#### LOUIS STOKES COLORADO ALLIANCE FOR MINORITY PARTICIPATION

## CO-AMP Continues to Deliver Degree **Completion Programs!**

The Colorado Alliance for Minority Participation continues in Phase III to increase the number of underrepresented (UREP) students enrolled in Science, Technology, Engineering, and Mathematics programs at its partner institutions (see complete listing and map of CO-AMP partners on pages 10 and 11). The number of enrolled UREM students has grown from 1,922 students (in 1996) to this year's figure of 3,246 students (a 69% increase). Likewise, the number of UREP students earning a Bachelor's degree increased from 215 to 378 during the same time period (a 76% increase)!

Since its inception, CO-AMP has established and institutionalized numerous programs and activities that offer students opportunities and experiences to increase retention, academic excellence, and degree completion, as well as preparing them for continuation to graduate school. CO-AMP and its partners remain committed to providing outstanding services to UREP STEM students in Colorado!

## Welcome, New Site Coordinators!

#### Gail LaForce — Northeastern Junior College

Gail LaForce joins the CO-AMP site coordinator team from North-



eastern Junior College (NJC). Gail is Grant Coordinator at Institutional Planning and Development and has oversight experience on several grants from the Department of Education. Gail has degrees from NJC, the University of Northern Colorado and Portsmouth General Hospital School of Nursing.

#### **CO-AMP LEADERSHIP**



Principal Investigator



Co-Principal Investigator

#### **Management Team**



Dr. Hector Mr. Dave Aragon CII-CSII-Boulder Pueblo



Dr. Peter **Dorhout** CSII-Ft. Collins



MSC Denver

## Staff



Dr. Don Data Manager



Dr. Rose Shaw External Evaluator



Dr. Beverly Program Manager

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**Whipple** Program Support

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Dr.	LaKuth	McAtee	— U	niversit	y of C	Colorado	at Bould	e:
Dr.	McAfee	assumed s	site co	ordinator	respo	nsibilities	following	C

indy Cabrales' departure for an opportunity to serve as an advisor with the University of Colorado's student government. Dr. McAfee also serves as BOLD (Broadening Opportunity through



Leadership and Diversity) Director of Student Engagement and Community Building. Dr. McAfee holds chemical engineering degrees from the University of Michigan (BSE) and MIT (PhD). Over the past few years, she has focused on engineering education, having spent a year doing a National Academy of Engineering-sponsored engineering education post-doctorate and three years as Executive Director for Education at a Science & Technology Center headquartered at Case Western Reserve University.



## **Northeastern Junior College Joins CO-AMP!**

## **New Subcontract Approved**

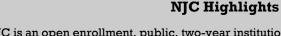


CO-AMP welcomes Northeastern Junior College (NJC) as a partner institution! NJC is an open enrollment, public, institution founded in 1941 and accredited by the Higher Learning Commission (HLC) of the North Central Association of Colleges and Schools. NJC offers two-year associate degrees and 19 certificate programs, as well as GED and English as a Second Language (ESL) programs. NJC occupies a unique position as Colorado's largest public residential two-year college while serving approximately 3,000 full-time and part-time students representing 30 US states and 11 foreign countries.

NJC has shown their commitment to broadening minority participation and developing an even greater diverse student population by doubling the number of minorities enrolled at NJC since 2005 and is committed to expanding minority participation in the coming years!

Northeastern has a stellar transfer record with approximately 55% of full time students planning to go on to a 4-year college or university to pursue a bachelor's degree or beyond. The remaining 45% are in specialized career and technical programs. Typically, Northeastern's graduation rate is twice the national average and is one of the highest in Colorado among both 2-year and 4-year colleges. We are truly proud of this newest addition to the CO-AMP family!







- NJC is an open enrollment, public, two-year institution founded in 1941, and located in Sterling, Colorado.
- NJC is Colorado's largest public residential two-year college.
- NJC offers two-year associate degrees, 19 certificate programs, GED and ESL programs.
- NJC serves 3,000 full-time and part-time students.



