

FY 2006

***Hispanic Serving Institutions
Education Grants Program***

***Description of
Funded Projects***

Multicultural Alliances
Science and Education Resources Development
Cooperative State Research, Education, and
Extension Service
U.S. Department of Agriculture
Washington, D.C.

Proposal Number: 2006-03451
Grant Number: 2006-038422-
Lead Project Director: Janita Robinson

Lead Institution: Laredo Com. College
Award Amount: \$310,400
Project Duration: 2 years

USDA-Texas HSI: A Collaboration in Education

The Texas Hispanic-Serving Institutions Consortium will improve educational access and success for thousands of underrepresented students and will build institutional capacity through various means. These capacity building efforts will include a training seminar where Regional USDA agencies will be invited to spend time learning about the Texas HSIs and their work relevant to USDA's priorities. The agencies will be asked to teach participants their agency's scope, mission and purpose, and employment opportunities. This information will help HSIs align their programs in the food, agricultural, and related sciences to the skills necessary to succeed at USDA. The project will also construct a student resume data base in Texas that will be made available to USDA hiring officials and the industry. Finally, the project will document project achievements of the HSIs.

Proposal Number: 2006-03454
Grant Number: 2006-038422-
Lead Project Director: Raul (Rudy) A. Reyna

Lead Institution: Univ of Texas – San Antonio
Award Amount: \$198,000
Project Duration: 2 years

San Antonio Prefreshman Engineering Program

To prepare underrepresented students for careers in science and engineering, this project funds UTSA's Prefreshman Engineering Program (PREP). PREP, which provides a rigorous academic program designed to prepare students for success in advanced studies leading to careers in STEM fields, will use the funds to support program assistant mentors over two years. Additionally, the program will add a water science component to include tools that provide students with experiential learning to solve complex problems in the context of real-world situations. The project will partner with Natural Resources Conservation Service, San Antonio Water System and UTSA's Center for Water Research and will expose students to scientific and engineering careers within USDA.

Proposal Number: 2006-03455
Grant Number: 2006-038422-
Lead Project Director: Shad D. Nelson

Lead Institution: Texas A & M - Kingsville
Award Amount: \$296,000
Project Duration: 2 years

Increasing Student Learning and Career Development through Agricultural and Natural Resources Based Research

This project will work to increase the number of minority students in agricultural careers through research. The project will provide 22 students with a mentored-research experience aimed at enhancing their technical and analytical skills. This project is a collaborative effort amongst TAMUK, the Texas Agricultural Experiment Station, the USDA-APHIS in Kingsville and the USDA-ARS in Lubbock. The project will increase the number of minorities obtaining advanced degrees and assuming leadership roles in agriculture.

Proposal Number: 2006-03456
Grant Number: 2006-038422-
Lead Project Director: Maya Durnovo

Lead Institution: Houston Com. Coll.
Award Amount: \$336,000
Project Duration: 2.5 years

Building New Career Tracks for Underrepresented Students

Houston Community College, in partnership with USDA Natural Resources Conservation Service, Spring Branch Independent School District and Sam Houston State University, will recruit and retain underrepresented students for careers in agricultural science. This multidisciplinary project encourages students to follow articulated tracks from high school to community college to a baccalaureate degree. The purpose of this project is to recruit and retain underrepresented, particularly Hispanic, high school and college students into studies that lead to dynamic careers in the broad food, agricultural, and natural resource systems (agriculture) of the nation.

Proposal Number: 2006-03461
Grant Number: 2006-038422-
Lead Project Director: Nancy Kalikow-Maxwell

Lead Institution: Miami Dade College
Award Amount: \$168,195
Project Duration: 2.5 years

Library Gateway Project (LGP)

The Library Gateway Project will enhance library resources in agricultural science disciplines and improve the research skills of college and high school faculty, librarians and students. The science library-research skills contest for high school and college students will generate student interest in scientific research. The National Agricultural Library in Beltsville, MD, the USDA collaborator in the project, will grant an internship to the college contest winner and will host the high school and college librarians and teachers and teach them about the availability and use of science resources. The two institutions directly participating include Miami Dade College North Campus and Coral Reef Senior High School, a science magnet school. Measurable outcomes include: Number of library resources added; Percentage of participating students satisfied with library resources; Percentage of workshop attendees aware of library resources; Number of science resources webpage hits; Percentage of science and faculty reporting library resource use through contest participation.

