

NKU, OFFICE OF RESEARCH, GRANTS, AND CONTRACTS
PROPOSALS SUBMITTED
FISCAL YEAR 2007 (JUNE 2007)

Department	Principal Investigator	Project Title	Funding Agency	Submission Date	Project Duration	Amount Requested
Associate Prov for Outreach & Dean of Grad Studies	Carole Beere	Regional Stewardship at Northern Kentucky University - Phase 2	Council on Postsecondary Education	06/05/2007	7/1/07 - 6/30/08	\$300,000

The regional stewardship funding will enable NKU to provide more faculty expertise and support for the goals of Vision 2015.

Biological Sciences	Hazel Barton	Kentucky Initiative for Cave and Karst	Kentucky NSF EPSCoR	06/11/2007	4/1/08 - 3/31/13	\$1,444,850
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EPSCoR RII

The Kentucky Initiative for Cave and Karst will undertake a comprehensive multi-level study of a cave system. In collaboration with Western Kentucky University, the University of Kentucky and the National Park Service, the researcher will study Mammoth Cave at the geological, hydrological, and microbial levels to create an integrated model of the cave ecosystem.

Biological Sciences	Hazel Barton	Planetary Protection: The Role of Microbial Mutualism in Starvation and Stressor Survival	Kentucky NASA EPSCoR	06/19/2007	8/1/07 - 7/31/10	\$114,363
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These funds will support cave microbiology projects being carried out by the Barton Lab, including cultivation of previously non-culturable microorganisms and examining if these species are capable of survival under Martian simulated conditions.

Biological Sciences	Hazel Barton	Kentucky Initiative for Cave and Karst	National Science Foundation (NSF)	06/11/2007	10/1/08 - 9/30/11	\$285,535
			Western Kentucky University			

To understand the physiological adaptation that microbial ecosystems undergo in response to nutrient stress, this research will examine cave systems using a combination of molecular and cultivation techniques, along with methods from the geological and chemical sciences.

Department	Principal Investigator	Project Title	Funding Agency	Submission Date	Project Duration	Amount Requested
Biological Sciences	Richard Durtsche	Development of Technologies for the Detection of Trigger Mechanisms of Gastric Activities using Tadpoles as Model of Vertebrate Digestion	Kentucky Science and Engineering Foundation R & D Excellence	06/14/2007	10/1/07 - 9/30/08	\$19,467

This project, as part of a larger research program to investigate the developmental role of gastric activity in vertebrates, will measure changes in acid production by cells of the stomach lining. They will test these technologies to measure pH changes on varying developmental stages of tadpole stomachs using the human proton (H⁺ ion) pump (stomach acid) inhibitor esomyprazole.

Biological Sciences	Miriam Kannan	Analysis of Periphyton Samples from the Ohio River	Ohio River Valley Water Sanitation Commission Users & Biological Programs	06/27/2007	8/1/07 - 7/31/09	\$18,900
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This project will be a contract with the Ohio River Valley Water Sanitation Commission (ORSANCO) to identify and quantify diatoms in 75 samples of periphyton collected from three different Ohio River pools in 2007 and again in 2008. The results will be used to develop a diatom based indicator for large river biological assessment.

Biological Sciences	Joseph Mester	Immunomodulation by Virion Components of Influenza A and Respiratory Syncytial Viruses	National Institutes of Health AREA	06/25/2007	7/1/08 - 6/30/11	\$196,650
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This project is based on the hypothesis that early interaction of specific structural components of the virion with cells of the innate and/or adaptive immune response directly modulates the outcome of the cellular immune response. It focuses on two respiratory pathogens, influenza A virus and human respiratory syncytial virus (HRSV), and its goals seeks to identify specific virion components capable of modulating the cellular immune response and to further define the intracellular signaling pathways triggered by these virion components.

