

Connection

Newsletter of Bio-Link • The National Advanced Technological Education Center for Biotechnology

BIO-LINK'S 16TH ANNUAL SUMMER FELLOWS FORUM

Bio-Link's 16th annual Summer Fellows Forum 2014 was once again hosted by the National Center located at City College of San Francisco (CCSF) from June 2 through June 6 at the Clark Kerr Campus conference site in Berkeley, California. Sixty Fellows comprised of community college instructors and high school teachers from across the nation participated in the weeklong forum.

The forum entitled "Encircling the Community" consisted of a pre-conference workshop, a variety of concurrent cutting-edge workshops, creation of the "Bio-Link Circles", informal meetings, networking, and at

the conclusion of the forum the much anticipated elegant annual dinner banquet.

As in the past, the forum afforded each Fellow the opportunity to profile their program at their school or college, to network and to share ideas and discuss issues that will continue to build the link between education and industry. Also back by popular demand, we hosted for a fourth consecutive time a special fellowship for those who were funded by the NSF Synergy Grant to participate at the forum beginning with the Bridge Learning Community Pre-Conference.

The Fellows participated in workshops given by both bay area and national guest lecturers, who donated their time and supplies. Thank you to all the presenters, everyone appreciated your efforts! Once again this year, a complete list of the forum presenters and workshops, along with many of the workshop PowerPoint presentations are available for review on the Bio-Link website.



Drs. Elaine Johnson and Bart Gledhill (left/right), Bio-Link Executive Director and Deputy Director, present a plaque of appreciation to Keynote Speaker, James Hewlett (center) at Bio-Link's 16th annual Summer Fellows Forum dinner banquet.

Thirty guests from CCSF and bay area industry also attended Bio-Link's 16th Annual Dinner Banquet on June 5. Bio-Link Director, Dr. Elaine Johnson greeted and welcomed all the fellows and guests, and introduced James Hewlett, Executive Director, Community College Undergraduate Research Initiative (CCURI), Professor of Biology, and Director of Biotechnology from Finger Lakes Community College in Canandaigua, NY. Mr. Hewlett closed out the evening and the weeklong conference with his engaging and fascinating Keynote Address: "Undergraduate Research At The Community College: Obstacles And Opportunities".

If you are interested in attending the 2015 Forum, save the dates of June 1-5 on your calendar and watch for upcoming announcements and registration information on the Bio-Link website or in the *Connections* Spring 2015 Issue.

- Lisa Huffman
Bio-Link Editor/Project Manager

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www.bio-link.org



From the Director | Dr. Elaine Johnson



The Bio-Link National Advanced Technological Education (ATE) Center of Excellence has had a very active and productive summer. Once again, the Summer Fellows Forum was a huge success. The Bridge to Bioscience (B2B) preconference allowed for

the Bridge Learning Community to share their experiences.

Little time passed until we participated in the Community College Program at the BIO International Convention in late June in San Diego. The speakers, including former community college biotech students, provided a clear message that our programs are providing the skills needed for the workplace.

In July, Bio-Link was one of the sponsors of the HI-TEC Conference in Chicago. One of the very popular sessions included presentations about collaboration between the NSF-ATE program and the Department of Labor TAACCCT grants.

Bio-Link is currently the lab skills hub for the c3bc Consortium of Bioscience TAACCCT award and is developing an environmental monitoring certificate. Madison College and Austin Community College are also part of the Bio-Link hub of this grant and are taking on leadership roles in the creation of the core competencies for lab skills, biomanufacturing, and biomedical device programs.

We are looking forward to more collaboration through communities of practice and circles that allow you to work together on projects with people that have interest in preparing technicians and meeting the needs of the bioscience industry.

If you are new to ATE and have not received previous funding, you might consider becoming part of Mentor-Connect that coaches colleges on small new to ATE projects. Or, you might want to apply for MentorLinks, a program of mentoring ATE projects managed by AACC.

Bio-Link looks forward to engaging you in all of the excitement and opportunities this coming year.

Biotech Updates from Minneapolis Community and Technical College (MCTC)

- 1) MCTC's Biotech program has been selected as a Finalist for the state's prestigious Tekne Award this year. The college has posted the news on its website www.minneapolis.edu/About-Us/News/2014/September/Biotech-Program-Named-Finalist-for-Tekne-Awards. The announcement can also be found in Tekne's website at www.tekneawards.org/
- 2) The program was also featured by the MHTA - showcasing the internship selection of biotech student. www.mhta.org/scitech-visits-stem-gem-in-minneapolis
- 3) This is exciting and has followed the transfer agreement that the University of Minnesota for the first time in its history entered into, with any college. In addition to the transferability of the program in its entirety, the agreement also guarantees admission to any of the tracks in the College of Biological Sciences, for program graduates with 3.5 or higher GPA. The Star Tribune newspaper featured the story and can be found at www.startribune.com/business/184720931.html
- 4) I have also implemented Undergraduate Research experiences and the students were invited to present at the St. Paul capitol. See photo taken with Senator Scott Dibble at right.