Proposal Number: 2006-03463
Grant Number: 2006-038422-
Lead Project Director: Marisela Linares Mendoza

Lead Institution: Columbia Basin College
Award Amount: \$139,888
Project Duration: 2 years

Pipeline Enhancements to Recruit, Support and Invigorate Student Transitions (PERSIST) Project

The goal of Columbia Basin Colleges PERSIST project is to attract, retain and graduate and transfer outstanding Hispanic students interested in pursuing a degree and career in the food and agricultural sciences or other USDA career pathways. In order to realize this vision, CBC has developed three related objectives for this project. These objectives include activities and measurable outcomes. The three objectives are: 1) To identify and recruit 30 students interested in food and agricultural science degrees and USDA related careers. 2) To provide alternative instruction delivery and academic support services to retain 90% of students recruited into food and agricultural science degree projects and other USDA related careers. 3) To assist 90% of students in transferring to other higher education institutions to pursue degrees in food and agricultural sciences or related USDA careers.

Proposal Number: 2006-03465
Grant Number: 2006-038422-
Lead Project Director: Andrea P. Boyar

Lead Institution: Lehman College
Award Amount: \$195,000
Project Duration: 3 years

Development of Online Courses in the Dietetics, Foods, and Nutrition Programs at Lehman College

It is estimated that less than 10% of Registered Dietitians are Hispanic Americans. This project addresses the need for culturally diverse and bilingual professionals in the fields of food and nutrition because many of the clients in New York using these professional services are diverse and multilingual. This project is designed to increase the availability of ten required nutrition courses with the expectation that recruitment, retention and graduation rates of these underrepresented sectors of the student body will improve. The project proposes to train our faculty in the best practices of online instruction by providing the mentorship and release time needed to facilitate online course development.

Proposal Number: 2006-03475
Grant Number: 2006-038422-
Lead Project Director: William Head

Lead Institution: CSU - Monterey Bay
Award Amount: \$340,000
Project Duration: 2 years

Pipeline to Success in Agriculture, Watershed & Natural Resource Sciences

This award funds California State University, Monterey Bay to create an educational pipeline that integrates curriculum with opportunities for students to make connections with real world experiences and career choices. California State University, Monterey Bay will form partnerships with Hartnell and Cabrillo community colleges, USDA's Agriculture Research Service, and 21 agriculture and natural resource organizations to move 165 high school, and 75 community college and university students through this educational pipeline and provide them with experiential opportunities to make the connection between their academic studies and real-world careers.

Proposal Number: 2006-03478
Grant Number: 2006-038422-
Lead Project Director: Edward Martinez

Lead Institution: NM Highlands University
Award Amount: \$334,000
Project Duration: 3 years

NMHU/LCC Science and Agriculture Summer Experience (SASE) Project

The New Mexico Highlands University Science and Agriculture Summer Experience (SASE) focuses on real world learning experiences related to the agricultural sciences in the fields of water quality and soil science. The objectives of the project are to: (1) Develop a formal partnership between New Mexico Highlands University and Luna Community College for recruitment and retention of underrepresented students in agricultural sciences with an outreach emphasis to high schools in northeastern New Mexico. (2) Create a summer institute for 52 incoming freshman and Luna transfer students. (3) Select one student for a full scholarship toward a degree in an agriculturally related field.

Proposal Number: 2006-03479
Grant Number: 2006-038422-
Lead Project Director: Brianna Aliabadi

Lead Institution: Mt. San Jacinto College
Award Amount: \$235,000
Project Duration: 3 years

Ensuring Success of Underrepresented Students in Environmental Science through Project-based Experiential Learning

This project will strengthen the educational parity for underrepresented students in the environmental and agricultural science fields. The main project objective is to increase the pipeline of outstanding Hispanic students pursuing higher education in the natural resources, conservation, and environmental fields and expand the career and leadership development opportunities for underrepresented students at the community college level. To address the particular academic needs of Hispanic and underrepresented students, Mt. San Jacinto College will develop and implement a mentoring program and provide individualized tutoring for at least 45 students, establish financial assistance incentives for one outstanding Environmental Studies student and offer premier experiential learning opportunities and internships.

