

## Biotechnology Medical Breakthroughs

### California Biotechnology: Fast Facts

According to the 2011 California Biomedical Industry Report, there are currently more than 875 new medicines in California's research and development pipeline with nearly one-third of those medicines focused on products that target cancer.

### Scripps Research and UCSD Awarded \$7.5 Million to Identify Potential Treatments for Nicotine Addiction

The Scripps Research Institute and the University of California, San Diego School of Medicine have been awarded approximately \$7.5 million to develop novel compounds that could become drug candidates for nicotine dependence and other drug addictions.

[Read more.](#)

### Scientists Hone in on Chemicals Needed to Reprogram Cells

Scripps Research Institute scientists have made a significant leap forward in the drive to find a way to safely reprogram mature human cells and turn them into stem cells, which can then change into other cell types, such as nerve, heart, and liver cells. [Read](#)

[more.](#)

### Research Sheds Light on Cellular Basis of Depression

Recent studies from UC San Diego School of Medicine suggest that targeting the specific synapses in the brain could reduce symptoms in humans with severe, chronic depression. [Read more.](#)

### UCI Researchers Find Novel Memory-Enhancing Mechanism in Brain

Discovery of a new molecule and its function could provide important clues about how the brain stores memories and also lead to new treatments for Alzheimer's disease, dementia and other cognitive impairments. [Read more.](#)

### Clinical Trial for Spinal Cord Injury Treatment Moving Forward

A therapy developed by scientists at UC Irvine's Stem Cell Research Center in collaboration with researchers at StemCells Inc. will be the basis of the world's first clinical trial using human neural stem cells to treat spinal cord injury. [Read more.](#)

### More Than 400 Rare Disease Treatments in Development, Pending Approval

According to a report by the Pharmaceutical Research and Manufacturers of America, more than 460 treatments for rare diseases are in late-stage clinical development or awaiting Food and Drug Administration approval. [Read more.](#)

### Americans Believe Government Needs to Invest in Medical Innovation

In a survey commissioned by the Council for American Medical Innovations, Americans think lawmakers need to do more to encourage investment in medical research. [Read more.](#)

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## Biotechnology Economic Contributions

### California Biotechnology: Fast Facts

According to survey findings in the 2011 California Biomedical Industry Report, 80 percent of California's biomedical company CEOs report that their companies have been courted by other countries, state governments or regional economic development associations in the past year.

### A Look at the Top Two Bio Clusters in the U.S.: California and Massachusetts

The nation's top biotech clusters may enjoy common strengths, but they too are facing challenges in the current economic environment, including tightening of financing for early-stage companies, state funding cutbacks, and workforce development issues. [Read more.](#)

### Study Shows Investors Optimistic on Biotech's Future

Investors are optimistic about the future for biotechnology and expect that biotech will outperform the overall health care sector in 2011. [Read more.](#)

### California Biotech, Despite Lots of Ugliness, Poised to Add Jobs, CEO Survey Says

Even though California has horrific budget deficits, high taxes, high unemployment, and an overall economy for investment that's still a bit shell-shocked from the financial crisis of 2008, leading life science executives in California are confident that things are starting to turn for the better. [Read more.](#)

### Biotech Industry Anticipates Growth Amid Obstacles

Despite the industry shakeout of recent years and the general gloom hanging over the state's economy, biotech CEOs "anticipate solid growth for their California operations" in the next two years. [Read more.](#)

### Biotech Companies That Are Expanding Operations and Increasing Employment in California

- Genomic Health, a 472-employee biotech company in Redwood City, is expanding space and hiring 50-100 employees for cancer diagnostic research and to market a new test for prostate cancer.
- Bayer HealthCare is investing more than \$100 million in new technology and infrastructure at the Bayer Berkeley facility for the manufacture of future versions of its hemophilia drug. Bayer is also expanding its work with scientists through its newly established U.S. Innovation Center in San Francisco's Mission Bay life sciences community.
- Pacific Biosciences is the first of a new wave of innovation in biotechnology, applying all of the best technology from Silicon Valley to a complex biology problem. The end result is ground breaking advances in understanding DNA and life itself. To date, the company has hired 450 employees and raised approximately \$580 million.
- Astellas has more than 200 employees in California at their Santa Monica and Palo Alto facilities. Construction just began on a new 160,000 square foot state-of-the-art research and manufacturing facility in Santa Monica that will allow the Agensys affiliate to expand to over 300 full-time employees by 2015.

