CO-AMP Commentary

LOUIS STOKES COLORADO ALLIANCE FOR MINORITY PARTICIPATION

New Location

CO-AMP moved from the Engineering Building to Sage Hall on the Colorado State University campus on December 3, 2007. Sage Hall is at the northeast corner of the CSU campus and directly west of Admissions in Spruce Hall.

CO-AMP is now administratively located within the College of Natural Sciences (Dean, Dr. Rick Miranda) and the Department of Psychology (Professor and Chair, Dr. Ernest Chavez).

Sage Hall is also home to two other Centers – Tri-Ethnic Center for Prevention Research (TEC) and Colorado Injury Control Research Center (CICRC).

Welcome, New Members!

New members of the CO-AMP team:

Dr. Beverly Marquart – Program Manager
Dr. Marquart received her Ph.D. from the School of Education at Colorado State University. She has been a researcher at the Tri-Ethnic Center for Prevention Research in the Psychology Department at CSU for the past seventeen years. She has also served as Project Coordinator and Co-Principal Investigator for National Institute on Drug Abuse (NIDA) grants.

Linda Heasley – Financial Coordinator
Linda manages funds for Federal grant projects. She has worked at CSU for sixteen years.

Jessi Floyd – Administrative Assistant
Jessi has been an administrative assistant for all three Centers in Sage Hall and has been working at CSU for five years.

Nisha Cornel – International Work Study Student
Nisha is originally from Bombay India. She moved from Dubai last fall to begin her graduate program at CSU. Nisha maintains the CO-AMP website and works on special projects.

~Drs Miranda, Chavez and El Hakim~

Inside this issue:

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO-AMP New Home</td>
<td>1</td>
</tr>
<tr>
<td>IMOU CSU and Fayoum</td>
<td>2</td>
</tr>
<tr>
<td>Governing Board</td>
<td>3</td>
</tr>
<tr>
<td>Larry Johnson</td>
<td>4</td>
</tr>
<tr>
<td>BD News</td>
<td>4</td>
</tr>
<tr>
<td>Jesse Johnson—TSJC</td>
<td>6</td>
</tr>
<tr>
<td>Miriam Galeas—Australia</td>
<td>7</td>
</tr>
<tr>
<td>NSF Research</td>
<td>8</td>
</tr>
<tr>
<td>Announcements</td>
<td>9</td>
</tr>
</tbody>
</table>
President of Fayoum University visits CSU: International Memorandum of Understanding Signed

Dr. Galal Said, President of Fayoum University in Fayoum, Egypt, visited Colorado State University on December 12th, 2007 for a series of meetings to explore new collaborative opportunities between CSU and Fayoum University. The highlight of his visit was the signing of an International Memorandum of Understanding (IMOU) in a special ceremony with Provost Tony Frank. The IMOU facilitates cooperative academic activities and strengthens the international context of research and education for students and faculty at both universities.

Since 1976, Fayoum University has been a public institution within the University of Cairo. In August 2005, it was established as an independent campus with 2,000 faculty members and enrollment of 25,000 students. The city of Fayoum is an oasis located approximately 63 miles southwest of Cairo and is noted for its agricultural production and tourism.

“I hope this collaboration will open new doors for CSU students who are interested in research opportunities that exist only in Egypt such as Ecology, Environmental and Water Resources — impacts of the River Nile, Arabic Literature and Islamic/Egyptian Archeology.”

~Dr. Omnia El-Hakim,
Governing Board Meeting on October 30, 2007

The Colorado Alliance for Minority Participation (CO-AMP) hosted Dr. A. J. Hicks, LS AMP Program Director for the National Science Foundation, during the annual Governing Board meeting on Tuesday, October 30, 2007, in the Cherokee Park Ballroom on the CSU campus. Dr. Hicks, in his keynote speech, provided a national overview of the success of the AMP programs as well as future direction of the program. State Senator, Bob Bacon, and State Representative, Randy Fischer, addressed the challenges facing higher education in Colorado. Industry and government representatives in attendance included: Agilent Technology, Ball Aerospace, Boeing, COMSTEC, Eastman Kodak, Hewlett Packard, IBM, National Renewable Energy Laboratory, Seagate Technology, and Texas Instruments.