Proposal Number: 2006-03481
Grant Number: 2006-038422-
Lead Project Director: Heather Smith

Lead Institution: Riverside CC
Award Amount: \$294,000
Project Duration: 3 years

Building Bridges Across Riverside Through Water Quality Research

This project will provide Riverside Community College students from underrepresented backgrounds an experiential learning opportunity in cutting-edge water quality research and exposure to a four-year college environment at the University of California, Riverside. Two students will be selected each year for a total of six students over the three year grant. The intention is that this experience motivates students to pursue a career in science and engineering. The collaboration addresses the USDA's priority for research in water resources and quality (Goal 5, Objective 5.2) and goal to expand and diversify the national scientific work force. The outreach component involves Riverside elementary school student participation in a Science Fair. Students of all ages will attend the seminar series in Environmental Science and Engineering, with a particular emphasis on the USDA priority areas of air, soil and water quality. This award funds a collaboration between Riverside Community College and University of California-Riverside.

Proposal Number: 2006-03482
Grant Number: 2006-038422-
Lead Project Director: William J. Quinn

Lead Institution: Saint Edwards University
Award Amount: \$230,000
Project Duration: 3 years

Joint Research/Field Internships in Forest and Range Ecosystems

This award supports a partnership between St. Edward's University and the United States Forest Service to provide research and field internships in forest and range ecosystems to a diverse group of undergraduate students. The program will improve management of natural resources, further the development of student scientific and professional competencies, and broaden the cultural diversity of the professional community. Participating students will also mentor thousands of high school students in an effort to further expand and diversify the talent pool in resource management.

Proposal Number: 2006-03484

Grant Number: 2006-038422-

Lead Project Director: Juan A. Negron-Berrios

Lead Institution: Interamerican Uni. - Barranquitas

Award Amount: \$283,000

Project Duration: 2 years

Building for the Future through Modern Biology and Biotechnology

This proposal will establish collaboration between the Inter American University of Puerto Rico at Barranquitas (IAUPR-BC) and Inter American University of Puerto Rico at Arecibo (IAUPR-AR) to strengthen the science curriculum through the creation of a new academic program in the area of Biotechnology. A BS in Biotechnology will be developed at both institutions (IAUPR-BC and IAUPR-AR) as a new degree program to fulfill the growing demand for trained professionals in the biotechnology industry, agriculture related projects, academia, and health-related fields. To enhance the learning experience, laboratories will be prepared with the most advanced equipment and instrumentation. As an additional learning experience, this project will allow a small group of students to be trained as biotechnology laboratory assistants.

Proposal Number: 2006-03485

Grant Number: 2006-038422-

Lead Project Director: Eliezer S. Louzada

Lead Institution: TX A & M - Kingsville

Award Amount: \$339,000

Project Duration: 3 years

Agricultural Biotechnology Research Experiences for the Preponderantly Hispanic Population of South Texas

This project will produce 26 highly trained students in several molecular techniques; from isolating DNA and RNA, to cloning and molecular characterizing genes. Additionally, at least five undergraduate students will continue their education through a masters degree in molecular biology. As part of the internship training, students will learn how to work independently in a research project, as well as how to mentor other students. After spending around four months working in the lab, students who master the molecular techniques will start mentoring new students. This teaching strategy has been very effective in promoting a good learning environment. Consequently, an additional outcome of this project is the preparation of highly skilled students, who are able to train others. We also observed that the project develops critical thinking in the students. Many students find their upper level classes easier after the hands-on internships.