## **Minority Access - Role Model Awards**

## Universities recognized for commitment to diversity

Colorado State University and the University of Colorado at Boulder, both members of the Colorado Alliance for Minority Participation (CO-AMP), were recognized with a national award by Minority Access, Inc. as role model institutions for diversity. The formal award ceremony was held during the 10<sup>th</sup> annual National Role Model Conference in Washington, D.C., September 11-13, 2009. This year's conference, "Hope for a Healthy, Diverse and Just Environment," focused on the excessive and inconsistent presence of certain illnesses in minority groups and the need for minorities to be present in the biomedical and health related fields to curb this health discrepancy.





"This (award) speaks to our shared commitment and the values we try to live by everyday in our offices, labs, performance halls, athletic facilities, and classrooms," said Roselyn Cutler, interim director of the Office of Equal Opportunity and Diversity, who accepted the award on behalf of CSU.

Minority Access, Inc. is a non-profit, educational organization that supports individuals, academic institutions, federal, state, and local government agencies, and various corporations to diversify campuses and work sites by improving the recruitment, retention and enhancement of minorities. The organization focuses

MINORITY ACCESS, INC.

Improving diversity in education, employment and research

heavily on maintaining a minority presence in the biomedical science and health related academic and research fields.

## **Bridge to the Doctorate 2 News**

#### **BD2 Student Awarded Competitive NSF Graduate Research Fellowship**

Colorado State University's BD2 student, Phillip Wheeler, was recently awarded the prestigious National Science Foundation Graduate Research Fellowship (NSF-GRF) available only to the most promising graduate students nationwide. The NSF-GRF is extremely competitive with fewer than 10% of applications across all NSF disciplines being selected. Wheeler, a doctoral student in the Department of Chemistry, received the Fellowship to continue his research in synthetic methodology. Wheeler's research project involves the development of new catalyzed acyl transmitter reactions, making complex peptides through a greener, more efficient process.



### **BD2 Student Awarded NIH Ruth Kirchstein Graduate Fellowship**

Colorado State University's BD2 student, Derek Dalton, was awarded the Ruth Kirchstein Graduate Fellowship from the National Institutes of Health (NIH). This Fellowship aims to improve the diversity of the health related workforce by supporting the training of predoctoral students from groups that have traditionally been underrepresented in the sciences. Dalton has been actively engaged in the development of a rhodium catalyzed reaction which brings three different components together to assemble a six-membered nitrogen heterocycle in a single step. With this [2+2+2] cycloaddition, Dalton is planning to assemble the natural product acosmine which has a variety of desirable medicinal properties.





## **Bridge to the Doctorate 3 News**

Krystle Frahm, Ph.D. student in Biomedical Sciences, was selected to attend the 16th Annual Compact For Faculty Diversity Institute on Teaching and Mentoring.

This annual program is conducted specifically for doctoral scholars who are interested in teaching at the postsecondary level, and was held at the Marriott Crystal Gateway in Arlington, Virginia, Thursday, October 22 – Sunday, October 25, 2009. Over 1,000 participants attended the conference. All travel and related expenses to attend the institute were provided for the students. Two students from the BD2 cohort previously participated in the Institute.



Julia Herman (previously Julia Figueroa) has published the following article: Piaggio AJ, Figueroa JA, Perkins SL. 2009. Development and characterization of 15 polymorphic microsatellite loci isolated from Rafinesque's big-eared bat, Corynorhinus rafinesquii. MOLECULAR ECOLOGY RESOURCES, V. 9, Issue 4, pp. 1191-1193. She presented her research at the Conference for Research Workers in Animal Disease, December 6-8, 2009 in Chicago, IL.