Biological Sciences	Nicole Minor	Fun with Science Camp for African Americans	Coca Cola Foundation	06/13/2007	1/1/08 - 12/31/08	\$16,247
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The "Fun with Science Camp" is designed to expose African American middle school students to participate in hands-on science activities with faculty from Biology, Chemistry, Physics, Geology, and Astronomy.

Department	Principal Investigator	Project Title	Funding Agency	Submission Date	Project Duration	Amount Requested
Business Informatics	Frank Braun	Business Risk Management/ Continuity Planning Software	Kentucky Science and Technology Corporation	06/28/2007	4/1/07 - 3/31/08	\$75,000

This project will develop a business continuance and risk management software application that will enable organizations to proactively manage risks that can impact business operations in the event of an unplanned disruption. This will support the discovery, determination, and documentation process that enables organizational risks to be identified and rated for overall business process impact and continuity requirements.

Chemistry	Heather Bullen	Self-Assembled Monolayers on Stainless Steel 316L: Development of Biofouling Resistant Surfaces	Kentucky Science and Engineering Foundation R & D Excellence	06/14/2007	11/1/07 - 10/31/08	\$13,880
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This project will support students in undergraduate research evaluating the development of nonbiofouling surfaces on stainless steel.

Chemistry	Stefan Paula	Determinants of SERCA inhibition by novel hydroquinone-based compounds	National Institutes of Health AREA	06/21/2007	5/1/08 - 4/30/11	\$196,650
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2,5 disubstituted hydroquinones will be evaluated as potential inhibitors of the enzyme sarco-endoplasmic reticulum ATPase. Computational techniques, enzymology, and organic synthesis will be used to achieve this task. Novel inhibitors can be valuable tools for the study of the enzyme's function and have been suggested to be of therapeutic value for cancer chemotherapy.

Computer Science	Maureen Doyle	Separation Problems on Chessboard Graphs	Kentucky NSF EPSCoR Morehead State University	06/05/2007	5/1/07 - 12/31/07	\$8,430
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In collaboration with Morehead State University, this project will work on various chessboard separation problems, which alter problems like the classic N-Queens Problem by placing obstacles on the chessboard. The project involves questions in both mathematics and computer science, and the results may potentially have technological applications like those of the N-Queens Problem.

Department	Principal Investigator	Project Title	Funding Agency	Submission Date	Project Duration	Amount Requested
Computer Science	Maureen Doyle	Attracting Women to Computer Science through Storytelling	National Science Foundation (NSF)	06/04/2007	1/1/08 - 12/31/08	\$38,200
			Broadening Participation in Computing			

These funds will support a two year demonstration project of weekend seminars and summer workshops for freshman women. The focus of the workshop will be to hear and animate real world stories on issues of access from people who face barriers to their postsecondary education.

Construction Management	Christine Stiegler	Career & Technical Education Professional Development for Teacher Educators at NKU	U.S. Dept of Education	06/18/2007	7/1/07 - 6/30/08	\$5,546
			KY Education Cabinet, Office of Career & Tech Ed			

These funds will provide for professional development of career and technical education faculty at Northern Kentucky University.

Kentucky Campus Compact	Gayle Hilleke	The Roger Grein Student Philanthropy Project	Roger Grein	06/11/2007	5/1/07 - 6/30/11	\$400,000
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Funded by Mr. Grein, the Kentucky Campus Compact will build a sustainable model of academic student philanthropy that can be replicated across the country.

Kinesiology, Health and Educational Foundations	Kimberly Code	Pathways to Home Ownership	Kentucky Real Estate Commission	06/19/2007	7/1/07 - 6/30/08	\$6,000
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This project is the continuation of a grant to develop a professional development delivery system for the Pathways to Home Ownership web-based curriculum project.