(left to right): Stephen Jordan, Peter Dorhout, Larry Johnson, David Aragon, Hector Carrasco, Sallye McKee, Rick Miranda, Peg Bacon, Omnia El-Hakim, A. J. Hicks, Randy Fischer (Colorado State Representative), Bob Bacon (Colorado State Senator).

Dr. Hicks
Keynote Speaker

(left to right): David Aragon, Elaine Green, Cindy Cabrales, Mike Garcia, Omnia El-Hakim, Carol Rankin, Bob Bacon (Colorado State Senator), Damion Cordova, Don May, Ross Barnhart, Khanh Vu.
Dr. Larry Johnson receives Peace Award

Larry Johnson, Professor of Mathematical Science at Metropolitan State College of Denver and member of the CO-AMP Management Team was recently chosen as a recipient of Metro’s 2008 Peace Award.

Since 1992, Metro State College has celebrated the life and philosophy of Dr. Martin Luther King, Jr. by recognizing extraordinary people who strive to emulate him and pursue his dream. Dr. King’s efforts are remembered through the annual Peace Award celebration that recognizes a Metro State College faculty member and student, as well as two Denver community leaders for their achievements and contributions.

Dr. Johnson was chosen for his longtime dedication to CO-AMP to improve the graduation rates of students of color in science, technology, engineering and math. Dr. Johnson has been a member of the CO-AMP Management Team since the early 1990s and has provided summer programming and outreach to middle and high school students of color, supported students with retention efforts, and provided assistance to students applying for graduate programs.

Bridge to the Doctorate News: 12 BD Fellows in Program

The Bridge to the Doctorate supplement was effectively implemented at Colorado State University with 12 Fellows receiving support to begin their path to the professoriate in STEM fields. New Fellows were welcomed into the program with substantial institutional support, including an agreement between all the colleges’ Deans to guarantee research and teaching assistantships to Fellows until they are awarded the PhD. During the year, the University recruited a second cohort of BD Fellows, bringing the total number to 24.
COAMP student news:
CSU SACNAS Chapter receives Role Model Award

The Society for Advancement of Chicanos and Native Americans in Science (SACNAS), in its first year as a chapter at Colorado State University, received the 2006-2007 Chapter Role Model Award for outstanding leadership. The mission of SACNAS is to encourage Chicano/Latino and Native American students to pursue graduate education and obtain the advanced degrees necessary for science research, leadership, and teaching careers at all levels. The Colorado State SACNAS chapter, the first of its kind to be established in the state, is guided by a faculty-advisory board comprised of professors and administrators from diverse academic backgrounds at the University. Colorado State SACNAS also plays a role in recruiting tutors for Triunfo, a program that provides academic support and mentorship to K-12 underrepresented students.

Colorado State is the first University to join the Society for Advancement of Chicanos and Native Americans in Science (SACNAS)

Colorado State University is the first university in Colorado to institute a chapter of the Society for Advancement of Chicanos and Native Americans in Science. SACNAS is a 30-year-old national organization that encourages Chicano/Latino and Native American students to pursue graduate education and obtain the advanced degrees necessary for science research, leadership and teaching careers at all levels.

“People from all ethnic and racial backgrounds who want to work with diverse populations in the sciences are welcome to join SACNAS”, said Arlene Nededog, Director of Undergraduate Retention Programs for the College of Natural Sciences. Nededog was joined by Christina Paguyo, who serves as coordinator of the College of Natural Sciences' Students as Leaders in Science program, in establishing the program.

“We are looking forward to facilitating mentoring, research, professional development and community service opportunities for science majors,” said Michelle Przybyski, president of the SACNAS chapter and a Colorado State senior majoring in psychology. "I am very proud that Colorado State is the first institution in Colorado to form a chapter."
Trinidad State Junior College (TSJC) in Southern Colorado has historically been committed to traditional and alternative approaches to education and research that promotes quality instruction and life-long learning while enriching the academic, technical, and cultural life of their diverse community (45% Hispanic student population).