For More Information: Email: Rekha.Ganaganur@minneapolis.edu; Web: www.minneapolis.edu/Educational-Programs/Programs/biotechnology/ and www.minneapolis.edu/Educational-Programs/Programs/chemistry/

- *Rekha Gaganur, Biotechnology and Chemistry Faculty
Biotech and Chemistry A.S. Degree Program Lead;
Science Liaison - Learning Center Mentor: AME, PSEO;
Advisor: STEM-Career and Internship Club STEM-BACPACKT,
MCTC-Undergraduate Research Initiative Lead
Minneapolis Community and Technical College*



HI-TEC 2014 HI-LIGHTS

The sixth annual HI-TEC Conference took place at the Hyatt Regency on the Riverwalk in Chicago, Illinois from July 21-24. HI-TEC is a National Conference on Advanced Technical Education where technical educators, counselors, industry professionals, and technicians can update their knowledge and skills. HI-TEC uniquely explores the convergence of scientific disciplines and technologies. It is an opportunity for community and technical college educators and stakeholders seeking professional development opportunities, educational materials, collaborative ventures, and insights into emerging market trends to develop and advance the technical workforce of the 21st century.

Bio-Link presented back-by-popular-demand the session “Listening to the Experience of Technicians from ATE Programs” that featured three technical professionals from different fields who provided insights into their technical education. They told their stories and shared their work experiences to help educators design learning experiences to prepare them for the workforce.

The “fishbowl” session was introduced by Elaine Johnson, the Executive Director of Bio-Link. Terryll Bailey of The Allison Group moderated the energetic and informative panelists:



1. **Trinidad Gonzalez** (right) Institute of Tuberculosis Research, Lab Technician
2. **Ricky Sanders** (left) Corpus Christi Army Depot, Machinist/Programmer
3. **Jon Zanders** (center) Stone Environmental Engineering and Science, Inc. (Westerville, OH), Project Manager / Environmental Consultant

All spoke candidly about their previous education and careers, skill preparation, about technical careers and what is important for educating the technical workforce.

Bio-Link was once again a Co-Producer for this year’s conference and also exhibited at the two-day Technology Showcase where new connections were established and many colleagues were reunited. HI-TEC 2015 will be held at the Portland Marriott Downtown Waterfront, in Portland, Oregon from July 27-30, 2015 and planning is already underway. For more information visit the HI-TEC website at www.highimpact-tec.org

- Lisa Huffman
Bio-Link Editor/Project Manager



Workshop participants practice the micelle lab activity under the watchful eye of Dr. Jeanette Mowery.

Bio-Link Works Together with Nano-Link

Two Bio-Linkers from Madison Area Technical College (Jeanette Mowery and Lisa Seidman) presented a well-received workshop this year at Hi-TEC 2014 integrating nano- and biotechnology. This workshop was part of an on-going effort to work together with our colleagues in Nano-Link, the regional center for nanotechnology.

Micelles are nano-sized molecules that have important applications in biotechnology; for example, micelles are sometimes used to deliver drugs to their target in the body. Seidman and Mowery developed a module that includes a laboratory activity using a surfactant and dye to allow students to experiment with micelle formation. (The module has some nice math/graphing too!) You can find the micelle instructional materials on-line at: www.nano-link.org/nano-infusion/nip-modules.

- Lisa Seidman, Ph.D., Co-PI
Madison Area Technical College

Fellows Forum Highlights



“The Bio-Link community approach of a focused seminar series was refreshing and provided me with information that no amount of background research and reading would have provided. The experiences gained at this meeting already caused us to re-evaluate aspects of our program. I believe will enhance the overall success of our curriculum design and ability to compete for national funding.”

