

# Horizons

**Expanding Horizons in Science, Technology, Engineering, and Mathematics**  
*Sponsored by the National Science Foundation*

## *Expanding Horizons IV: Inspiring Students in STEM Disciplines to "Start Small and Think Big"*



*Dr. Ricardo B. Jacquez, Director of New Mexico AMP; New Mexico State Senator Michael S. Sanchez; Juan Silva of Raytheon Missile Systems; and Dr. Steve Castillo, Dean of NMSU College of Engineering, after the Conference Luncheon.*

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Over 370 New Mexico AMP community college and university students, staff, faculty, and administrators, along with representatives from the New York City, Oklahoma, California, Puerto Rico, and Ohio LSAMPs and high school juniors, seniors, and advisors from the New Mexico Math, Engineering, Science Achievement, Inc. (New Mexico MESA) program, attended the 2007 New Mexico AMP Student Research Conference at New Mexico State University (NMSU) on October 5th, 2007. All who attended the conference benefited from the keynote address delivered by Dr. Mary O'Connell, NMSU Professor in Plant and Environmental Sciences, as well as the Conference Luncheon address presented by the Honorable Michael Sanchez, New Mexico Senator.

Dr. O'Connell, who is a Regents Professor at NMSU, discussed her research of medicinal plants of the Southwest and the role ethics plays in research. She informed the attendees of her research of such plants as the lavender plant, and she shared the learning opportunities that her research has provided students. During her career at NMSU, O'Connell has mentored hundreds of students and her research has garnered more than \$4 million in research grants.

At the Conference luncheon, Senator Sanchez, provid-

*continued on page 5*



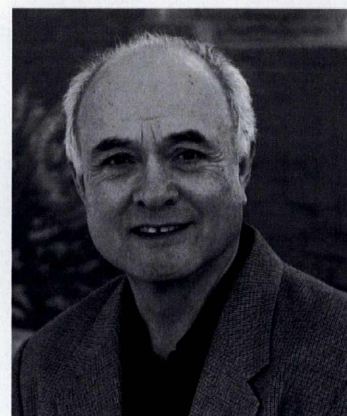
# From the Director . . . . .

This has been a very busy, yet exciting time for New Mexico AMP. Beginning with the New Mexico AMP Student Research Conference in October 2007 and looking forward now to our summer events and program activities and the Conference in the fall of 2008, we continue to impact New Mexico's students in ways that lead to participation in cutting-edge research, graduate school, and beyond. On pages 4-5 of this newsletter, you will find an announcement about the 2008 conference, an overview of the conference web/registration pages, and information and pictures from the 2007 conference.

Topping off the highlights of the past year, I am pleased to report that Senate Bill 422 was passed by the New Mexico Legislature in spring 2007. This bill designates the Alliances for Underrepresented Students as a statutory unit of New Mexico State University for the purpose of promoting educational achievement and support of underrepresented students in STEM. The Alliances is a collaborative effort between New Mexico AMP and the NSF-funded Regional Alliance for Science, Engineering, Science and Mathematics for Students with Disabilities (RASEM) – two statewide programs committed to outreach to and support of New

Mexico students pursuing STEM degree programs. Supporting the long-term sustainability of New Mexico AMP, RASEM, and other complementary programs, this statutory designation allows the Alliance to receive state funding as well as gifts, grants, and donations from the public or from private sources.

Another highlight was the visit with the program review team from the National Science Foundation in March 2008. The team, comprised of three individuals from the NSF and three external program reviewers, met with the New Mexico AMP staff and administrators, faculty, and students from around the state on March 18 and 19. The team conducted a rigorous and formal review of the New Mexico AMP program and the outcomes of the past fourteen and one-half years. We were delighted to share with the team the good work that all of you have done on behalf of New Mexico's STEM students. Highlights of the visit were the opportunity to visit the NMSU-Alamogordo campus, meetings with New Mexico AMP partners and collaborators, and a luncheon with students. In total, over 70 individuals participated in a variety of meetings and events. I thank all of those who rose to the occasion and, in many cases, traveled long distances to be present.