Recently, TSJC was honored by a CO-AMP student and research intern, Jesse Johnson, who received a third place award in the Organismal Biology Division of the Beta Beta Beta (TriBeta) National Biological Honor Society for his research involving Bighorn sheep. Even though TSJC has often been the only community college presenting research at national conferences, many of their students like Johnson have won prestigious awards.

Since 2001, fourteen TSJC students that have completed at least one year in the CO-AMP Biology Internship program have continued on to complete various degrees, enter graduate school, or begin challenging careers. According to Carol Rankin, Coordinator of CO-AMP since 1999 and catalyst for creation of the COAMP Biology Research Internship Program at TSJC, “the internship program has really made a difference in student lives. It gives students a head start in learning how to do research. The program has been a great retention tool in that the students who have been in the program have been able to clearly identify their educational goals. They see these goals as being attainable.”

And from student, Jesse Johnson’s perspective, CO-AMP has been, “a bright spot in an otherwise gloomy life. This grant has the potential to change one’s life; I know this because it has changed my life dramatically. It made me realize that with hard work, with determination, and with good mentoring I could make a difference in this world. I believe that the good mentoring I received through this process has prepared me for the journey of receiving a Doctorate and beyond. CO-AMP provides the opportunities for young minorities to make a life for themselves.”

“CO-AMP has been a bright spot in an otherwise gloomy life. This grant has the potential to change one’s life; I know this because it has changed my life dramatically. It made me realize that with hard work, with determination, and with good mentoring I could make a difference in this world. I believe that the good mentoring I received through this process has prepared me for the journey of receiving a Doctorate and beyond. CO-AMP provides the opportunities for young minorities to make a life for themselves.”

~ Jesse Johnson

“The internship program has really made a difference in student lives. It gives students a head start in learning how to do research. The program has been a great retention tool in that the students who have been in the program have been able to clearly identify their educational goals. They see these goals as being attainable.”

~ Carol Rankin
Miriam Galeas is a second-year Colorado State University fellow in the Bridge to Doctorate program. In the Fall semester of 2007 Miriam traveled to Perth, Western Australia to visit Murdoch University. At Murdoch she was a visiting researcher in the lab of Richard J. Hobbs, the editor of the journal, Restoration Ecology. While in Australia she also worked closely with Dr. Rachel Standish in projects ranging from rehabilitation assessment to climate change experiments. The rehabilitation project involved assessing efficacy of rehabilitation efforts, following mining activities by the large aluminum company Alcoa in the jarrah forest of southwest Australia. Climate change experiments included monitoring changes in plant communities following alterations of precipitation patterns and nutrient alterations in the Banksia woodlands of Australia.

~Large tingle tree, near Valley of the Giants, Southwest Australia.~

~Galeas taking plant cover estimates in the Banksia woodland~
NSF's Math and Science Partnerships Demonstrate Continued Increases in Student Proficiency

Elementary mathematics students showed greatest gains over 3 years

January 24, 2007

An analysis of 123 schools participating in the National Science Foundation (NSF) Math and Science Partnership (MSP) program shows improvements in student proficiency in mathematics and science at the elementary, middle and high school levels over a 3-year period.

Students showed the most significant improvements in mathematics proficiency, with a 13.7 percent increase for elementary, 6.2 percent increase for middle-school, and 17.1 percent increase for high-school students. Science proficiency at each level showed marked gains as well, with a 5.3 percent increase for elementary, 4.5 percent increase for middle-school, and 1.4 percent increase for high-school students.

The most dramatic increases were documented by elementary grade students in mathematics, where 7.2 percent more students achieved or exceeded proficiency from 2002-2003 to 2003-2004, followed by an increase of 6.5 percent from 2003-2004 to 2004-2005.

African-American, Hispanic, and white students showed significant improvements in elementary level mathematics, as did students designated as special-education or as limited English proficiency students.

The proficiency data also reveals a correlation between teachers who participate in MSP professional development and their school’s change in student achievement. The correlations are positive in both mathematics and science at all grade levels (elementary, middle and high school) and are statistically significant for both elementary and high-school mathematics and science.