Watch a ["View from the Top"](#) Interview with Magda Marquet, Co-Founder and Co-Chair of Althea Technologies, Inc., who discusses the critical role of strategic partnerships in the biopharmaceutical industry allowing greater efficiency and focus on core competencies and fostering innovation. Althea Technologies, Inc. is also one of CBF's most generous program sponsors.

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## Biotechnology Workforce Development

### California Biotechnology: Fast Facts

According to the 2011 California Biomedical Industry Report,

California's biotech industry directly employs nearly 268,000 Californians. Another 783,000 - 13.8 percent of the state's total workforce - hold biomedical industry-related jobs.

#### **Biotech Future Hinges On Grade School Education**

California's biomedical leaders are worried about a shrinking workforce due to education problems that start as early as kindergarten. [Read more.](#)

#### **A Call to Strengthen Science Education**

Unless the United States makes a commitment to increase and improve education in science, technology, engineering and mathematics (STEM), it is likely that the bioscience industry will be forced to look abroad to hire workers. [Read more.](#)

#### **Bayer USA Foundation Grants \$540,000 to CSU, East Bay for STEM Education**

The Bayer USA Foundation will provide a \$540,000 grant to California State University, East Bay (CSUEB) to create the Center for STEM Education on its Hayward campus. The groundbreaking center will enhance and help to coordinate existing STEM (science, technology, engineering and mathematics) education activities at CSUEB to give the university a greater role in regional and national STEM education.

The grant will be administered over three years and allow the school to begin teacher development in STEM education and advance student academic achievement. The center will become the focal point of region-wide efforts to build on and expand successful models like Biotech Partners and MESA (Mathematics, Engineering, Science Achievement), two leading education and job training programs. It also will expand a pipeline of K-12 students motivated and prepared to pursue college degrees in STEM disciplines or math and science teacher education.

The center will focus on four key areas: ongoing K-12 teacher support and training programs; active student recruitment from local and regional high schools; creation of a STEM education resource center that will work to scale up best practice K-12 programs; and the formation of an administrative hub for university STEM education collaborations and partnerships with outside organizations. For more information go to: [http://www.bayerus.com/Foundation/Foundation\\_Home.aspx](http://www.bayerus.com/Foundation/Foundation_Home.aspx)

#### **BIOCOM Institute Receives National Award for Support of Education**

The BIOCOM Institute, a statewide program dedicated to education initiatives that advance scientific literacy, has been named an *Elearning!* 100 award winner. The awards program is hosted by *Elearning!* Media Group and honors top learning organizations. The Institute joins Intel, Defense Acquisition University and others who drive performance through learning. As an award-winner, the BIOCOM Institute is being recognized for its learning culture, innovation and learning support through initiatives such as:

- **BRIDGE/EDGE Grants:** These projects provide education, training, and placement services to incumbent, dislocated, and unemployed veterans and workers in the greater San Diego region.
- **Life Science Immersion Program:** This intensive online certificate program uses industry driven curriculum to give individuals the business acumen to successfully transition into and move up the career ladder in industrial careers.
- **Scholarship & Education Fund:** Supports students demonstrating academic excellence and a desire to pursue research in the life sciences.
- **Science ACES/Science Education Speakers Bureau:** A program that matches industry professionals with K-12 volunteer speaking opportunities.

For more information about the BIOCOM Institute, go to: <http://www.biocominstitute.org/>.

## Biotechnology Spotlight - DiversityInc's 2011 Top 50 Companies for Diversity

Several of California's biotech companies made DiversityInc's 2011 Top 50 Companies for Diversity list. California's biotech industry understands that a diverse workforce is essential to the ultimate success of the entire organization. Biotech companies statewide dedicate extensive time and resources to provide education and training to historically underserved populations. Included in this year's Top 50 list were: Johnson & Johnson, Merck & Co., Novartis Pharmaceuticals Corp., Abbott, and Eli Lilly & Co. In addition, Pfizer was named the top company for working families. For more information about the DiversityInc Top Companies lists go to [www.diversityinc.com](http://www.diversityinc.com).

