

RUTGERS UNIVERSITY
ACADEMIC EXCELLENCE FUND AWARDS 2003-04

Analytic Chemistry Facility for Agricultural and Environmental Research <i>(Gerben Zylstra, Biotechnology Center for Agriculture and the Environment, Cook College)</i> To support establishment of a facility to provide analytic capabilities advancing major research programs in environmental science, metabolomics, and biotechnology instruction.	\$120,000
Biogeoscience Research Initiative <i>(Alexander Gates, FAS-N)</i> To support purchase of laboratory and field equipment for studies of the coupling between geophysical, geochemical and biological components of the environment.	\$60,000
Cell Assemblies and Specific Language Impairments <i>(Kenneth Harris, FAS-N)</i> To use mathematical analyses of cellular activity of neuronal populations to investigate mechanisms used in processing speech, and to understand how language-based learning disorders develop.	\$45,000
Center for Computational and Integrative Biology <i>(Joseph Martin, RU-C)</i> To support creation of an interdisciplinary research and graduate program in the area of computational biology. Funds to be used for consultation, interdisciplinary coordination, recruitment, start-up costs and equipment.	\$125,000
Center for Critical Infrastructure Engineering <i>(Ali Maher, Tayfur Altiok, Mike Muller, Haym Benaroya, Eng)</i> To support establishment of a multidisciplinary technology development center in Critical Infrastructure Engineering to promote research in key areas of infrastructure including energy, logistics, transportation and aviation. Partnership with other academic institutions (Princeton, NJIT, Stevens, Rowan), public sector agencies and industry.	\$150,000
Center for Institutional Governance <i>(Greg Mark, Law-N)</i> To support development of the Center for Institutional Governance; initial emphasis of the Center will be on corporate governance issues such as executive compensation and law governing accounting regimes.	\$26,000
Center for Obesity Research and Intervention <i>(M. Friedman, IHCPAR)</i> To help create a new, interdisciplinary research center focused on the etiology, consequences and management of obesity. Collaboration with RWJSM.	\$160,000

<p>Center for Pharmaceutical Management Studies <i>(Mahmud Hassan, RBS-N)</i> To support development of a resource center of pharmaceutical industry expertise; facilitate pharmaceutical management research activities; disseminate information about the pharmaceutical industry to concerned stakeholders.</p>	<p>\$75,000</p>
<p>Center for the Study of Public Security <i>(Leslie Kennedy, RU-N)</i> To support a forum -- including academic, professional, corporate and governmental Stakeholders -- on the social, economic and legal consequences of heightened security and to support a forum on security and the role of the media.</p>	<p>\$66,000</p>
<p>Combinatorial and Parallel Polymer Synthesis <i>(Joachim Kohn, Biomaterials)</i> To support acquisition of an automated parallel polymer synthesizer for use in rapid and efficient production of polymer libraries used in research on new biological and medical materials and medical devices.</p>	<p>\$120,000</p>
<p>Core Facility for Gene Expression Analysis <i>(C.S. Yang, EMSP)</i> To support purchase of equipment to provide state-of-the-art technologies relating to gene expression studies, available to RU scientists, including members of the Center for Cancer Prevention Research, RU science departments, the Cancer Institute of New Jersey, RWJSM, UMDNJ School of Public Health and other investigators.</p>	<p>\$100,000</p>
<p>Europe in the Globalizing World: European Studies at Rutgers University <i>(Jan Kubik, FAS-NB)</i> To support further development of the interdisciplinary European Studies research, educational and outreach program.</p>	<p>\$60,000</p>
<p>Facility for RNAi-Based Functional Genomics <i>(Kenneth Irvine and Richard Padgett, Waksman)</i> To support establishment of a core facility for high-throughput, whole-genome or targeted screens of the effects of suppression of expression of specific genes in model organisms.</p>	<p>\$125,000</p>
<p>FAS Research Office to Support Extramural Funding Opportunities for Humanities and Social Science Faculty <i>(Holly Smith, Michael Beals, Douglas Blair, Barry Qualls and Edward Rhodes, FAS-NB)</i> To support establishment of a research office to provide structural assistance, databases, workshops and other support functions to develop and enhance funding opportunities for research in the humanities and social sciences.</p>	<p>\$60,000</p>
<p>Forensics/Biopreparedness <i>(Felissa Lashley, Nursing)</i> To initiate a specialization at the Master's level and a post-Master's certificate program in forensics/biopreparedness and to purchase a simulation training model for use in development of the program.</p>	<p>\$40,000</p>