Proposal Number: 2006-03488

Grant Number: 2006-038422-

Lead Project Director: A. Tineke Berends Sexton

Lead Institution: Houston Com. College

Award Amount: \$248,000

Project Duration: 2 years

Genetics Research Opportunities for Community Colleges

This model program at a Hispanic Serving Institution gives underrepresented community college students an innovative experience with plant genomics research in a standard genetics class to encourage an interest in agricultural science careers. The research, a PCR experiment genotyping different sorghum varieties, begins at two community colleges and spreads to simple biology research at six HCCS colleges. Key activities include: faculty development and seminars; student visits to university campuses and interaction with agricultural researchers; internships with the USDA Agriculture Research Service; a full USDA scholarship for a talented student; student presentations at Tri Beta Honor Society; middle school DNA Day outreach; a website to publish program information and student research results; and dissemination of the model to other colleges in the state. The program will recruit students for seven genetics classes at two HCCS colleges. The research, originally piloted at one college, will be institutionalized and introduced to a second college

Proposal Number: 2006-03489
Grant Number: 2006-038422-
Lead Project Director: Rolston St. Hilaire

Lead Institution: NM State University
Award Amount: \$290,000
Project Duration: 2 years

A Multi-Institutional Educational Model to Enhance Irrigation Teaching and Training

Three New Mexico Hispanic Serving Institutions, Doña Ana Branch Community College, New Mexico State University, and Albuquerque Technical Vocational Institute have partnered to create two new distance education classes in landscape irrigation to address the current demand for minority professionals vastly exceeding supply. This project will create a closer partnership among the three New Mexico educational institutions, facilitate the transition of students among state agriculture programs, establish two new courses in landscape irrigation, and enhance the professional development of students and faculty. The overall project goal is to fulfill an immediate and urgent need for more minorities in landscape irrigation.

Proposal Number: 2006-03495
Grant Number: 2006-038422-
Lead Project Director: Linda W. Wessel-Beaver

Lead Institution: UPR - Mayaguez
Award Amount: \$330,000
Project Duration: 3 years

Collaborative Initiative for Plant Breeding Education

This project, between the University of Puerto Rico at Mayaguez and North Dakota State University, will strengthen education and research in plant breeding and genetics. Puerto Rico is an important site for the plant breeding activities of a large number of international seed companies. Plant breeders improve our lives and livelihoods by developing plant varieties that are more nutritious, flavorful, attractive and/or productive. Planned activities include curriculum revision, faculty professional improvement, and acquisition of laboratory equipment. Participants (up to the Ph.D. level) will conduct plant breeding research both in Puerto Rico and North Dakota.

Proposal Number: 2006-03497
Grant Number: 2006-038422-
Lead Project Director: Thomas Edward Scarlett

Lead Institution: Trinidad State Jr College
Award Amount: \$195,000
Project Duration: 2 years

Agribusiness & Agriculture Technology Degree Programs & Related Curriculum Development at Trinidad State Junior College

The purpose of this project is to provide a college degree program with higher education linkages for rural underserved students that will support increased economic opportunities and improve quality of life in the eight rural counties of South Central Colorado. Project objectives include: 1) development of an agribusiness and agriculture technology curriculum that is academically rigorous, with strong emphasis on practical, hands-on application of the underlying concepts and principles learned in coursework; 2) development of an active, effective, successful recruiting program targeting 50 underrepresented students; 3) providing internship, work-study, and other educational opportunities outside of the classroom for 10-20 students to reinforce and enhance concepts and principles learned in coursework; 4) Host a total of two panel discussions, workshops, and presentations to provide students the opportunity to learn more about careers in agriculture; and 5) development of articulation agreements with four-year universities to allow seamless transfer and transition for students pursuing baccalaureate and/or masters degrees in agriculture fields of study.

