

# Bio-Link Connection

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

## Bio-Link's 13th Annual Summer Fellows Forum

**Expanding the Impact  
June 6 – 10, 2011**

**Berkeley, California**

Individuals interested in attending the Forum and can provide their own funding for the Conference Registration Fee (\$675.00 Single Occupancy or \$375.00 Commuter) and all travel costs, should register online ([www.bio-link.org](http://www.bio-link.org)) or email and/or call Lisa Huffman at the National Center at [lhuffman@biolink.ucsf.edu](mailto:lhuffman@biolink.ucsf.edu)/415-487-2471 for further information ASAP!

Fellows will learn new skills and techniques, examine and test exemplary curriculum models and course material, engage in dialogue about ethical, legal, and social issues in biotechnology and learn how to disseminate this information within their own regions. The weeklong activities include: concurrent workshops, an industry tour, a dinner banquet with a keynote speaker, and some free time for sightseeing. Fellows are expected to implement new strategies into their own programs, to lead regional staff development activities, and provide prompt response to follow-up surveys.

**OPEN REGISTRATION DEADLINE  
EXTENDED: MAY 18**

**CITY COLLEGE OF SAN FRANCISCO**

[www.bio-link.org](http://www.bio-link.org)

## ATP/PI Conference



### ATE Student Success: Building A Diverse And Entrepreneurial Workforce

It was an exciting night for the Bio-Link Staff as many attendees visited the popular Bio-Link National Center of Excellence Exhibit during the Showcase Session in October 2010 at the annual ATP/PI Conference held in Washington, DC.

## The AAAS Community College Forum:

### Lessons Learned about Biotechnology Education

The AAAS Community College Forum on Biotechnology Education that highlighted cutting edge curriculum used in biotechnology post-secondary education, as well as innovative industry partnerships was held on February 17, 2011 in Washington, DC. This day-long Forum demonstrated how community college based biotechnology programs and educators play a vital role in preparing post-secondary students for careers in the biotechnology industries including research and development, diagnostics, regulatory affairs, homeland security, and sustainable energy production and management. Biotechnology education curriculum areas include laboratory techniques, industrial biotechnology, green biotechnology and agriculture, nanotechnology, homeland security, and bioenergy and biofuels. The Forum included presentations about vision and change in undergraduate biology education, exemplary curriculum in biotechnology education, and partnerships with industry. This all-day session also included plenary panels, poster sessions, and small group discussions. Bio-Link Director, Elaine Johnson and Yolanda George of AAAS and also a Bio-Link NVC Member were the lead organizers for the event. Celeste Carter represented the National Science Foundation and many Bio-Link Program Directors presented. As an outcome, five attendees applied for the Bio-Link Summer Fellows Fellowship in June.

- Elaine Johnson  
Bio-Link Director

## Growing the Bio-Link Organization

This is a time to embrace the support that we all have from our Bio-Link Community. As colleges struggle with cutbacks in programs and more students flood into workforce preparation courses, we count on each other to provide solutions that will continue to overcome isolation of biotechnology programs and promote the community of sharing that has become a trademark of Bio-Link. Many activities and resources are available to us. Thanks to NSF funding, we had an opportunity to organize a successful full-day forum at the AAAS meeting this past February in Washington, DC. We are delighted to utilize the Bio-Link network for the Cold Spring Harbor workshops. The improved Bio-Link website with interactive design, credited to Dr. Sandy Porter, now allows much greater communication and program updating.

We are expecting a record turnout at the Bio-Link Summer Fellows Forum with many new faces. The leadership core of Bio-Link is expanding. Leadership development was part of the original design and is even more important as our organization grows. In addition, the third annual HI-TEC Conference will be in San Francisco this July. We welcome new ideas and hearing from you about what you need and what you can contribute. With a common purpose, we can continue to provide the highest quality of technical workers for the biotech and related industries.



## Bio-Link Scales Up Bridge to Biotech Programs at Community Colleges

Bio-Link received a three year grant from the National Science Foundation (NSF) to participate in the Synergy Project, which focuses on equipping the leaders of NSF funded Advanced Technological Education centers with the tools and resources needed to bring successful projects to scale.

Bio-Link's project is to scale up Bridge to Biotech (B2B) programs at community colleges across the country.

The B2B program is a semester-long program consisting of three linked courses in Introductory Science, and contextualized Math and English for Biotech, which targets under-prepared students. B2B has proved to increase student continuation and success in community college biotechnology programs.

The first cohort of adopting colleges will meet at Bio-Link's Annual Summer Fellows Forum in June in Berkeley, California, to jump start their collaboration, begin working on a project plan, and meet City College of San Francisco (CCSF) Bridge to Biotech Faculty. Bio-Link will provide access to course materials and program tools developed by CCSF and Bio-Link, as well as workshops and webinars to support the development of new programs. The group will continue working together over the next year as a learning community to support each other's efforts in the implementation process.



CCSF B2B Faculty Dr. Laurence Clement (left), Angela Sumner, former CCSF Biotech Club President, and Jeanette Wright, B2B Student (right) discuss career opportunities during the poster session at the CCSF B2B Internship and Networking Event last December.

The first cohort of colleges will include St. Louis Community College, Missouri; Solano Community College, California; Gwinnett Technical College, Georgia; Universidad del Turabo, Puerto Rico; Austin Community College, Texas; and, Tompkins Cortland Community College, New York.

