

**NKU, OFFICE OF RESEARCH, GRANTS, AND CONTRACTS  
PROPOSALS SUBMITTED  
FISCAL YEAR 2005 (NOVEMBER 2004)**

Department	Principal Investigator	Project Title	Funding Agency	Submission Date	Project Duration	Amount Requested
Biological Sciences	Hazel Barton	The Use of PNAs in the Recovery of Nucleic Acids from Extremely Low Biomass Enviroments	Kentucky Science and Engineering Foundation R&D Excellence	11/04/2004	4/1/05 - 3/31/07	\$54,815

The aim of the proposal is to develop new technology, utilizing synthetic peptide nucleic acids, to extract DNA from extremely low biomass environments. The results should help establish an astrobiology database of mineral transformations from microbial activity.

Biological Sciences	Jerry Warner	Advanced Placement Biology	Holy Cross High School	11/04/2004	9/1/04 - 6/30/05	\$4,421
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During the 2004-2005 academic year, the Department of Biological Sciences of Northern Kentucky University will provide Advanced Placement Laboratory experiences for students from Holy Cross High School.

Center for Civic Engagement	Joan Ferrante	Mayerson Student Philanthropy Program	Manuel D. and Rhoda Mayerson Foundation	11/30/2004	9/1/04 - 8/31/05	\$86,200
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The Mayerson Student Philanthropy Project is a course-based community-investment effort whereby students study and identify community needs, and engage with nonprofit leaders to address those needs. Faculty and student design a curriculum-based collaborative to identify a community need and award funding to one or more nonprofit agencies to address that need.

Chemistry	Heather Bullen	Impact of Aqueous-Metal Oxide Interfaces on Biofilm Formation: ATR-FTIW as an In-Situ Approach to Probe Bacterial Adhesion	Research Corporation Cotrell College Science Award	11/12/2004	8/1/05 - 7/31/07	\$45,609
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Biofilms have a profound impact on industrial, food processing and medical settings. Attenuated total-reflectance infrared spectroscopy (ATR-FTIR) will be used in conjunction with other analytical techniques to monitor bacterial biofilm adhesion onto model metal oxide sol gel films. The knowledge gained will be useful in not only understanding the fate and transport of chemical and biotic systems, but in developing new methods to control biofilm fouling and corrosion of engineered materials and systems.

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Chemistry	Heather Bullen	Biology & Chemistry Interdisciplinary Summer Undergraduate Research Experience (iSURE) at Northern Kentucky University	Merck Company Foundation American Assoc for the Advancement of Science	11/04/2004	5/15/04 - 9/14/07	\$60,000

The purpose of the Merck/AAAS Undergraduate Science Research Program is to enhance undergraduate science education in the areas of biology and chemistry and to encourage programs that foster understanding of the interrelationship of these sciences.

Chemistry	Keith Walters	Incorporation of fullerene moieties into transition metal supramolecular systems	Research Corporation Cottrell College Science Award	11/12/2004	8/1/05 - 7/31/07	\$38,003
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The research in this proposal may expand the field of supramolecular photochemistry and its use in molecular electronics applications.

Intercollegiate Athletics	Jane Meier	Student Athlete Advisory Committee Enhancements, Student Athlete Health, Safety & Welfare, and Academic Support Enhancements	National Collegiate Athletic Association	11/04/2004	10/26/04 - 10/25/05	\$2,900
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These three grant programs will fund areas in the Intercollegiate Athletics department. The Student Athlete Advisory Committee Enhancements Grant Program will help fund Kids' Night Out, which provides an activity for kids in grades 1 through 5 while their parents are able to have a night out on the town. The Student Health, Safety and Welfare Grant Program will help purchase an Automatic External Defibrillator. The Academic Support Enhancements Grant Program will help expand the current lab-study area for student-athletes.

Nursing & Health Professions	Denise Robinson	Advanced Nursing Education Traineeship	U.S. Dept. of Health and Human Services	11/17/2004	7/1/05 - 6/30/06	\$35,000
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The advanced Nursing Education Traineeship provides tuition/stipends for Masters of Science in Nursing students who are willing to work in a medically underserved area after graduation. Full time students are eligible for support for up to 3 years, while part time students are eligible only in the last year of their program. Students sign a statement indicating they will search for jobs in a medically underserved or health professional shortage area after graduation.

Department	Principal Investigator	Project Title	Funding Agency	Submission Date	Project Duration	Amount Requested
Physics and Geology	Sam Boateng	Water Quality Assessment of the Doe Run Lake and its Feeder Creeks in Erlanger, Northern Kentucky	Kentucky Water Resources Research Institute	11/12/2004	3/1/05 - 2/28/06	\$12,229

It is the goal of this project to monitor the water quality of the lake and its feeder creeks to establish a baseline for future long term monitoring. Also, the relationship between land use and water quality will be evaluated. The goals will be achieved by sampling and testing water samples from selected locations on the lake and its feeder creeks. The samples will be tested for dissolved oxygen, pH, conductivity, nitrate, phosphate and fecal coliform. Benthic macroinvertebrates will be sampled to determine any adverse effect on the most sensitive biota.

Political Science	Melissa Moon	Kentucky Juvenile Crime Analysis	Department of Justice Kentucky Department of Juvenile Justice	11/24/2004	1/1/05 - 9/30/05	\$27,585
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This project will examine the juvenile crime problem in Kentucky. It will also examine delinquency prevention and educational needs for juveniles within Kentucky.

Soc., Anthro., & Phil.	Judy Voelker	Pottery Manufacture in Prehistory: An Examination of Ceramics in the Mun Valley from the Neolithic Period to the Origins of Angkor	ASIANetwork Freeman Student-Faculty Fellows Program	11/30/2004	4/1/05 - 7/31/06	\$32,406
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This project seeks funding for five NKU students and a faculty mentor to travel to mainland Southeast Asia in the Summer 2005 to conduct analysis on ceramic material from the site of Ban Non Wat, northeast Thailand. This research will expand current knowledge of the role of craft intensification in the development of complex societies.

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**Total Number of Proposals: 11**

**Total Funds Requested: \$399,168**