Proposal Number: 2006-03498
Grant Number: 2006-038422-
Lead Project Director: Joshua F. Stevenson

Lead Institution: TX A & M International U
Award Amount: \$105,000
Project Duration: 2 years

Development of Plant Science Research and Curriculum for Hispanics in Laredo, Texas

This project has two objectives: 1) development of plant science curriculum, and 2) development of plant science student research. A plant science curriculum will be used to train an estimated one hundred students a year within Webb County and the Laredo metropolitan area. The development of undergraduate coursework within the core of a biology major degree will be the foundation for subsequent upper level and graduate coursework. Seven new courses will be developed and three existing courses will be augmented wholly or partially under the umbrella of plant science. Course topics include: general botany, plant systematics, and plant physiology. To support this new curriculum, the project will equip a teaching laboratory in the new Lamar Bruni Vergara Science Center. The project will also support an estimated ten students a year in faculty supervised undergraduate and graduate plant science research at TAMU. The development of plant science research lab facilities will allow student opportunities for experiential learning and working with regional plant science and agricultural issues.

Proposal Number: 2006-03505
Grant Number: 2006-038422-
Lead Project Director: Harmit Singh

Lead Institution: CSU - Los Angeles
Award Amount: \$234,000
Project Duration: 2 years

Food Analysis and Food Chemistry Laboratory Development

The primary goal of this project is to produce well-trained faculty and competitive food science students, most of whom will come from underserved minority backgrounds. The project will meet three objectives related to the improvement of teaching and research facilities in the nutritional sciences (NTRS) and Food Science and Technology (FST). Three major instruments will be added to the food chemistry and analysis laboratory. The newly purchased instruments will be used for teaching food chemistry and analysis courses. Four to six students will attend and participate in Southern California Institute of Food Technology (SCIFT) and annual IFT or AACC meetings. Students will conduct experiments under the supervision of their advisor. Participant faculty members will visit the USDA- Western Regional Research Center (WRRC) at Albany, CA, and receive training on instruments and explore future possibilities for research collaborations and training opportunities for students. The knowledge gained during these visits to USDA, meetings, conferences and workshops will be disseminated to students during classroom lectures affording them current information on research methods and job opportunities.

Proposal Number: 2006-03506
Grant Number: 2006-038422-
Lead Project Director: Priscilla Bloomquist

Lead Institution: NM State University
Award Amount: \$289,000
Project Duration: 3 years

PATHWAYS to Success: A Collaborative Initiative to Transition Outstanding Hispanic Students into a Bachelor's Degree Program in Foodservice

This grants funds a collaboration between the nationally ranked School of Hotel Restaurant and Tourism Management (SHRTM) at New Mexico State University and the New Mexico Restaurant Association to conduct an innovative project to increase Hispanic American representation in management and ownership in the restaurant industry and related fields. The three-year project features a recruiter/mentor who will engage in outreach activities including hosting student/teacher events throughout the state to educate high school foodservice teachers and students about educational and career opportunities. SHRTM will also provide targeted scholarships for Hispanic American students, and an aggressive retention program designed to enhance student success.

Proposal Number: 2006-03508
Grant Number: 2006-038422-
Lead Project Director: Gour Choudhury

Lead Institution: CSU - Fresno
Award Amount: \$190,000
Project Duration: 2 years

Equipping the Culinary Science Laboratory for the New Culinology Program

Food manufacturing companies producing ready-to-eat meals and food products are growing rapidly in the Central Valley, and are experiencing extreme difficulties in finding personnel cross-trained in food and culinary sciences. The Culinology program at California State University, Fresno will bridge the gap by providing, an innovative, well-trained, diverse, and fully-educated workforce to meet the current needs of the industry. This project will equip the culinary science laboratory to prepare students with extensive food and culinary skills balanced with comprehensive training in food science and technology so that they can capitalize on the employment opportunity created by the new value-added ventures.

Proposal Number: 2006-03510
Grant Number: 2006-038422-
Lead Project Director: Allen Rasmussen

Lead Institution: TX A & M U - Kingsville
Award Amount: \$74,298
Project Duration: 2 years

Student Leadership Program for Agricultural Students from Hispanic Serving Institutions

Texas A & M-Kingsville, in collaboration with New Mexico State University, will coordinate a project where thirty students from around the country that have participated on USDA-HSI funded projects travel to Washington, DC, to present summaries of their projects to USDA agencies. During this time, students will interact with USDA agency staff to understand the role of USDA in agricultural policy in their region and will enable USDA staff to learn more about HSI universities and their students. This interaction will allow students to learn more about job opportunities within all the USDA agencies.