- James F. Guenther, Ph.D.
Delgado Community College, City Park

Summer Fellows Forum Participants

Northeast Region

Terrie Biddinger
James Hewlett
Uma Narayanan
Bruce Nash
Michelle Tipton
Edgar Trout

North Central Region

Jeanette Mowrey
Lisa Seidman
Thomas Tubon
Kathie Whelchel
Luanne Wolgram

Northwest Region

Kendra Hill
Candiya Mann
Sandra Porter
Todd Smith

South Central Region

Sondra Dubowsky
Rob Hatherill
Fabiola Janiak-Spens
Solomon Nfor
Jack O'Grady
Alisa Petree

Southeast Region

Clint Coleman
Leonard Fodera
James Guenther
Toby Mapes
Bill Woodruff

Southwest Region

Johanna Anton
Zeke Alvarez Saavedra
Heather Brown

Southwest Region cont.

Douglas Bruce
Bob Del Vecchio
Caitlin Fox
Gisele Giorgi
Bart Gledhill
Katherine Huang
Nancy Hurtado-Ziola
Laurie Issel-Tarver
Elaine Johnson
Barbara Juncosa
Sebastian Kraves
Gregory Langland
Dave Menshew
Daniel Michael
Mary Nelson
Vivian Ngan-Winward
Sara Sandhu

BLC Fellows

John Carrese
Beth Elam Michaud
Edith Kaeuper
Katherine Krolikowski
Jonathan Krupp
James Lewis
Ying-Tsu Loh
Li Lovett
Eilene Lyons
Jeff Rapp
Thomas Tubon
Barb Wenger
Carin Zimmerman



“It was great to share our B2B adoption experience with others! All of the new students at Athens Tech will be required to take a First Year Seminar class based on the B2B communications class. I also brought back a wealth of ideas to discuss with our Biotech faculty. We are already trying the new outreach methods I learned at the SFF.”

- Jeffrey C. Rapp, Ph.D. Biotechnology Program Chair
Athens Technical College



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Save the Date!

Bio-Link's 17th Annual Summer Fellows Forum

June 1-5, 2015

Clark Kerr Campus, Berkeley, CA

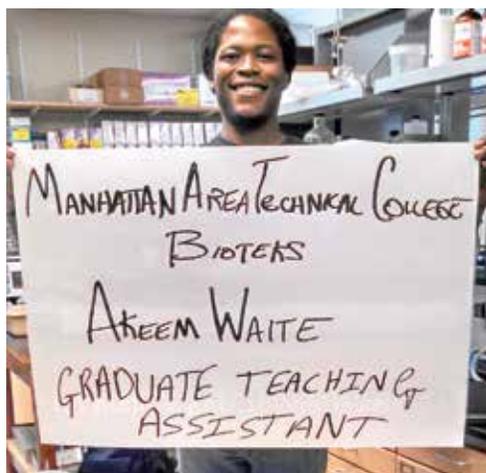
Info and Registration at
www.bio-link.org

SOP for Pictures to Support Community College Biotech Training

We are making a video to highlight our alumni who have industry jobs. What we would like is help gathering those pictures. This will help show industry nationwide that our students are already an integral part of many large biotech companies.

This picture campaign will speak loudly about how industry has been employing community and technical college students across the nation. Be sure that your college is represented by having your alumni take their pictures as described in the SOP. The final product will be made available to all Bio-Link programs.

- Edie Kaeuper, Ph.D., Bio-Link Partner
City College of San Francisco



How to Submit:

- 1) Construct a hand written sign with the following information:
 - Company you work for
 - Your Position in the company and the years you have worked at the company
 - The Community College you attended for your biotech training
- 2) Find a spot to take your pictures. We have a few examples shown here.
- 3) Send the best picture in a jpg format to: ekaeuper@ccsf.edu along with your release form (email ekaeuper@ccsf.edu for form).
- 4) When the film is complete you will get a link to it and know that you have helped your biotech program.

Stem Cells and Regenerative Medicine are Powerful Motivators for Students

Twenty-one educators from around the country shared knowledge and ideas about stem cell education at the first Stem Cell Education Summit, June 16 - June 20, 2014 in Madison, WI. This workshop was supported by a National Science Foundation ATE Grant. The event included instruction by faculty from Madison Area Technical College, City College of San Francisco, Alamance Community College, and the University of Wisconsin-Madison. Participants practiced culturing mouse stem cells, human embryonic stem cells, and induced pluripotent human stem cells. Participants also learned about advanced topics including genomic editing using the Cas9/CRISPR system.

In addition to sharing technical knowledge, participants also shared ideas and strategies for bringing stem cells and regenerative medicine into a variety of educational settings ranging from middle school classrooms to pre-professional stem cell certificate programs. Around the country educators have discovered that the promise of regenerative medicine is a powerful motivator for students. Stem cell education is also a vehicle to teach deep concepts about the intricacies of living systems and development.