<p>Global Legal Studies Program <i>(Claire Dickerson, Law-N)</i> To support academic study and clinical programs in areas that challenge the conceptual framework of the international legal system, including non-conventional violence, workers' rights and transnational commercial pressures.</p>	<p>\$20,000</p>
<p>Graduate Program in American Studies <i>(Charles Russell, FAS-N)</i> To support the new inter-disciplinary M.A. and Ph.D. in American Studies through development of a series of databases for research and by establishment of periodic roundtable discussions to define further the scope of the programs.</p>	<p>\$40,000</p>
<p>Graduate Program in Dance <i>(George Stauffer, MGSA)</i> To develop a Masters of Fine Arts program of excellence in modern dance with a focus on choreography and performance, including technologies of staging, lighting and sound.</p>	<p>\$150,000</p>
<p>Graduate Program in Spanish Bilingualism and Second Language Acquisition <i>(Jose Camacho, Liliana Sanchez, Thomas Stephens, FAS-NB)</i> To help establish a graduate program in bilingualism and second language acquisition focused initially in Spanish and providing training based on cognitive foundations of language and research on methodology for applying this knowledge to real-world situations where language contact is pervasive.</p>	<p>\$40,000</p>
<p>Grid Computing Initiative <i>(Brian Hancock, RU-Libr)</i> To support establishment of a grid computing network within the Center for Electronic Texts in the Humanities, to solve problems involving collaborations using large amounts of text. Working initially with the Philosophy and Classics departments, develop a model for use throughout the academic community.</p>	<p>\$38,000</p>
<p>Initiative in Interdisciplinary Study of Issues of Privacy and Security <i>(Paul Kantor, SCILS)</i> To establish a program of research and education in issues of privacy, safety and security, based on the interplay between human behavioral sciences, information processing and retrieval, natural and computer languages and organizational research.</p>	<p>\$100,000</p>
<p>Institute for New Brunswick Development <i>(Radha Jagannathan, Carol Walker, EJB, and Michael J. Camasso, SSW)</i> To support establishment of an institute that will provide assistance to local community-based institutions, schools, judiciary systems and other agencies with research on data-driven decision-making processes for local development.</p>	<p>\$60,000</p>
<p>Institute on Education Law and Policy <i>(Paul Tractenberg, RU-N)</i> To support research on identification of the elements of successful urban schools and to develop strategies for replication of these successful models.</p>	<p>\$45,000</p>