*Ricardo B. Jacquez, Ph.D. P.E., Director of New Mexico AMP and Recipient of Presidential Award*

While rigorous and admittedly exhausting, the opportunity to showcase the various projects, student accomplishments, and institutional changes that have occurred across New Mexico was deeply satisfying. The review went well, and we are now working with a number of excellent suggestions and insights provided by the review team. As we prepare for the future, the program review was a timely opportunity to reflect and evaluate on our collective efforts, and we are actively pursuing several of the ideas that emerged from the program review.

This is a remarkable Alliance, and I am thankful for your continued commitment to apply your expertise to assist the citizens of New Mexico in realizing and fulfilling their educational goals and dreams. I look forward to seeing you at the 2008 Conference in October!



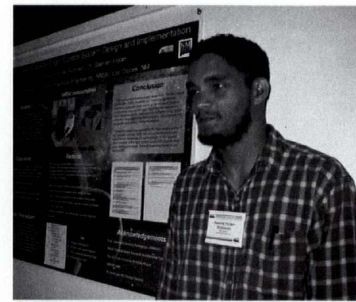
# People, Places, and Things . . . . .

The Summer Community College Opportunity for Research Experience (SCCORE) program was held from July 9-August 14, 2007 at NMSU. Sixteen (16) students participated in the summer bridge program from Central New Mexico Community College, Dine College, Luna Community College, Mesilla Valley Christian Schools, NMSU-Alamogordo, NMSU-Grants, Sandia High School, and Santa Fe Community College. The SCCORE program is designed to help students explore academic and career opportunities, to provide a research assistantship with a faculty mentor, and to assist students in the transition to participating New Mexico AMP baccalaureate-granting institutions. In the program, students participate in workshops, orientations, and a credit-bearing course. Participants present a poster at an end-of-program symposium attended by mentors and NMSU dignitaries.

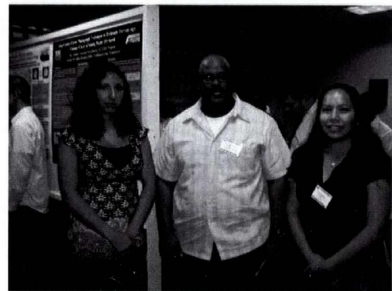
Kwame Porter-Robinson received the NMSU Goldwater Scholarship for 2007-2008 as a double-major in the fields of electrical engineering and applied mathematics. Kwame, currently a Bridge to the Doctorate student, previously participated in the NMSU Computer Science, Engineering, and Mathematics Scholarship (CSEMS) program and the Undergraduate Research Assistantship (URA) program.

New Mexico AMP students Iris Olivas and Jose Solis attended the Eighth Annual Minority Access Role Models Conference in Arlington, Virginia from September 13-16, 2007. Iris, a biology major at NMSU-Alamogordo Community College and past participant of the SCCORE program, will transfer to UNM in the fall of 2008. Jose recently received his Master's degree in Civil Engineering from NMSU as a Bridge to the Doctorate participant and will work toward the Ph.D. at the University of Colorado at Boulder in the fall. Jose started his long career with New Mexico AMP at Santa Fe Community College as a SMET 101 student and a Minority Engineering Transfer and Articulation (META) program participant. Jose transferred to NMSU where he participated as a research assistant in the URA program.

Several New Mexico AMP institutions have announced their selections for leadership positions. UNM named Suzanne Trager Ortega as Provost and Executive Vice President for Academic Affairs. Ortega has served as Vice Provost and Graduate Dean of the University of Washington. UNM also named former NMSU Associate Provost for Academic Affairs and Community Colleges Josephine (Jozi) De León as the Vice President for Equity and Inclusion. Dr. Ramon Dominguez replaces DeLeon as Interim Associate Provost. Dr.



Above: Kwame Porter-Robinson, Goldwater Scholar and New Mexico AMP student, presents at the Conference



Above: Faculty Mentor Dr. Salim Bawazir poses with his research assistants, Patricia Coriz and Purity Husky, at the SCCORE Symposium



Above: Jose Solis and Iris Olivas with LSAMP Director Art Hicks at the Role Models Conference in Washington, D.C.

Dominguez has been serving as the interim campus executive officer of NMSU Carlsbad Community College. Luna Community College named Dr. Pete Campos as its new President. Dr Campos has been Superintendent at Las Vegas City Schools since 2004 and a state senator since 1991.