Participants are looking forward to collaborating in the future to develop new materials and to find new ways to introduce stem cells in a variety of settings. For more information about future efforts and to join the collaboration, contact Dr. Tom Tubon (tubon@madisoncollege.edu).

- Lisa Seidman, Ph.D., Co-PI
Madison Area Technical College



Stem Cell participants on a field trip to Life Technologies.

GeneConnection Returns to Skyline College to Start its 25th Year of Service to San Mateo County High School Students

On Saturday, September 6, Skyline College helped GeneConnection celebrate its 25th year of existence by hosting a faculty kickoff at the Skyline College meeting rooms in Building 6. The kickoff was doubly fitting because GeneConnection first started at Skyline College, and by hosting this event the Skyline College Biotechnology program is continuing to connect with local High School faculty and biotechnology companies that employ our students and graduates.

The 25th year celebration for GeneConnection was sponsored by BABEC, California Community Colleges Doing What Matters and North Valley Biotechnology center. In the picture Johanna Anton (left) and Kim Hansen (right) are next to a plaque depicting an Assembly resolution of recognition for GeneConnection from our assembly member Kevin Mullin who is chair of the Assembly Select Committee on Biotechnology.

The GeneConnection provides logistics, materials and support for an innovative biotechnology laboratory program for high school students in San Mateo County. This program engages over 11,000 students annually. Over 50 Faculty from Bay area High schools attended the event, which included a talk from Genentech Senior Scientist Dr. Ingrid Wertz as well as talks and discussions about Next Generation Science Standards and how to introduce the concept of Cell Signaling to students in a fun and educational manner.

With the implementation of the Next Generation Science Standards (NGSS), Gene Connection has worked to correlate all of their mobile labs with NGSS. Aligning to the standards GeneConnection lets the faculty do what they do best, that is introducing students to rigorous biotechnology labs, without



having faculty worry about the logistics of setup, procurement of consumables and if the materials that the students are using are going to cover and match the standards.

The Science Math and Technology Division and the Biotechnology Department hope to continue to support Biotechnology Laboratory education throughout the County and to continue to offer Professional development to local teachers and to collaborate with local high schools.

See more at: www.skylinecollege.edu/skylineshines/2014/09/11/geneconnection-returns-to-skyline-college-to-start-its-25th-year-of-service-to-san-mateo-county-high-school-students/#sthash.YTpLVr1n.dpuf

- Nick Kapp, Ph.D.
Skyline Community College

CCURI Fall 2014 Colloquium

The Community College Undergraduate Research Initiative (CCURI) uses an inquiry-based teaching model where students are exposed to real world science through a case study in an introductory course followed by a hands-on research experience resulting from questions about or related to the case. CCURI is providing resources for their 26 institutional partners including introductory workshops/conferences that are building regional and national collaborations, start-up supplies and a wide variety of faculty development opportunities.

CCURI is excited to announce a Student Poster Session and Conference co-hosted with Bio-Link on November 20-23, 2014 in Charlotte, NC.

The Conference portion will be held on Friday, November 21 and focus on networking and leveraging relationships to create a successful and sustainable undergraduate research program at community colleges.

The Student Poster Session will be on Saturday, November 22 at Gaston College.

Please register through the link at: www.cvent.com/d/14qv06 and check out the links that contain important information regarding the event.

Save the Date!

High Impact Technology Exchange Conference

Educating America's Technical Workforce

July 27–30, 2015

Portland Marriott Downtown Waterfront
Portland, Oregon

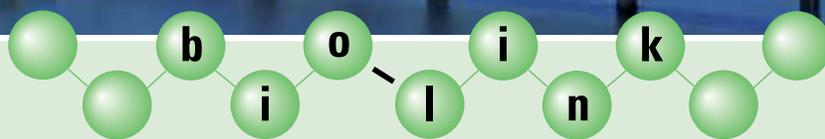
CALL FOR PROPOSALS

Call for workshop proposals closes Jan 15.

Call for breakout and poster session proposals closes Feb 2.

Proposal form will be online Nov 17.

www.highimpact-tec.org



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NSF AWARD # 1400721

This project was supported in part by the National Science Foundation. Opinions expressed are those of the authors and not necessarily those of the foundation.



BIO-LINK CONNECTION is the official newsletter of Bio-Link, the Advanced Technological Education Center for Biotechnology, and is produced and published by the National Center Staff. Please submit questions, comments or articles by e-mail to Lisa Huffman, Editor, at Lhuffman@biolink.ucsf.edu at the National Center.

Bio-Link is committed to program improvement, instructor enhancement, communication, program assistance, and supporting school-to-career activities in the biotechnology area.

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