<p>Institute on Ethnicity, Culture and the Modern Experience <i>(Clement Price, RU-N)</i> To support public intellectual service and scholarship on cultural diversity through programs such as the Gustav Heningburg Fellows Program, Annual Marion Thompson Wright Lecture Series, Teachers as Scholars Program and Newark Reads Program.</p>	<p>\$45,000</p>
<p>Interdisciplinary Research and Training in Visual Science <i>(Eileen Kowler and Dimitri Metaxas, FAS-NB)</i> To help establish a major integrated, interdisciplinary research and educational program encompassing human and computer vision, including development of advanced technical applications in vision -- interfaces, augmented reality systems, machine-vision systems – based on models of human visual performance.</p>	<p>\$125,000</p>
<p>Languages and MOO <i>(Josephine Grieder, FAS-N)</i> To purchase components of a Multi-User-domain Object-Oriented system for use in an interactive writing-based environment in the computer laboratory; initial emphasis will be on use of the MOO with heritage speakers who possess oral competence but lack formal instruction in grammar, reading and writing.</p>	<p>\$29,000</p>
<p>Law and Philosophy Institute <i>(Ray Solomon, Law-C)</i> To further develop a major program to advance knowledge and understanding of legal topics of philosophical significance, with and emphasis on contemporary analytic philosophy, criminal law theory and moral theory, in collaboration with Department of Philosophy, FAS-NB.</p>	<p>\$50,000</p>
<p>Novel Atomic Layer Deposition Apparatus <i>(Yves Chabal, Torgny Gustafsson, Eric Garfunkel, Robert Bartynski, Yicheng Lu, FAB-NB & Eng)</i> To support construction of a unique thin film atomic layer deposition system to permit fabrication, using atomistic concepts, of new functional materials with potential impact on a number of fields of science and engineering.</p>	<p>\$150,000</p>
<p>Numerical Simulation and Acoustic Imaging of Deep-Sea Hydrothermal Plumes <i>(Prosenjit Bagchi, Peter Rona and Karen Bemis, Eng, IMCS and FAS-NB)</i> Support of a new interdisciplinary research program to characterize the transport and mixing of minerals and biota in deep-sea buoyant hydrothermal plumes and a new research and educational initiative in Computational Geophysical Flows. Collaboration with other academic institutions (U Washington) and Federal research laboratories.</p>	<p>\$83,000</p>
<p>Program on Economic Restructuring and Worker Outcomes – PERWO <i>(Adrienne Eaton, SMLR)</i> To develop a research program and support initial demonstration projects focusing on the impact on workers and communities of ongoing economic restructuring in the State of New Jersey.</p>	<p>\$66,000</p>

<p>Public Productivity: Performance Management <i>(Marc Holzer, RU-N)</i> To create a performance measurement infrastructure for municipal governments in New Jersey.</p>	<p>\$40,000</p>
<p>Small Animal Digital Imaging Laboratory <i>(Debra Laskin, EMSP)</i> To support purchase of equipment for a shared core facility providing state-of-the-art technology for non-invasive, real time imaging of cellular and genetic activity in whole animals.</p>	<p>\$160,000</p>
<p>Tailored Carbon Nanotubes: Novel Synthesis Utilizing Real-Time Laser-Based Diagnostics <i>(Stephen Tse, T. Rossmann, J. Shan and A. Pelegri, Eng)</i> To establish a center for optimized manufacturing of carbon nanotubes with specified characteristics, at high rates and reduced costs, for research and industrial application.</p>	<p>\$68,000</p>
<p>Technology and Integrated Arts <i>(Ian Watson, Visual and Performing Arts, Newark)</i> To purchase a dedicated server to provide streaming video and software to allow manipulation of digital files, video cameras and portable video racks for multi-camera productions, and sophisticated editing equipment to create finished professional level work.</p>	<p>\$75,000</p>
<p>Time-Resolved Nanoscale Opto-Mechanical Biosensing Initiative <i>(Zhixiong Guo, Dajun Zhang, and David Denhardt, Eng and FAS-NB)</i> To initiate a Bio-Nano-Opto-Mechanical Program focused on development of sensitive biosensors based on near-field radiation and optical resonance phenomena, characterization of biomolecules on microsphere beads without detection tags, and dynamics measurements of cell deformations on a nanoscale. Collaboration with industry partners.</p>	<p>\$68,000</p>
<p>Towards a Practical Quantum Computer <i>(E. Abrahams, P. Chandra, M. Gershenson and L.B. Ioffe, FAS-NB)</i> To support initiation of a research program to build and characterize a family of protected qubits, elementary building blocks of quantum logic circuitry, whose features are ideal for the practical realization of a working quantum computer.</p>	<p>\$125,000</p>
<p>Walter Rand Institute <i>(Richard Harris, RU-C)</i> To support development of a graduate program in Public Affairs, initial course development, start-up funding for faculty recruitment, infrastructure and promotional costs.</p>	<p>\$125,000</p>