. The fundamental limitations/strengths of conventional qubit designs will also be studied.</p>	<p><b>\$90,000</b></p>
<p><b>Triple Quadrupole GC/MS for Analysis of Trace Organics in Environmental Matrixes</b>  <i>(Lisa Totten, Cook College)</i>  To purchase a gas chromatograph with tandem mass spectrometer for use in quantifying trace organic compounds in environmental samples, and further research in environmental and natural sciences.</p>	<p><b>\$175,000</b></p>
<p><b>Wireless Ecosystems: Distributed Resource Sharing, Self-Organization, and Security in Networks of Cognitive Radios</b>  <i>(Dipankar Raychaudhuri, SOE/WINLAB)</i>  To strengthen Rutgers design, analysis and experimental capabilities in key technology areas, with emphasis on the wireless ecosystem as a unifying concept.</p>	<p><b>\$50,000</b></p>

## Attachment 2

**NEW BRUNSWICK ENROLLMENT (HEADCOUNT) BY UNIT  
FALL 2000 THROUGH FALL 2004**

	Fall 2000	Fall 2001	Fall 2002	Fall 2003	Fall 2004
<i>Undergraduate</i>					
Douglass	3,226	3,354	3,251	3,033	2,952
Livingston	3,791	4,070	4,028	3,886	3,821
Rutgers	10,875	10,740	10,496	10,032	9,587
UC-NB	3,256	3,165	3,329	3,574	3,550
Cook	3,119	3,253	3,122	3,014	2,951
Engineering	2,265	2,337	2,428	2,417	2,379
MGSA	625	651	626	583	617
Pharmacy*	782	782	790	826	956
<b>Total Undergraduate</b>	<b>27,939</b>	<b>28,352</b>	<b>28,070</b>	<b>27,365</b>	<b>26,813</b>
	Fall 2000	Fall 2001	Fall 2002	Fall 2003	Fall 2004
<i>Graduate</i>					
Pharmacy	205	245	297	378	373
EJB	146	147	176	166	184
GS-NB	3,589	3,596	3,865	3,890	3,845
GSAPP	185	205	199	211	232
SCILS	403	393	463	443	484
SMLR	239	280	284	286	320
GSE	1,403	1,340	1,393	1,436	1,284
MGSA	247	250	274	293	306
SSW	881	843	865	850	855
<b>Total Graduate</b>	<b>7,298</b>	<b>7,299</b>	<b>7,816</b>	<b>7,953</b>	<b>7,883</b>
<b>TOTAL ALL:</b>	<b>35,237</b>	<b>35,651</b>	<b>35,886</b>	<b>35,318</b>	<b>34,696</b>

\*Phase-in is occurring to 6 year Pharm D. program.

Attachment 3

**NEW BRUNSWICK UNDERGRADUATE DEGREES**

	<b>2002-2003</b>			<b>2003-2004</b>		
	<b>BA</b>	<b>BS</b>	<b>Total</b>	<b>BA</b>	<b>BS</b>	<b>Total</b>
Cook College	33	544	577	39	491	530
Douglass College	593	63	656	661	75	736
School of Engineering	0	415	415	0	452	452
Livingston College	661	188	849	751	136	887
School of Pharmacy	0	117	117	*See Table 3/advanced degrees		
Rutgers College	1904	572	2476	1925	494	2419
University College	512	106	618	502	107	609
<b>Total BA/BS</b>	<b>3703</b>	<b>2005</b>	<b>5708</b>	<b>3878</b>	<b>1755</b>	<b>5633</b>
	<b>BFA</b>	<b>BM</b>	<b>Total</b>	<b>BFA</b>	<b>BM</b>	<b>Total</b>
Mason Gross	103	37	140	80	19	99
<b>Total NB Undergraduate Degrees</b>	<b>3843</b>	<b>2005</b>	<b>5848</b>	<b>3977</b>	<b>1755</b>	<b>5732</b>

*\*2002-2003: Joint BS degrees awarded with the New Brunswick School of Business: Douglass College, 15; Livingston College, 49; Rutgers College, 253; University College 26; Total: 343.  
2003-2004: Joint BS degree awarded with the New Brunswick School of Business: Douglass College, 29; Livingston College, 43; Rutgers College 260; University College 22; Total: 365.*

*2002-2003: Joint degrees awarded with the E.J. Bloustein School of Planning and Public Policy: Douglass College, 6; Livingston College, 10; Rutgers College, 8; and University College, 4. Total: 28.  
2003-2004: Joint degrees awarded with the E.J. Bloustein School of Planning and Public Policy: Cook College, 9; Douglass College, 10; Livingston College, 14; Rutgers College, 18; University College, 12; Total 63.*

*2002-2003: Joint degrees awarded with the School of Communication, Information, and Library Studies: Cook College: 22; Douglass College, 98; Livingston College, 91; Rutgers College, 227, University College, 74; Total: 512  
2003-2004: Joint degrees awarded with the School of Communication, Information and Library Studies: Cook College, 24; Douglass College, 103; Livingston College, 104, Rutgers College, 226; University College, 51; Total: 508*

*2003-2004: Joint degrees awarded with the School of Management and Labor Relations: Douglass College, 20; Livingston College, 21; Rutgers College, 25; University College, 38; Total: 104.*

**NEW BRUNSWICK ADVANCED DEGREES**

DOCTORATE DEGREES	UNIT	2002-2003 NUMBER	2003-2004
Doctor of Pharmacy	EMS	113	171
Doctor of Psychology	GSAPP	23	33
Doctor of Education	GSE	27	28
Doctor of Philosophy	GS-NB	300	310
Doctor of Musical Arts	MGSA	8	11
<b>TOTAL NB Doctorate Degrees</b>		<b>471</b>	<b>553</b>
MASTERS DEGREES	UNIT	NUMBER	
City and Regional Planning	EJB	35	26
City and Regional Studies	EJB	7	3
Public Affairs and Politics	EJB	14	9
Public Policy	EJB	9	12
Psychology	GSAPP	20	27
Education	GSE	280	304
Arts	GS-NB	81	102
Arts for Teachers	GS-NB	9	18
Philosophy	GS-NB	2	4
Public Health	GS-NB	84	68
Science	GS-NB	316	367
Science-Teaching	GS-NB	0	
Fine Arts	MGSA	38	47
Music	MGSA	13	16
Communication & Information Studies	SCILS	41	39
Library & Information Science	SCILS	117	128
Human Resource Management	SMLR	53	80
Labor and Industrial Relations	SMLR	1	0
Labor and Employee Relations	SMLR	24	31
Social Work	SSW	246	292
<b>TOTAL NB Masters Degrees</b>		<b>1390</b>	<b>1573</b>
OTHER DEGREES	UNIT	NUMBER	
Specialist in Education	GSE	2	4
Artist Diploma in Music	MGSA	0	1
<b>TOTAL NB Others</b>		<b>2</b>	<b>5</b>
<b>TOTAL NEW BRUNSWICK ADVANCED DEGREES</b>		<b>1392</b>	<b>1578</b>

Attachment 4

**FULL-TIME FACULTY, NEW BRUNSWICK CAMPUS  
FALL 2003/FALL 2004**

RANK	FALL 2003	FALL 2004
PROFESSOR	722 (47%)	725 (47%)
ASSOCIATE PROFESSOR	397 (26%)	405 (26%)
ASSISTANT PROFESSOR	301 (20%)	293 (19%)
INSTRUCTOR/ASSISTANT INSTRUCTOR	83 ( 6%)	91 ( 6%)
LECTURER	21 ( 1%)	23 ( 2%)
TOTAL	1524 (100%)	1537 (100%)