## **CO-AMP Student News**



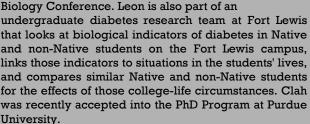
#### Summer Internship 2009 - Alaska Department of Natural Resources

Isaac Cadiente, a CO-AMP student at Fort Lewis College majoring in environmental biology, participated in a summer internship at the Alaska Department of Natural

Resources. His internship involved collection of data for tree regeneration and silviculture, as well as an additional project on salmon spawning habitat in logged and unlogged streams. This internship also involved surveying logging roads and inspection of pre-commercial tree thinning operations throughout southeast Alaska.

#### Tri-Beta Biology Conference

Leon Clah, a senior Biology major and Chemistry minor at Fort Lewis College, presented his research, "Ubiquitin Conjugate Mimics to Identify Mediators of Ubiquitin-dependent Signaling" at the Tri-Beta Biology Conference. Leon is also part of an





High school students assemble solar cookers to melt chocolate as part of the Thermodynamics in Mechanics workshop.

#### University of Colorado – Denver: 2010 SHPE High School Engineering Conference

CO-AMP students from the University of Colorado Denver SHPE (Society of Professional Engineers) student chapter organized the third annual High School Confer-

ence to encourage students to explore a career in engineering. UCD hosted 130 students from eight Colorado high schools on February 5, 2010, to learn and interact with university professors and engineering students. Conference participants experienced "Green Engineering" through professional speakers, presentations by UCD professors, and various hands-on workshops in electrical, mechanical, and civil engineering. Workshops included Windturbine electricity, Enviro batteries, Thermodynamics in Mechanics (solar powered cooking, as shown in the photo), and Waste to Taste! Green Water Filtration.

#### **AWG Outstanding Student**

Wai K. Allen, CO-AMP student at Fort Lewis College, received the 2010 Association for Women Geoscientists (AWG) Outstanding Student award. Allen was also a recipient of the Amoco Minority Scholarship for 2009.





## **CO-AMP Student News (continued)**

#### **Trinidad State Students Launch High-Altitude Balloon Experiment**

Five sophomore TSJC science and engineering students - Laura Mourer, Matt Barela, Paul Philbin, Jeremy Begley, and James Donnelly (L to R)- launched an experiment via a high-altitude balloon to the stratosphere in mid-January 2010. Their experiment was designed to economically measure the vertical profile of carbon dioxide and methane concentrations up to 100,000 feet, roughly three times higher than commercial airlines fly and only 1% of the Earth's atmosphere above this altitude. Experiments, such as this one conducted by TSJC students, are important to calibrate atmospheric models because carbon dioxide will likely be detected remotely by orbiting satellites; these satellites must be calibrated regularly against direct measurement, which is the goal of this project.







#### University of Colorado -Denver Receives SHPE Regional Chapter of the Year Award

The University of Colorado — Denver SHPE (Society of Hispanic Professional Engineers) chapter received the "SHPE Regional Chapter

of the Year Award" for the exceptional activities they coordinated during 2008-2009. Students were able to attend the annual SHPE Region III Leadership Development Conference hosted by the University of Wyoming, Laramie (April 24-26, 2009) through funding provided by CO-AMP and the President's Diversity Fund.

#### University of Colorado - Denver: 2009 American Society of Civil Engineers (ASCE) Student Award

The ASCE student chapter at University of Colorado – Denver (UCD) competed against 14 regional university entries on April 6, 2009, to win and qualify for the National Competition (University of Nevada – Las Vegas, May 2009) by constructing a steel bridge (19 feet long, 3

½ feet wide and 3½ feet tall!). The president of ASCE is CO-AMP student, Roksana (Roxy) Taghizadeh.





#### **CU Boulder: SMART Program Hosts Twenty-five Science Undergrads**

The Summer Multicultural Access to Research Training, or SMART program at CU Boulder, is a 10-week research internship that prepares undergraduates for graduate programs in science, technology, engineering and math (STEM) fields. Each summer students from institutions nation-wide participate in research and attend weekly workshops

on scientific writing and presenting, GRE preparation, and the application process for graduate school. Under the guidance of faculty mentors, interns carry out and formally present individual research projects in their area of interest. Last summer, twenty-five undergraduates took part in this challenging and informative program and had the opportunity to interact in the social environment of a large university and in a community of peers.





## **CO-AMP Student News (continued)**

## SACNAS - Role Model Award

The CSU-SACNAS chapter was awarded the Role Model Chapter of Year at the National SACNAS conference for the third consecutive year. Each year, the SACNAS Chapter Committee honors a number of chapters for their outstanding level of achievement in public service, mentoring, leadership, and/or community outreach. This year 15 students along with two advisors from CSU-SACNAS attended the annual conference held in Dallas, TX (October 15-18-2009). The conference offered a forum for students to network with other scientists and gain exposure to graduate programs and scientific research.

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. Although the organization's name speaks to certain populations, people from all ethnic and racial backgrounds who want to work with diverse populations in the sciences are welcome to join SACNAS. The CSU-SACNAS chapter was the first of its kind to be established in the state of Colorado. The organization receives guidance through a faculty advisory board which is comprised of professors and administrators from

diverse academic backgrounds.



Advancement of Chicanos and Native Americans in Science

Colorado State University Student Chapter

## **SACNAS - Regional Meeting**

CSU-SACNAS, along with Metropolitan State

College of Denver and the University of Colorado – Denver, played a major role in the 1<sup>st</sup> annual SACNAS Rocky Mountain Regional meeting held at the Auraria Campus in Denver (August 28-29, 2009). The purpose of the SACNAS Rocky Mountain Regional meeting was to offer an informal academic platform that would introduce SACNAS to colleges and universities in the Rocky Mountain region, and to local high schools from the surrounding Denver metro area and Northern Colorado. In addition, the meeting brought individuals from the Rocky Mountain region together to support each other's chapters, gain leadership skills, and to create a supportive team of individuals. By initiating this network, members and chapters throughout the Rocky Mountain Region have begun to build a support system for a SACNAS community.

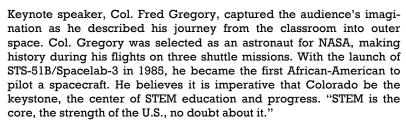
## STEMAPALOOZA

More than 7,000 Coloradoans attended STEMapalooza, presented by the University of Colorado Denver, on October 16-17, 2009, to celebrate STEM education and partnerships. The event was an ideal venue for edu-



cators and businesses to network and share the latest information about the sciences. For students, parents and teachers, it provided opportunities to dive into hands-on ("minds-on") activities such as learning about how to test your DNA, to seeing a live caiman (a member of the crocodilian family), to getting a 3-D view of

the globe, to engineering your own robot!



Gov. Bill Ritter (captured in a "sea" of students during STEMapalooza 2008) launched the Colorado STEM Network, a statewide coalition of businesses, government, education and community groups in 2009.

## **International Connections**

## Ghana, Africa



## Research Experience for Undergraduates (REU) — Ghana, Africa

Two Trinidad State Junior College (TSJC) graduates, Jess Trujillo (bottom) and Jesse Johnson (top), participated in a National Science Foundation – REU internship at the University of Cape Coast, Ghana Africa this past summer



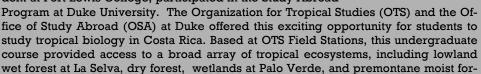
(2009). This NSF-REU provides participants the opportunity to conduct research in ecology, environmental science, and conservation biology in tropical sub-Sahara Africa. Trujillo, former president of TSJC's Phi Alpha chapter of the Tri-Beta biological honor society, was awarded a USDA \$50,000 Biology Transfer Scholarship and is currently a conservation biology major at the University of New Mexico. Johnson is a sophomore at Fort Lewis College in Durango, Colorado.

## Costa Rica, South America



## Summer Study Abroad Program Duke University — Costa

During the summer of 2009, Sheryl Manygoats, CO-AMP student at Fort Lewis College, participated in the Study Abroad



est at Las Cruces. This international experience also included tropical ecosystem design, implementation, and interpretation which prepared students to conduct their own independent research projects at all three facilities. Projects ranged from seed dispersal, population studies (flora and fauna), and comparisons of different habitats.

## Geneva, Switzerland



## Duke University/World Health Organization Institute — Geneva, Switzerland

Katrina Gillette, a BD3 student in Soil and Crop Science, was chosen as an intern for the Duke University/World Health Organization institute in Geneva, Switzerland. Duke University's Program on Global Policy and Governance at the World Meteorological Organization in

Geneva prepares graduate students from around the world to deal with the policy and institutional issues at the heart of global governance. The program provides exceptional experiential education through intensive courses taught by leading global policymakers and through internships at Geneva-based international agencies, non-governmental organizations (NGOs), and government delegations.







## **Steering Committee Meetings**

## Spring Meeting at Southern Ute Indian Reservation, Ignacio, CO



April 9, 2009

The Spring CO-AMP Steering Committee meeting was hosted by the Southern Ute Tribe at Ignacio, Colorado on April 9, 2009. CO-AMP members were welcomed by Southern Ute Tribe officials: Mr. Johnny Valdez (top left photo), Executive

Officer, and Ms. La Titia Taylor (top right photo), Director of Education.

Guest speakers included: Dr. Margaret E. M. Tolbert (bottom left photo), National Science Foundation Senior Advisor in the Office of Integrative Activities (OIA); and Dr. Ed Galindo (bottom right photo), science faculty member at the University of Idaho. Both speakers highlighted broadening participation and expanding outreach in STEM fields for Native Americans, as well as the need to relate science and research to Native culture.

Adrian Abeyta's research project on elk habitat was included as part of the student presentations. Abeyta is a member of the Southern Ute Tribe and a graduate of Colorado State University.











Student presenters (L to R): Isaac Cadiente – Costa Rica Tropical Rainforest Reforestation Plantations: Effects of Soil Bulk Density and Leaf Litter Abundance on Relative Growth Rates; Jesse Johnson – Dewlap Size, Morphology, and Behavior in Norops Aquaticus; Matthew Frank – Tenovin: An Activator of the Guardian of the Genome; Naglee Allen – AISES Chapter Representative; Randy Anguiano-The Game of Chutes and Ladders as a Markov Chain.



Site Coordinators; Southern Ute and Ute Mountain Ute Tribal Representatives

## Fall Meeting at University of Colorado, Boulder, CO

October 9, 2009

The University of Colorado at Boulder hosted the CO-AMP Steering Committee on October 9, 2009. Presentation topics included: Best Practices for Recruitment and Training of Students from Community Colleges to 4-year Institutions (Drs. Ernie Chavez and Steve Mills, a report on the Community College Workshop held at University of Alabama, October 4-6,2009); Minority Retention Issues & Promising Practices – An overview of Retention Literature (including Tinto Model and Bean & Eaton Model) and Highlights of Successful Programs by Dr. LaRuth McAfee; and a roundtable discussion of Staying in Touch Tracking program and Best Practices in CO-AMP.





# **Announcements!**

## GOVERNING BOARD AND STEERING COMMITTEE MEETING

April 9, 2010

#### **Hosted by**

Metropolitan State College Writer Square Denver, CO



#### **Featured Guest Speakers**

#### Randy Fischer

Deputy Majority Whip Colorado State Representative District 53

#### Dr. Caesar Jackson

Acting Division Director
Human Resource Development/
Education and Human Resources
National Science Foundation

#### Dr. Omnia El-Hakim

Program Director
Diversity and Outreach
Directorate for Engineering
National Science Foundation









## NSF JOINT ANNUAL MEETING

**JAM Conference** 

June 6th-9th, 2010 Washington, DC



#### **MESA JAMBOREE**

April 20, 2010 at Colorado School of Mines Golden, CO

The MESA High School Science and Engineering Jamboree is a hands on engineering competition where students compete in a series of mathematics, engineering and science related projects including the Wind Energy design, Prosthetic Arm design, Popsicle Stick Bridges, Paper Towers, and other competitions.