## California Biotechnology Foundation Workforce Guide

Be sure to check out the CBF Workforce Guide: [Building California's Biotechnology Work Force: a Guide to California's Career Technical Education Programs](#) which is a comprehensive inventory of statewide biotech-sponsored workforce development programs in California. If you would like a copy of the Guide, contact Patty Cooper at [patty.cooper@cabiotech.org](mailto:patty.cooper@cabiotech.org).

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## New Member Welcome

- [Amgen](#)
- [Astellas Pharma US, Inc.](#)
- [Pfizer Inc.](#)
- [Sunovion Pharmaceuticals Inc.](#)

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## Member Spotlight

### Astellas Pharma US, Inc.

Astellas is a pharmaceutical company dedicated to improving the health of people around the world through the provision of innovative and reliable pharmaceutical products. Astellas markets products in the areas of, Cardiology, Dermatology, Infectious Disease, Neurology, Oncology, Transplant and Urology.

The company's commitment to *changing tomorrow* is measured not only by their focus on bringing innovative and effective new medicines to patients and physicians, but also by the importance they place on the impact they can make within the communities where they work and live. Astellas supports many causes and has created two unique initiatives to demonstrate their commitment: Changing Tomorrow Day, an annual worldwide volunteer event and Science WoRx, a mentoring program and online resource network for science teachers and their students in California and nationwide.

Astellas employs more than 200 employees in California at two different locations. Agensys, which began operations in Santa Monica in 1997, was founded by oncologists at UCLA. In 2007, Astellas Pharma Inc. acquired Agensys with the plan to make it the center of the company's antibody product discovery and development operations. Today, Agensys has a rich pipeline that includes five therapeutic fully human monoclonal antibody products in clinical trials directed at a variety of cancer indications and numerous candidates in late preclinical development.

In addition, construction just began on a new 160,000 square foot state-of-the-art research and manufacturing facility in Santa Monica that will help fulfill Astellas' mission of developing innovative pharmaceuticals for unmet medical needs. The facility will allow the Agensys affiliate to expand to over 300 full-time employees by 2015. For more information about Astellas visit: <http://www.astellas.us/>.

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## Calendar

March 22, 2011 - Crohn's and Colitis Foundation Reception

Please join members of the California State Legislature and the Crohn's and Colitis Foundation for a fundraising reception to help find a cure for Crohn's Disease and Ulcerative Colitis and support critical programs that will vastly improve the quality of life of individuals affected by these diseases. From 5:30 p.m. - 7:00 p.m. at the Cafeteria-15L located at 1116 15th Street, Sacramento, CA. Donations are tax deductible. For more information contact Dean Marcoccia at [dmarcoccia@dsi.com](mailto:dmarcoccia@dsi.com).

**March 22, 2011 - California Biomedical Industry Report Briefing**  
BayBio, the California Healthcare Institute and PricewaterhouseCoopers (PwC) are co-hosting an insightful industry forum that will examine the business and financial implications of the 2011 California Biomedical Industry Report. A distinguished panel of life sciences industry, venture capital and academic leaders will provide their perspectives on the report's findings and the outlook for California's biomedical cluster. Crowne Plaza Hotel - 4290 El Camino Real, Palo Alto, CA. For more information go to: <http://www.baybio.org/events/details/pwc-2011-california-biomedical-industry-report-briefing-03222011/> or contact Lisa Gaston at [lisa.gaston@us.pwc.com](mailto:lisa.gaston@us.pwc.com) or 415.498.5389.

**April 21, 2011 - SoCal Bio Workforce Development Summit**  
SoCalBio will host a workforce development summit to enhance partnerships between Los Angeles area life sciences employers and surrounding workforce and economic development professionals, educators and other state and local partners. From 10 a.m. - 3 p.m. at the Los Angeles Chamber of Commerce Board Room. For more information go to [http://www.socalbio.org/Workforce\\_Summit/summit\\_home.htm](http://www.socalbio.org/Workforce_Summit/summit_home.htm) or call 213.236.4890.

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## Thank You

Thank you for reading this edition of the *California Biotechnology News Update*. Be sure to check out the CBF website at [www.cabiotech.org](http://www.cabiotech.org) for updated news and information regarding California's biotechnology industry.

Sincerely,  
Patty Cooper  
California Biotechnology Foundation