NSF’s MSP program supports partnerships among higher education, local K-12 school systems, and supporting stakeholders, such as businesses or informal science-education organizations. At a minimum, each partnership must contain one institution of higher education and one K-12 school system.

The program’s portfolio includes 52 partnerships and more than 30 other projects engaged in the development of tools, research and capacity building for evaluation to support the work of the partnerships.

With an investment of approximately $600 million, NSF’s MSP program focuses on research and development and complements programs at the Department of Education that disseminate educational strategies and tools to the 50 states via formula-driven funds. Federal initiatives supporting local K-12 education represent a small percentage of the state and local funds that support school systems. A key question for the MSP program evaluation is therefore the identification of strategies likely to have positive impacts on local school systems under such circumstances.

Projects in the current MSP portfolio are expected to impact more than 141,000 science and mathematics teachers and 4.2 million students in 530 local school districts. Since its inception, MSP has funded 89 projects.
Indigenous Alliance Expansion Proposal

The National Science Foundation (NSF) has announced an offer to seed fund the Pre-College component for new schools in the Indigenous Alliance that attended the Dissemination Conference at the University of Alaska - Anchorage in October 2007. This proposed funding would support a broad expansion of the eight new Alliance schools (including Colorado State University – Fort Collins) in 5 states. The objective is to effect a systematic change in the hiring patterns of Indigenous Americans in the fields of science, technology, engineering and mathematics by increasing the number of individuals on a career path to leadership in STEM fields. The Pre-College component brings computer technology to remote communities; provides high school students with a vision of a career in engineering and science; connects students with professionals in industry and academia; provides industrial partners with a technologically trained workforce; catalyzes an interest in high school trigonometry, chemistry, and physics; and develops the enabling infrastructure necessary to sustain the effort long term.

U.S. Department of State – The Bureau of Educational and Cultural Affairs Community College Initiative for Egypt

A request for grant proposals was recently announced by the U.S. Department of State, Bureau of Educational and Cultural Affairs (ECA), to administer the Community College Initiative for Egypt. The Initiative will support study by Egyptian undergraduate students at accredited U.S. community colleges. The multi-year program will bring approximately 450 students to U.S. community colleges from Egypt and provide quality educational programs, professional development, employment skills and a deeper understanding of American society to underserved, non-elite Egyptian students, particularly women and students in their early and mid-twenties who already have some work experience.

Colleges will place students in certificate programs lasting one academic year or may also offer students two-year programs leading either to a certificate or an Associate Degree. Students will be placed in the fields of Agriculture, Applied Engineering, Business Management/Administration, Health Professions, Information Technology, Media, and Tourism/Hospitality Management.

New Site Coordinators

Cindy Cabrales – University of Colorado, Boulder
Cindy is Program Coordinator for the Multicultural Engineering Program (MEP) and Women in Engineering Program (WIEP) and specializes in Retention and Student Support. She is also a member of the Legislative Affairs Committee.

Lorrie Wolfe – AIMS Community College, Greeley
Lorrie joined the AIMS Office of Institutional Advancement in March 2008 as a Grants Specialist. She wrote and evaluated grant requests for more than 20 years and is a graduate of Colorado State University. Lorrie was previously the Executive Director of United Way of Loveland/Berthoud/Estes Park.
## CO-AMP Site Coordinators

**Adams State College**  
Mike Garcia, Director  
Upward Bound  
Phone: 719/587-7865  
FAX: 719/587-7522  
Email: dmogarcia@adams.edu

**AIMS Community College**  
Lorrie Wolfe, Grants Specialist  
Office of Grants & Contracts  
Phone: 970/339-6650  
Email: lorrie.wolfe@aims.edu

**Colorado School of Mines**  
Dr. Khanh Vu, Director  
Minority Engineering Program  
Phone: 303/273-3021  
Email: kvu@mines.edu  
Connie Casey, Assistant  
Phone: 303/273-3286  
FAX: 303/273-3760  
Email: ccasey@mines.edu