To learn more about Bio-Link's B2B scale up project, visit: [www.bio-link.org/home/bridge-to-biotech](http://www.bio-link.org/home/bridge-to-biotech) or contact Laurence Clement at [lclement@ccsf.edu](mailto:lclement@ccsf.edu).

- John Carrese and Laurence Clement  
City College of San Francisco

### Bio-Link Austin Meeting 2011

The Austin Bio-Link meeting will be from **August 15-19, 2011** at the new Roundrock Biotech lab. The workshop will highlight three days of higher education curriculum and two days of high school curriculum. Higher Education curriculum will include Protein Expression and Purification labs hosted by Bio-Rad. There will also be talks on effective grant writing and social networking within Bio-Link. High School labs will highlight basic laboratory skills, pGlo transformation, bioinformatics activity, and PCR. For registration visit [www.bio-link.org/home/events/bio-link-austin-meeting](http://www.bio-link.org/home/events/bio-link-austin-meeting).

# BioTechnology Virtual Enterprise Summer Faculty Development Seminar

Infuse soft and entrepreneurial skills into your existing courses and curriculum through the use of the BioTechnology Virtual Enterprise (VE) simulation. The STEM Virtual Enterprise is an in-class pedagogical simulation that has students assume the roles of members of a high-tech enterprise and operate that business in face-to-face teams. It delivers technical, soft and business skills as part of an entrepreneurial experience comprised of a series of active-learning modules, online tools and student events. STEM-VE's organized national and international network of student businesses motivates students to produce high-quality projects and connecting classrooms across the STEM spectrum.

This seminar will discuss Virtual Enterprise and provide time and resources for integrating the pedagogy into your STEM classroom. Implementers from BioTech and STEM classrooms will be on-site to discuss their successes and struggles with integrating the pedagogy into existing courses.

**Date:** Friday, June 17, Saturday, June 18

**Location:** CUNY Baruch, Field Center for Entrepreneurship, New York City, NY

**Cost:** Free, plus up to \$500 travel stipend offered to qualified STEM faculty members

**Registration:**

[www.ive.cuny.edu/2011conference/](http://www.ive.cuny.edu/2011conference/)



VE students in action, showcasing their products at a trade show.



## News From The San Mateo Biotechnology Career Pathway

In its 23rd year, The San Mateo Biotechnology Career Pathway—SMBCP—([www.SMBiotech.com](http://www.SMBiotech.com)) is a 4-year biotechnology-training program for motivated teenagers. Using Elyn Daugherty's *Biotechnology: Science for the New Millennium*, 2012 edition, the SMBCP prepares 400 students each year for workplace experiences and college majors in biotechnology.

### SMBTC Facility

Since 1988, over 7,000 SMBCP students have been trained in the original San Mateo Biotechnology Training Center (SMBTC) located in the old woodshop on the San Mateo High School Campus. This year, after 5 years of planning and the acquisition of \$7 million of grant and bond measure funding, a new SMBTC facility opened with over 9,000 feet of lab training space and 4000 feet of conference and storage areas. In addition to the high school program, the SMBTC is the site, each July, of the annual biotechnology education workshop, "DNA is the Flash, but Protein is the Cash of Biotech." See [www.BiotechEd.com](http://www.BiotechEd.com) for details.

## Worthington Minnesota Regional Bioscience Conference

Worthington Regional Economic Development Corp. Manager, Glenn Thuringer and his team organized an outstanding two-day conference on April 7 at the 7th Annual Regional Bioscience Conference at the Minnesota West Community and Technical College. Over the past seven years, the conference has gradually expanded to an annual event that features national speakers and over 200 attendees from several states.

A wide range of bioscience topics were covered: from Dr. Steven Burrill's state of bioscience address to Dr. Celeste Carter's sessions on NSF grant-writing to local bioscience development. Industry tours were also included. The final keynote by Dr. Jack Schultz addressed the success of small town economies through entrepreneurship. He spoke directly to the students, stressing that they are the next generation of "idea people", citing several examples of entrepreneurs age 20 and under.

Glenn Thuringer stated that the ultimate goal of the conference was to encourage students to pursue bioscience careers. Over 160 students from regional schools, grades 7-12, and college students attended both pre-conference labs and the conference sessions. They also displayed their science projects during the full conference. Thuringer included middle school students when he discovered that interest in science careers started at this time.

Minnesota West, Worthington is a marvelous example of a successful community college bioscience program that draws in potential students, brings together the city and the business community, and calls national attention to its achievements.

- Kathie Whelchel  
Bio-Link Consultant

HI  TEC

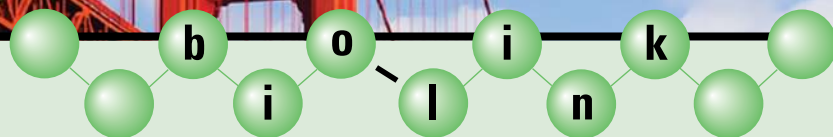
**Register Now!**

# High Impact Technology Exchange Conference

## Educating America's Technical Workforce

July 25–28, 2011 • Hyatt Regency • San Francisco

[www.highimpact-tec.org](http://www.highimpact-tec.org)



## National Center

Dr. Elaine Johnson, Director • Dr. Bart Gledhill, Deputy Director • Lisa Huffman-Martinez, Project Manager

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**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-Martinez, Editor, at [Lhuffman@biolink.ucsf.edu](mailto: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.

### For information on

- Calendar of Events
- Curriculum Clearinghouse
- Internships
- Jobs
- Online Courses
- Virtual Laboratory
- Web Links, and more . . .

[www.bio-link.org](http://www.bio-link.org)



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