Department	Principal Investigator	Project Title	Funding Agency	Submission Date	Project Duration	Amount Requested
Latino Student Affairs	Leo Calderon	Engagement of Edward James Olmos for National Hispanic Heritage Month at NKU - 2007	National Park Service William H. Taft Nat'l Historic Site	06/14/2007	9/1/07 - 10/31/07	\$5,000

These funds will cover the engagement of Edward James Olmos as the keynote speaker for an event during National Hispanic Heritage Month (9/15/2007 - 10/15/2007) at Northern Kentucky University.

Management & Marketing	Vassilis Dalakas	Using Service Learning to Help College Students Become Education Consumers	American Association of Colleges and Universities Engaged Learning, Student Well Being & Student Civ	06/28/2007	8/1/07 - 3/31/08	\$2,300
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This project will educate 35 students to help them become better consumers relating to spending money. They will use this knowledge in service learning projects to educate other students on campus.

Nursing & Health Professions	Denise Gormley	Assesing Health Disparities in underserved Hispanic Women in Northern Kentucky	National Institutes on Aging Health Disparities among Minority and Underserved	06/01/2007	7/1/08 - 10/31/10	\$393,300
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This research will examine the effectiveness of nursing intervention on reducing disparities in health care access, physical activity, diet, and weight among underserved Hispanic/Latino women in northern Kentucky.

Nursing & Health Professions	Marilyn Lottman	The HERI Project: Hispanic Enrichment Resource Initiative	U.S. Department of Health and Human Services Centers for Medicare and Medicaid Services	06/22/2007	9/30/07 - 9/29/09	\$234,400
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This project will foster networks among disciplines to design health care plans specifically for Hispanic Americans regarding cardiovascular health.

Department	Principal Investigator	Project Title	Funding Agency	Submission Date	Project Duration	Amount Requested
Office of Economic Initiatives	Jan Hillard	NetplanKY	Kentucky Office of Homeland Security FY 2007 Homeland Security Grant Program	06/07/2007	9/1/07 - 8/31/08	\$91,000

"NetPlanKy" will create a portal system to aid first responders by providing access to Emergency Operation Plans and Standard Operating Procedures. First responders will access the portal via the internet, gaining access to indexed and hyperlinked versions of various plans.

Office of the Dean of Education & Human Services	Paul Wirtz	Transition to Teaching	Kentucky Department of Education	06/14/2007	7/1/07 - 6/30/08	\$195,000
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This project will focus on identifying, training, and mentoring non-certified teacher candidates employed by federally-identified school districts across Kentucky. NKU will also serve as the fiscal agent for Eastern Kentucky University and Murray State University.

Political Science & Criminal Justice	Julie Raines	Northern Kentucky Regional Mental Health Court Jail Diversion Program	Health Foundation of Greater Cincinnati Mental Illness & Substance Abuse in the C. J. Syst	06/14/2007	8/1/07 - 1/31/09	\$40,489
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The ultimate goal of this project is to implement a regional mental health court to service Boone, Campbell, and Kenton Counties in northern Kentucky to reduce the recidivism rates and to address the real illnesses at hand.

Sociology, Anthropology, & Philosophy	Mary Carol Hopkins	African Art for Kentucky K-12 Teachers	National Endowment for the Arts Learning in the Arts	06/11/2007	7/1/08 - 6/30/10	\$55,810
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This project will present a seven day institute for 50 Kentucky art teachers to work with five Ghanaian artists in a traditional setting on the NKU campus.

Department	Principal Investigator	Project Title	Funding Agency	Submission Date	Project Duration	Amount Requested
Steely Library	Perry Bratcher	W. Frank Steely Library Digital Project	Kentucky Department for Libraries and Archives	06/20/2007	10/1/07 - 9/30/08	\$14,047

Library Automaton Grants

The W. Frank Steely Library Digital Project will broaden user access to Special Collections and Archives. An overhead scanner and new server will enable the library to digitize important collections adding unique content to the knowledgebase of the Commonwealth and beyond.

Total Number of Proposals: 25

Total Funds Requested: \$4,171,064