## *Dr. Jacquez Receives Presidential Award*

**N**ew Mexico AMP Director and NMSU Civil Engineering Professor Ricardo B. Jacquez was honored at the White House for his work in mentoring science and engineering students. Dr. Jacquez received a 2006 Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring (PAESMEM), a White House initiative supported and administered by the National Science Foundation (NSF). In comments made at the award ceremony, Dr. Jacquez's breadth of involvement in program-level mentoring activities

was particularly noted. Dr. Jacquez's accomplishments include serving as Principal Investigator for the New Mexico AMP, New Mexico CETP, and other NSF programs as well as serving for ten years as the Director of Education Programs and the Environmental Fellows Program for the Waste Management Education and Research Consortium (WERC), a multi-institutional initiative funded by the Dept. of Energy and the State of New Mexico. Beyond being honored at a White House ceremony, Dr. Jacquez and his fellow awardees each received a grant of \$10,000



*Ricardo Jacquez and nine other individuals and one organization were recognized as PAESMEM awardees in Washington, D.C.*

to continue and advance their mentoring work. These funds will be redirected into New Mexico AMP program activities.

### ***Mark Your Calendar Now... for the 2008 New Mexico AMP Student Research Conference on October 3, 2008***

*Visit the New Mexico AMP Conference website at  
[www.nmsu.edu/~nmamp/conference](http://www.nmsu.edu/~nmamp/conference) to find out*

- More about the conference activities and to see the agenda.
- Information about the oral and poster presentations, including presentation categories, submission deadlines, and presentation formats.
- Judging criteria for oral and poster presentations that will be used in the competitions.
- Registration information. (You can register for the event on the Registration page; you will be asked if you are a student presenter and if you are, a second page will show where you can submit your abstract and presentation information.)

*Pre-and post-conference workshops for New Mexico Community College Students on Oct. 2 and 4*



# Expanding Horizons IV

## 2007 Student Research Conference

*Continued from page 1*

ed information about his own background as well as his passion for encouraging students to complete their education. This passion is what drove Senator Sanchez to be the lead sponsor of the New Mexico Lottery Scholarship. The Senator also focused on the possibilities for students of diversity, encouraging them to realize their unique potential for success that may eventually contribute to New Mexico's growth and welfare.

Student research presentations took place throughout the day, with 20 oral presentations and 26 poster presentations, including a record number of collaborative team presentations. Sixteen (16) oral presentations and 26 poster presentations competed for awards.

Students had the opportunity to talk with NMSU faculty members during the University Research Council Poster Presentations and to attend the New Mexico MESA Paper Tower Competition and the NMSU Information Fair, with assistance from the offices of Admissions, Graduate School, Financial Aid, and others. Dr. Ken White, Department Head of Civil Engineering and expert bridge consultant, informed students about the Minneapolis Bridge failure and demonstrated with a single truss bridge model how the bridge may have collapsed.

Rounding out the Confer-



*At Left: Students interact at the Conference Luncheon and prepare to hear Senator Sanchez*



*Above: Senator Michael S. Sanchez inspires students to realize their unique potential by sharing about his own background*



*Below: Dr. Mary O'Connell gives the Keynote Address at the Conference*

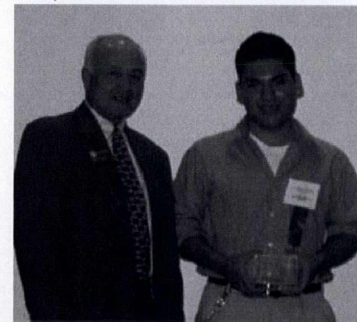


*At Right: Dr. Ken White discusses the Minneapolis Bridge Failure, demonstrating with a single truss bridge model*



*Above: Sandra Jacquez, SCCORE participant, placed first in the Poster Competition*

*Below: Dr. Jacquez presents the First Place Award to Sadot Banuet for the Oral Presentation Competition*



ence event were the pre- and post-conference workshops. The pre-conference workshop helped the community college students navigate the conference and make the most of the conference experience. The day following the conference, Dr. Krist Petersen, Associate Dean of the College of Engineering at NMSU, and Phyllis Baca, Institutional Coordinator and Chair of Technologies at Santa Fe Community College, presented a workshop that targeted transfer issues to make the transition easier for students to move from community college to university.



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*Horizons* is published by the New Mexico Alliance for Minority Participation. Comments and contributions are welcome.

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Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

This material was developed under Grant HRD-0331446.



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