**Colorado State University**  
— Pueblo  
Dr. Jane Fraser, Chair  
Department of Engineering  
Phone: 719/549-2036  
FAX: 719/549-2519  
Email: jane.fraser@colostate-pueblo.edu  
Loretta Cisneros, Assistant  
Phone: 719/549-2890  
Email: Loretta.cisneros@colostate-pueblo.edu

**Diné College**  
Clarissa Bowman, Coordinator  
Research Initiative for Scientific Enhancement  
Phone: 505/368-3555  
FAX: 505/368-3519  
Email: cnbowman@dinecollege.edu

**Fort Lewis College**  
Dr. Don May, Professor  
Engineering  
Phone: 970/247-7545  
FAX: 970/247-7206  
Email: may_d@fortlewis.edu

**Metropolitan State College**  
**of Denver**  
Dr. Larry Johnson, Director  
Center for Math, Science, & Environmental Education  
Phone: 303/556-5106  
FAX: 303/556-5107  
Email: johnsonl@mscd.edu

**Pueblo Community College**  
Dr. Lana Carter, Dean  
Arts & Sciences  
Phone: 719/549-3253  
FAX: 719/543-3309  
Email: Lana.carter@pueblocce.edu  
Ross Barnhart, Coordinator  
Learning Center  
Phone: 719/549-3365  
Email: Ross.barnhart@pueblocce.edu

**Trinidad State Junior College**  
Carol Rankin, Dean  
Arts & Sciences  
Phone: 719/846-5670  
FAX: 719/846-5050  
Email: Carol.Rankin@trinidadstate.edu

**University of Colorado — Boulder**  
Cindy Cabrales, Program Coordinator  
Retention & Student Activities  
Phone: 303/492-0083  
Email: cindy.cabrales@colorado.edu

**University of Colorado — Colorado Springs**  
Tina Moore, Director  
Student Support College of Engineering & Applied Sciences  
Phone: 719/262-3347  
FAX: 719/262-3542  
Email: tmoore@eas.uccs.edu

**University of Colorado — Denver**  
Dr. Paul Encinias, Director  
Student Advocacy Center  
Phone: 303/556-2777  
FAX: 303/556-4787  
Email: Paul.Encinias@.cudenver.edu
CO-AMP Industry Partners

**Ball Aerospace**
- Suzanne Delchamps
- Patti Ravine
- LaKenya Brown
- Rob Markovic

**Hewlett-Packard**
- Sonia Brocko
- Sandy Kovar
- David Ramsay

**NREL National Renewable Energy Laboratory**
- Fannie Posey-Eddy

**Boeing**
- Gloria Bradway
- Dona Wallace

**Eastman Kodak**
- Greg Smith

**Seagate Technology**
- Lydia Wiatrowski

**IBM**
- Alma Rosales

For more information regarding CO-AMP industry partners, contact Bev Marquart at Beverly.Marquart@ColoState.EDU
Community Colleges: Taking the lead on International Initiatives for Egypt

We are so proud of the leadership of our CO-AMP community college partner institutions for their hard work in initiating a proposal to increase the number of international students at their campuses and develop collaborative efforts to build international ties with Egypt. Northeastern Community College, AIMS Community College, Red Rocks Community College, Pueblo Community College, and Trinidad State Junior College are developing a grant to host more than 90 students from Egypt with NJC being the lead institution of this initiative. Funds are available through the U.S. Department of State for this partnership with up to $15.5 million granted over a three year period. We thank our community college partners for their enthusiastic support and unique contribution for providing quality technical experience and excellent professional education in areas such as: Agriculture, Applied Engineering, Business Management and Administration, Health Professions, Information Technology, Media, and Tourism and Hospitality Management which are essential for a society to move forward economically and politically! This initiative will have a positive impact on the future development of Egypt, as well as mutual benefits of social and cultural activities to better understand and appreciate diversity and foreign policy in the U.S. and Egypt.

Congratulations in advance to our community college partners and best of luck for a successful award!

~Omnia

Omnia EL-Hakim
Principal Investigator & Director of CO-AMP

Note from the Director: