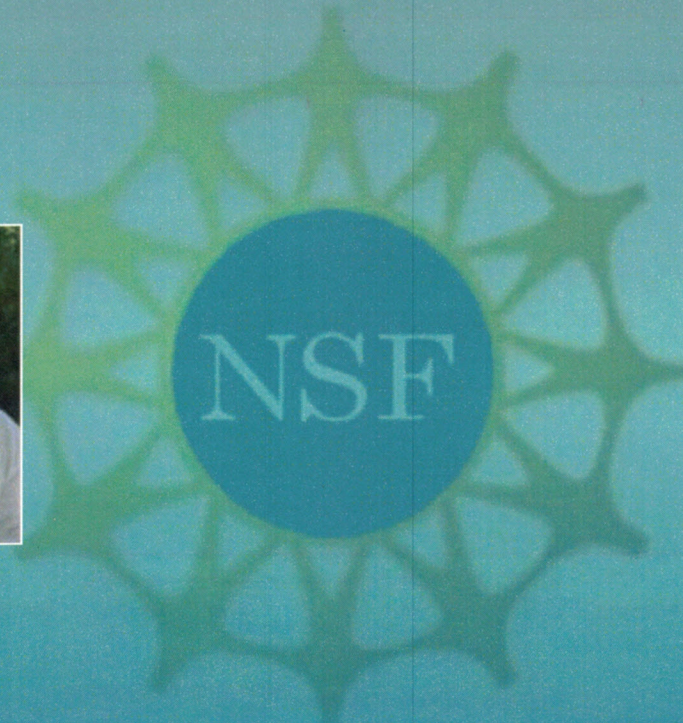
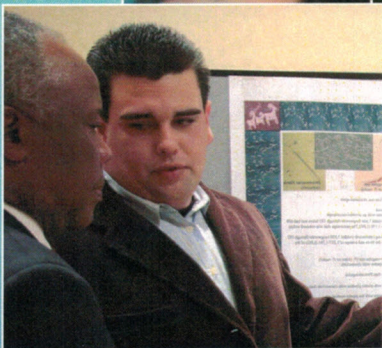
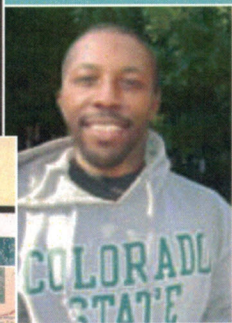
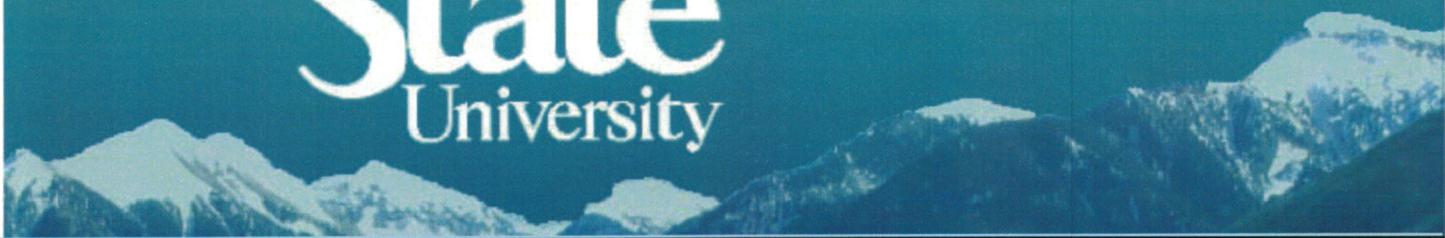


CO-AMP
Bridge to the Doctorate

Linking diverse students to educational opportunities in
Science, Technology, Engineering and Mathematics

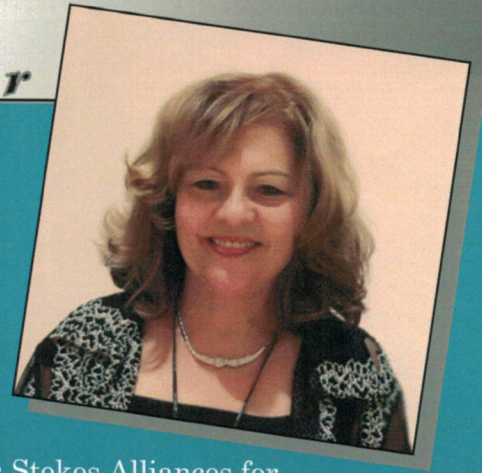


Colorado
State
University



Note from the Principal Investigator/Director

On behalf of the Colorado Alliance for Minority Participation (CO-AMP), I want to take this opportunity to thank the National Science Foundation and Dr. A. James Hicks for supporting educational opportunities for diverse students in Science, Technology, Engineering and Mathematics (STEM)! Without their vision and leadership in creating the Bridge to the Doctorate (BD) program, advanced degrees would not be possible for many underrepresented students.



Since 1996, CO-AMP has been honored to be a member in the Louis Stokes Alliances for Minority Participation (LS AMP) consortia and a partner in the BD initiative since 2006. CO-AMP is a unique and innovative program because it encourages the talents and skills of underrepresented students and serves as an advocate for their academic success. CO-AMP also creates a synergy among diverse groups while providing top-notch academic research opportunities to undergraduate and graduate students. In addition, CO-AMP encourages undergraduate students to discover their research potential and to seriously consider pursuing graduate studies. As an alliance, CO-AMP works collaboratively with other AMP programs to build highly qualified, globally competitive scholars to enter the BD program and be successful role models for other diverse students. CO-AMP is currently establishing an infrastructure throughout Colorado institutions of higher education to support and mentor these potential BD students.

Through the BD program, NSF funding enables AMP students to focus on their studies and motivate other diverse students, thus increasing the educational attainment of underrepresented groups. The BD program is crucial to CO-AMP because it allows students an opportunity to excel in their chosen research fields. CO-AMP is honored and privileged to be part of this national effort to positively impact diverse students receiving graduate degrees in STEM fields. To all of them I say, welcome to Colorado!

-Omnia El-Hakim,

Map of CO-AMP Partners



Serving Colorado and the Four Corners Region

Contact us:

Dr. Omnia El-Hakim, PI/Program Director

100C Sage Hall, Colorado State University

Fort Collins, CO 80523-1879

(970) 491-2656; Fax (970) 491-3421

Omnia.ElHakim@colostate.edu

Dr. Beverly Marquart, Program Manager

100E Sage Hall, Colorado State University

Fort Collins, CO 80523-1879

(970) 491-6686; 1-800-835-8091

Fax (970) 491-3421

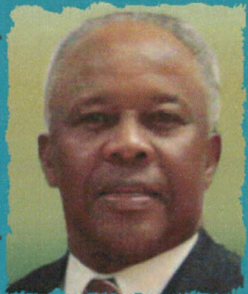
Beverly.Marquart@colostate.edu

www.coamp.colostate.edu

www.bridgetothedoc.colostate.edu

Administration

Dr. A. James Hicks
Director LS AMP
National Science
Foundation



Dr. Larry Edward Penley
President of CSU; Chancellor
of the CSU System; Chair of
CO-AMP Governing Board
Colorado State University

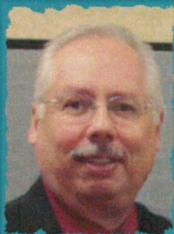


Dr. Omnia El-Hakim
Principal Investigator
and Director of CO-AMP
Professor of Civil Engineering
Colorado State University

Dr. Peter Dorhout
Vice Provost for Graduate
Studies; Assistant VP for
Research; CO-PI of CO-AMP
Colorado State University



Management Team



Dr. Hector Carrasco
Colorado State
University –Pueblo



Dr. Larry Johnson
Metro State
College –Denver



David Aragon
University of
Colorado –Boulder



Dr. Omnia El-Hakim
Colorado State
University
–Ft. Collins



Dr. Peter Dorhout
Colorado State
University
–Ft. Collins



Dr. Beverly Marquart
Colorado State
University
–Ft. Collins

Evaluator



Dr. Rose Shaw
CO-AMP / BD
Evaluator

Graduate School



Dr. Jodie Hanzlik
Vice Provost
at CSU site



Dr. Elaine Green
BD Program Coordinator
at CSU site

Faculty Advisory

Board at CSU

From 2003 to Present

- Dr. Michael Antolin, **Biology***
- Dr. V. Chandrasekar, **Electrical & Computer Engineering***
- Dr. Peter Dorhout, **Graduate School***
- Dr. Omnia El-Hakim, **CO-AMP PI/Director***
- Dr. Greg Florant, **Biology***
- Dr. Elaine Green, **Graduate School***
- Dr. Larry Goodridge, **Animal Sciences***
- Dr. Jodie Hanzlik, **Graduate School***
- Dr. Harrison Hughes, **Horticulture & Landscape Architecture***
- Dr. Anura Jayasumana, **Electrical & Computer Engineering***
- Dr. Nancy Levinger, **Chemistry***
- Dr. Terry Nett, **Biomedical Sciences***
- Dr. Jorge Ramirez, **Civil Engineering***
- Dr. Sue James, **Mechanical /Biomedical Engineering***

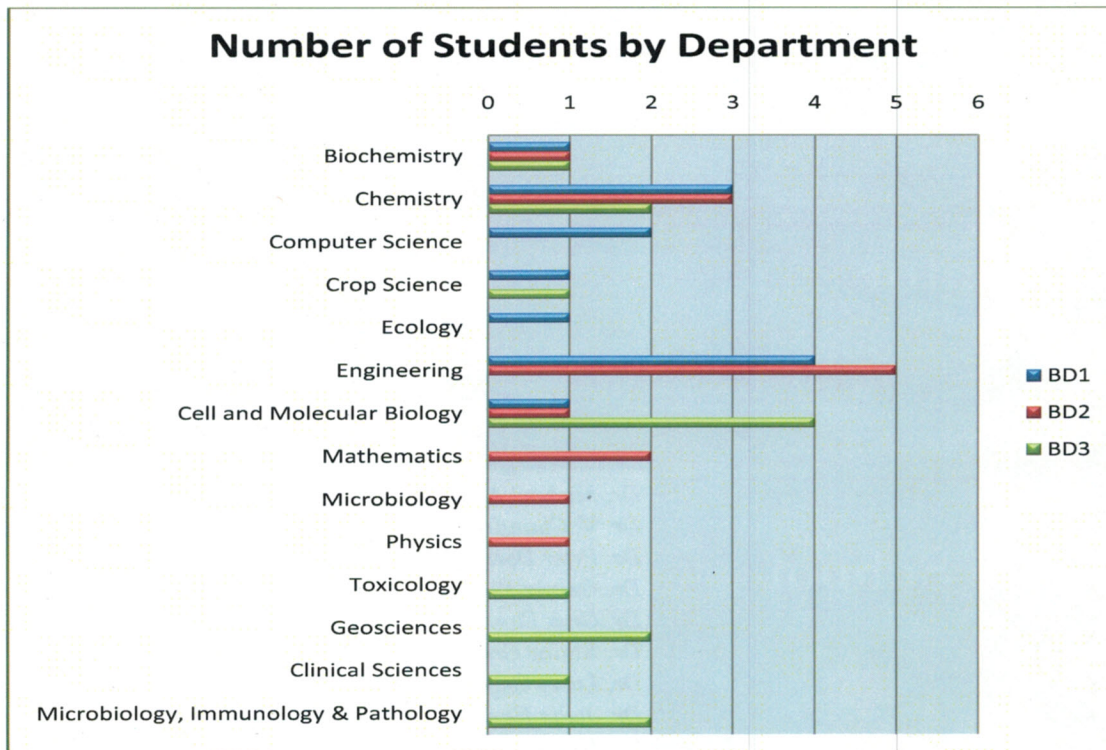
About the Bridge to the Doctorate

The Bridge to the Doctorate (BD) program in Colorado, an initiative within the National Science Foundation's Louis Stokes Alliances for Minority Participation (LS AMP), began when the Louis Stokes Colorado Alliance for Minority Participation (LS CO-AMP) was successfully funded in May 2006. Nine LS AMP baccalaureate degree graduates, BD Cohort 1, being awarded fellowships for their first two years of graduate studies. Since then, 26 additional fellowships, BD Cohort 2 and 3, have been awarded for a current total of 35 Fellows.

The BD initiative develops well qualified, highly competitive scholars in STEM fields with the goal for these advanced degree graduates to enter the professoriate and become role models for other diverse, underrepresented students. BD funding is awarded each year by NSF to support 12 scholars in STEM disciplines.

The LS CO-AMP program has built a collaborative relationship among institutions in the LS AMP consortia in order to award graduate fellowships to highly qualified AMP students enrolling at Colorado institutions of higher education – Colorado State University, Colorado School of Mines, University of Colorado at Boulder, University of Colorado at Colorado Springs and University of Colorado at Denver.

A Faculty Advisory Board was created through the Graduate Center for Diversity and Access at the CSU Graduate School to serve as an oversight group and selection committee for distribution of BD funds.



Benefits to BD Fellows:

- Fellowship funding for first 2 years of graduate study (\$30,000/year)
- \$10,500 cost-of-education allowance for tuition and fees (includes health coverage)
- Assistantship support after the two years of BD Fellowship support
- Professional meeting/workshop opportunities
- Research projects in laboratories with faculty mentoring
- Travel opportunities to present research and attend science conferences
- Network opportunities with graduate students and faculty across STEM disciplines

Community Building/

Peer Mentoring

- * One-on-One or Group Advising
- * Sharing Best Practices among the BD Cohorts



Conferences

- * NSF Joint Annual Meeting Conference
August 2007
- * NSF Joint Annual Meeting Conference
June 2008

Orientation

- * Programs and Campus Resources

Fellowships

- * Post BD Fellowship Information
- * NSF Graduate Research Fellowship Program



Professional Development

- * Preparing for the Professoriate
- * Professional Ethics
- * Selecting Research Topics and Mentors
- * Cultural Differences in STEM fields
- * Typical Path to the Ph.D. workshop
- * Campus Research Resources
- * Becoming a Successful Graduate Student

Cohort 1



Herman Bravo
Dept. Mechanical Engineering
Advisors: Dr. J. Rocca
& Dr. P. Wilbur
B.S. Mechanical Engineering 2005
University of California- Berkeley

Miriam Galeas Loeffler
Dept. Ecology
Advisor: Dr. E. Pilon-Smits
B.S. 2002
M.S. Biology 2005
Colorado State University



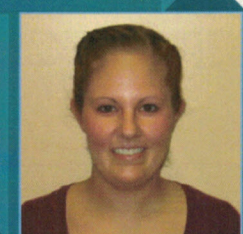
Elizabeth Castelbaum
Dept. Soil & Crop Science
Advisor: Dr. P. Byrne
B.S. Rangeland Ecology 2006
Colorado State University

Shay Perea-Boettcher
Dept. Biochemistry
Advisor: Dr. J. Bamburg
B.S. Biochemistry 2001
Colorado State University



John Edwards, III
Dept. Computer Science
Advisor: Dr. I. Ray
B.S. Computer Science 1996
University of Missouri- Rolla

Elizabeth Perrault
*Dept. Cell
& Molecular Biology*
Advisor: Dr. K. Reardon
B.S. Chemistry 2005
Fort Lewis College



Rachel Garcia
Dept. Civil Engineering
Advisor: Dr. J. van de Lindt
B.S. Civil Engineering 2006
Colorado State University

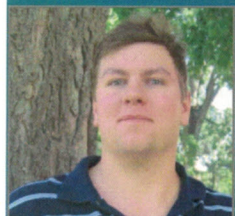
Janet Locklear
Dept. Chemistry
Advisor: Dr. C. Henry
B.S. Chemistry 2005
University of North Carolina-
Pembroke



Shantell Hinton
Dept. Electrical Engineering
Advisor: Dr. A. Maciejewski
B.S. Engineering 2006
Vanderbilt University



Cohort 2

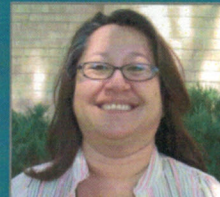


Jacob Barker

Dept. Mechanical Engineering
Advisor: Dr. V. Manivannan
B.S. Mechanical Engineering 2007
Colorado State University

Lorene Martinez

Dept. Microbiology
Advisor: Dr. R. Jones
B.S. Biology 2004
Colorado State University



Natalia Cordova Sanchez

Dept. Mathematics
Advisor: Dr. R. Pries
B.S. Mathematics 2007
University of Puerto Rico-
Rio Piedras

Matthew Martinez

Dept. Electrical Engineering
Advisor: Dr. V Chandrasekar
B.S. Electrical Engineering 2007
New Mexico State University



Derek Dalton

Dept. Chemistry
Advisor: Dr. T. Rovis
B.S. Chemistry 2007
University of Colorado-
Denver

Santano Mestas

Dept. Biomedical Engineering
Advisor: Dr. K. Lear
B.S. Biochemistry 1999
Colorado State University



Miguel Galvez

Dept. Electrical Engineering
Advisor: Dr. V Chandrasekar
B.S. Electrical Engineering 2006
Colorado State University

Michelle Sanchez

Dept. Chemistry
Advisor: Dr. R. Williams
B.S. Chemistry 2007
Regis University



Carlos Herrera

Dept. Biochemistry
Advisor: Dr. Laurie Stargell
B.S. Biology 2007
University of Puerto Rico

Ruffin Swain

Dept. Mathematics
Advisor: Dr. J. Duflet
B.S. Mathematics 2007
California State University-
Dominguez Hills



William Johnston

Dept. Physics
Advisor: Dr. W. Fairbank
B.S. Physics 2007
Texas A & M University-
Commerce

Philip Wheeler

Dept. Chemistry
Advisor: Dr. T. Rovis
B.S. Chemistry 2004
University of California-
Santa Cruz



Cohort 3



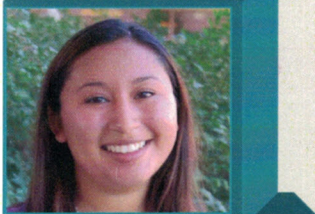
Gladys Bonilla
Dept. Geosciences
Advisor: Dr. D. Schutt
B.S. Physics 2008
University of Puerto Rico-
Rio Piedras

Mark Goodwin
*Dept. Environmental & Radiologi-
cal Health Sciences (Toxicology)*
Advisor: Dr. W. Hanneman
B.S. Biochemistry 2008
Colorado State University



Katherine Davila Olmo
Dept. Geosciences
Advisor: Dr. W. Sanford
B.S. Environmental Sciences 2008
University of Puerto Rico-
Rio Piedras

Jacqueline Harding
Dept. Chemistry
Advisor: Dr. A. Kennan
B.S. Chemistry 2007
University of Texas at El Paso



Vanessa Enriquez
Dept. Cell & Molecular Biology
Advisor: Dr. P. Laybourn
B.S. Zoology 2007
Southern Illinois University-
Carbondale

Brian Leon
Dept. Chemistry
Advisor: Dr. A. Kennan
B.S. Chemistry 2008
University of CA-
Irvine



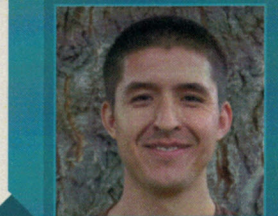
Daniel Feliciano
*Dept. Biochemistry &
Molecular Biology*
Advisor: Dr. L. Stargell
B.S. Chemistry 2007
University of Puerto Rico-
Rio Piedras

Contessa Majors
*Dept. Cell &
Molecular Biology*
Advisor: Dr. P. Laybourn
B.S. Physics 2007
Langston University



Julia Figueroa
Dept. Clinical Sciences
Advisor: Dr. M. Salman
B.S. Zoology 2007
Colorado State University

Alejandro Trujillo
Dept. Cell & Molecular Biology
Advisor: Dr. D. Crans
B.S. Biology 2007
New Mexico State University



Krystle Frahm
Dept. Biomedical Sciences
Advisor: Dr. S. Tobet
B.A. Health Psychology 2005
Texas State University

Dezaray Varland
*Dept. Cell &
Molecular Biology*
Advisor: Dr. P. Laybourn
B.S. Cell & Molecular Biology 2008
Ft. Lewis College



Katrina Gillette
Dept. Soil and Crop Sciences
Advisor: Dr. N. Hansen
B.S. Soil and Crop Sciences 2008
Colorado State University

Lisa Wolfe
*Dept. Microbiology,
Immunology & Pathology*
Advisor: Dr. K. Dobos-Elder
B.S. Biochemistry 2004
Colorado State University



Bridge to the Doctorate Student Highlights

BD 1 Fellow, Miriam Galeas, Conducts Plant Research in Australia



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

Miriam Galeas has completed her second-year BD Fellowship at Colorado State University. Miriam spent the fall semester of 2007 assisting with research in Perth, on the western coast of Australia.

While in Australia she worked with researchers in the Restoration Ecology Laboratory at Murdoch University. She helped with mining rehabilitation projects in the jarrah forest, and with climate change experiments in banksia woodlands.

Galeas has now been accepted into the Ph.D. program at CSU and recently learned that she was awarded a GK-12 (Graduate K-12 Education) Fellowship from NSF to continue her studies.



~ Galeas taking plant cover
estimates in the Banksia
woodland~

BD 1 Fellow, John Edwards, Awarded GEM Fellowship

John Edwards, BD1 Fellow, presented his research at the 2007 JAM Conference in Washington, D.C. Edwards is a Computer Science student coming to Colorado from the Missouri LSAMP. At the conclusion of his second year, he was awarded a GEM (National Consortium for Graduate Degrees for Minorities in Engineering and Science, Inc.) Fellowship. He spent that summer as an intern at Apple Computers in California and returns to CSU to enter a doctoral program.



BD Advisors



(Alphabetical from left to right)

Row 1:

Dr. James R. Bamberg, Professor, **Biochemistry and Molecular Biology**; Dr. Patrick Byrne, Assistant Professor, **Soil & Crop Sciences**; Dr. Debbie C. Crans, Professor, **Chemistry**; Dr. Karen Dobos-Elder, Assistant Professor, **Microbiology, Immunology & Pathology**; Dr. Jeanne Duflot, Professor, **Mathematics**; Dr. William M. Fairbank, Professor, **Physics**; Dr. William Hanneman, Associate Professor, **Environmental & Radiological Health Sciences**; Dr. Neil Hansen, Associate Professor, **Soil and Crop Sciences**.

Row 2:

Dr. Charles Henry, Associate Professor, **Chemistry**; Dr. Robert L. Jones, Professor, **Microbiology**; Dr. Alan J. Kennan, Associate Professor, **Chemistry**; Dr. Paul Laybourn, Professor, **Biochemistry & Molecular Biology**; Dr. Kevin Lear, Professor, **Electrical & Computer Engineering**; Dr. Anthony A. Maciejewski, Professor, **Electrical & Computer Engineering**; Dr. Venkatesan Manivannan, Associate Professor, **Mechanical Engineering**; Dr. Elizabeth A. H. Pilon-Smits, Associate Professor, **Biology**.

Row 3:

Dr. Rachel Pries, Associate Professor, **Mathematics**; Dr. Indrajit Ray, Associate Professor, **Computer Science**; Dr. Kenneth F. Reardon, Professor, **Chemical Engineering**; Dr. Jorge Rocca, Professor, **Electrical & Computer Engineering**; Dr. Tomislav Rovis, Professor, **Chemistry**; Dr. M.D. Salman, Professor, **Clinical Sciences**; Dr. William Sanford, Associate Professor, **Geosciences**; Dr. Derek Schutt, Assistant Professor, **Geosciences**.

Row 4:

Dr. Laurie Stargell, Associate Professor & Associate Chair, **Biochemistry & Molecular Biology**; Dr. Stuart Tobet, Professor, **Biomedical Sciences**; Dr. John van de Lindt, Associate Professor, **Civil Engineering**; Dr. Chandrasekaran Venkatachalam, Professor, **Electrical & Computer Engineering**; Dr. Paul Wilbur, Professor, **Mechanical Engineering**; Dr. Robert M. Williams, Professor, **Chemistry**.

Colorado LS-AMP: International Initiative Highlights

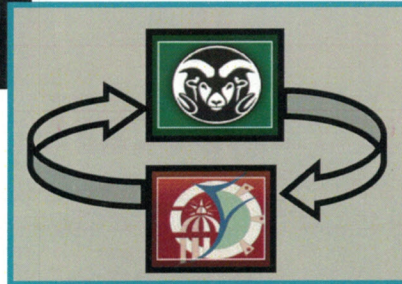
President of Fayoum University in Egypt Signs International Memorandum of Understanding with Colorado State University



President Galal, Fayoum University, and President Penley, Colorado State University

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.

Dr. Galal Said, President of Fayoum University in Fayoum, Egypt, visited Colorado State University on December 12, 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 Colorado State University Provost and Senior Executive Vice President, Tony Frank. The IMOU facilitates cooperative academic activities and strengthens the international context of research and education for students and faculty at both universities.

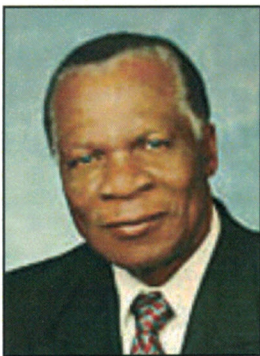


Dr. Omnia El-Hakim and Dr. Galal

"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, Principal Investigator/Director of CO-AMP

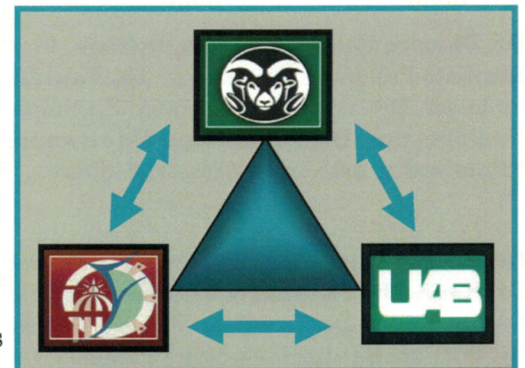
Collaboration with other AMP Institutions



Dr. Louis Dale,
Alabama LS AMP

This summer, CO-AMP initiated a Memorandum of Understanding with the Alabama AMP alliance (University of Alabama at Birmingham) to encourage more African-American students to enroll at Colorado State University.

University of Alabama at Birmingham is also initiating an International Memorandum of Understanding with Fayoum University to introduce a global experience to their students and faculty, as well as an international exchange for Fayoum University students and faculty.



UAB THE UNIVERSITY OF ALABAMA AT BIRMINGHAM