## La Titia Taylor Becomes Education Director of Southern Ute Tribe

As of October 1, 2009, La Titia Taylor assumed the position of Education Director for the Southern Ute Indian Tribe in Ignacio, Colorado. Ms. Taylor was the Director of Higher Education prior to the consolidation of Higher Education and Public Education into the Southern Ute's Department of Education. The Education Department's programs include: Adult Education; Adult Occupation; Internships; Distance Learning; GED testing; higher education scholarships; Johnson O'Malley programs; Education Counseling; Tutoring and Enrichment; and Administration, serving the education

tional needs of Southern Ute Tribal members and the community.





## **CO-AMP Site Coordinator Team**

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## 5 ° 3

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## Serving Colorado and the Four Corners Region



















Great Stories Begin Here













## **CO-AMP Industry Partners**



#### **Ball Aerospace**

Suzanne Delchamps Patti Ravine LaKenya Brown Rob Markovic



## Hewlett-Packard

Sonia Brocko David Ramsay



Fannie Posey-Eddy



Seagate **Chris Porter** 





**Boeing** 

Gloria Bradway Dona E. Wallace



Eastman Kodak **Greg Smith** 



## El Paso Corporation

**Kelley Hicks** Rob Ferguson





**AMD** John Wuu

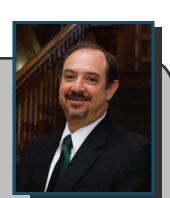


CO-AMP Sage Hall Fort Collins, CO 80523-1879 (970) 491-6686 Fax: (970) 491-3421

## Note from the Director:

The Colorado Alliance for Minority Participation (CO-AMP) continues in Phase III (2006-2011) to support underrepresented (UREP) minority students by developing opportunities and experiences that increase retention, academic excellence, and degree completion. Strong linkages are currently in place with CO-AMP's two-year colleges to build institutional capacity and develop meaningful connections for students bridging to 4-year institutions. In addition, CO-AMP has begun work to create international opportunities that will enhance CO-AMP students' academic experience. Innovation is the key to competitiveness in today's globally integrated economy and America's competitiveness also demands increased concentration in math and science. Given that cultural awareness and understanding can be the difference between success or failure in the business community, this preparation for students is imperative to a globally engaged workforce.

Recently, Colorado School of Mines (CSM) in Golden submitted a proposal to the National Science Foundation for a fourth cohort of the Bridge to the Doctorate (BD). CSM has distinguished itself by developing a curriculum and research program geared towards responsible stewardship of the earth and its resources. For example, CSM is one of a very few institutions in the world having broad expertise in resource exploration, extraction, production and utilization.



Dr. Rick Miranda
Principal Investigator
and Director of
CO-AMP
CSU Provost/Executive
Vice-President

Since its founding in 1874, the school's mission has been influenced by the needs of society. Those needs are now focused more clearly than ever before as the world faces a crisis in balancing resource availability with environmental protection. CSM and its programs are central to developing bold and innovative solutions. We are looking forward to a successful award and assisting each new BD Fellow as they advance through their academic careers to earn their Ph.D.s!

CO-AMP is very proud of its staff at each partner institution that works so diligently to support their undergraduate students through conferences, summer research opportunities, workshops, internships, and mentoring programs. Each CO -AMP partner institution continues to build upon our paramount mission of training and preparing the next generation of young scientists who will diversify the workplace and enhance the economic vitality of our state, nation, and world!

Dr. Rick Miranda