

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

Shad D. Nelson (P.I.), Plant & Soil Sciences
Randy Stanko & Jamie Laurenz, Animal Sciences
Thomas McGehee, Geophysical Sciences



KEY OBJECTIVE = TARGET STUDENTS

To provide under-represented undergraduate students with the skills necessary to compete for and obtain employment in positions that meet the USDA Education Grants Program's Purpose and Priority criteria of "enhancing the Nation's food and agricultural scientific and professional work force."



Undergraduate Presentations Lead to Honors, Awards, McNair Scholarships, and Graduate School Assistantships



Annual TAMUS Pathways to the Doctorate Symposium



Ronald E. McNair Scholars



1st, 2nd, 3rd undergrad and 2nd grad;
2005 SS-ASAS, Baton Rouge, LA

HSI Funded Student Names	Status When in Program	Minority in Science	Grad Year	Went on to Graduate School	Employed in field? or Major Discipline
Veronica Ancona	M.S.	Yes	2005	Ph.D. Canada	Molecular Biology
Catherine Simpson	M.S.	Yes	2005	Ph.D. TAMU	Soil Science
Viola Gade	M.S.	Yes	2004		Yes-Biology teacher
Ram Uekoo	M.S.	Yes	2006	Ph.D. TAMUK	Food Health
Lisa Soliz	M.S.	Yes	2005	Ph.D. TAMU	Animal Science
LeeRoy Rock Luna	B.S.	Yes	2005	M.S. TAMUK	Plant Science
Robert Munguia	B.S.	Yes	2006	M.S. TAMU	Soil Science
Jeremy Rounsavall	B.S.	Yes	2005	M.S. TAMUK	Animal Science
Tracy Cadena	B.S.	Yes	2005		Yes-teacher
Tracy Kalka	B.S.	Yes	2005	M.S. TAMUK	Ag Education
James Wilborn	B.S.	No	2005	M.S. TAMUK	Crop Science
Sara Fredrickson	B.S.	Yes	2005		Yes-USDA/NRCS
Willie Arwine	B.S.	No	2005		Yes-Ag Extension
Chad O'Gorman	B.S.	No	2005	M.S. TAMUK	Animal Science
Nicole Burdick	B.S.	Yes	2005	M.S. TAMUK	Animal Science
Barbara Vasquez	B.S.	Yes	2005		Plans for M.S. Yes-Vet
Laci Schneider	B.S.	Yes	2005	DVM TAMU	Vet School
Jaqueline Dominguz	B.S.	Yes	2005	M.S. TAMU	Animal Science
Jill Langrebe	B.S.	Yes	2006		Plans for M.S. Animal Science
Kimberley Collard	B.S.	Yes	2006		Plans for M.S. Animal Science
Marcella Torres	B.S.	Yes	2007		Animal Science
Andrea Galindo	B.S.	Yes	2007		Plans for M.S. Food Health
Jose Reyes	B.S.	Yes	2006		Plant Science
Delfino Rodriguez	B.S.	Yes	2006		Plans for M.S. Crop Science
Omar Bejar	B.S.	Yes	2007		Plant Science
Carlos Pena	B.S.	Yes	2006		Plans for M.S. Crop Science
Javier Vela	B.S.	Yes	2006		Ag Science
Eli Borrego	B.S.	Yes	2008		Plans for M.S. Plant Science
Bryan Shook	B.S.	No	2007		Crop Science
Barbara Vasquez	B.S.	Yes	2005		Plans for M.S. Yes-Vet

92% Minority students
52% Hispanic students
5 previous M.S. grads
-4 in Ph.D. programs
-2 Hispanics
25 B.S. students
-13 previously hired
-9 in grad school
-3 Hispanics
-12 currently hired
-8 plan grad school
-6 Hispanics

Outcomes: What We Have Seen

- 100% retention of undergraduates enrolled in program
 - 95% remained at TAMUK College of Ag
- Over 50% of undergraduates continued into graduate school
- 5 grad students have entered into doctorate degree programs
- All others have job offers prior to leaving school or found jobs within 3 months after graduation in their field

HSI funding--A Mechanism for Under-represented Student Success

- USDA/CSREES HSI educational grants program has proven to be a invaluable partner for promoting student retention and individual achievement
- Continued support of programs like this is necessary to allow for students to progress to graduate school and train them for future careers in scientific disciplines

HSI Support to TAMUK Students

- 2000 - "*Experiential Learning in a Food and Ag Science Curriculum*," Appelt & Laurenz
- 2001 - "*Hands-on research, bridges to graduate studies in agricultural biotechnology*," Louzada, Persans & Peltz
- 2002 - "*Meeting the Experiential needs of South Texas Students for Careers in Agricultural Science*," Nelson & Stanko.
- 2003 - "*Agricultural biotechnology research experiences for the preponderantly Hispanic population of South Texas*," Louzada
- 2003 - "*Recruitment and retention of freshman students through e-mentoring and job shadowing to promote career awareness*," Kinkel
- 2004 - "*Teaching and mentoring South Texas students for careers in agricultural science and research*," Nelson, Stanko & Laurenz
- 2005 - "*Developing undergraduate student professional competencies in agricultural sciences through experiential learning*," Doan-Crider & Fedynich
- 2005 - "*Enhancing professional career development of South Texas graduate students*," Garcia, Laurenz & Stanko