



July 2009

Biotech News

- SBE Member Anand Asthagiri and his group discover how cells use a "tuning" mechanism to reconcile mixed signals and make decisions regarding growth, which has applicability in understanding how tumors grow, and how to grow tissues. http://media.caltech.edu/press_releases/13270
- Biological engineers develop new efficient process for making therapeutic proteins without live cells by weaving coding DNA into an artificial hydrogel made of synthetic DNA, thereby producing proteins up to 300 fold more efficiently than with DNA floating freely in the same solution. <http://www.azonano.com/news.asp?newsID=10709>
- Biochemists discover new process which uses formic acid to convert glycerin from biodiesel production to allyl alcohol, an intermediate chemical that is useful in manufacturing butanediol and its derivatives. <http://newscenter.lbl.gov/feature-stories/2009/06/11/replacing-petros-with-biomass/>
- Researchers from academia and in industry develop a new computer model to help identify which parts of an antibody are most likely to attract other molecules, allowing them to alter the antibodies to prevent such clumping, and thereby prolong the shelf life of antibody based drugs. <http://web.mit.edu/newsoffice/2009/stable-drugs-0629.html>
- DOE solicits feedback on draft of Algal Biofuels Technology Roadmap. http://www1.eere.energy.gov/biomass/news_detail.html?news_id=12576

Society News

SBE welcomes their new **Executive Director!** Miriam Cortes-Caminero is a biochemist and pharmacologist with international experience in sales and marketing and product management in the bio-pharmaceutical field. She most recently served as director of marketing with Sartorius Stedim Biotech, where she held a variety of positions, including head of product management. Earlier in her career, she served as product manager and regional sales manager with Pall Life Sciences. Cortes-Caminero has also been an instructor in biochemistry and biotechnology at both St. John's University and the State University of New York (SUNY) at Stony Brook. You can send Miriam a note of welcome at sbe@aiiche.org.

Mark your calendar! SBE's next webinar on **Advanced Membrane Technologies** is scheduled for **Tuesday July 21st from 2:00 to 3:00 EST**. Professor Georges Belfort, Russell Sage Endowed Professor of Chemical Engineering at Rennselaer Polytechnic Institute, will present on fundamental and applied aspects of separations processes in biochemical engineering. The webinar will cover advanced interactions of proteins with substrates, especially polymeric surfaces such as synthetic membranes, chromatographic media, marine surfaces and biomedical surfaces. It will detail the use of fundamental separations processes to solve applied problems in the biological and environmental fields. For more information and to register, visit us at: <http://www.aiche.org/SBE/Education/SBEwebinars.aspx>.

Save the date for the **2009 AICHE Annual Meeting** which will take place in Nashville, TN from **November 8-13**. The AICHE Annual Meeting is a leading educational forum for chemical engineers interested in innovation and professional growth. A wide range of subjects relevant to the latest research and most advanced technologies in emerging growth areas will be discussed. [Click here](#) to learn more.

Special SBE Events include:

- **SBE's Biofuels Symposium: Transportation Fuels from Coal and Biomass: Review of an NRC Report – Monday, November 9th from 3:15-5:45.** This session will explore the technological status, costs, and environmental impacts of coal and biomass conversion. Michael Ramage (ExxonMobil-retired) is chairing the session, which includes James Katzer (Exxon Mobil-retired), Gregory Stephanopoulos (MIT) and James Sweeney (Stanford University) as speakers.
- The **SBE James E. Bailey Award** Lecture will take place on **Tuesday, November 10th from 6:30-7:30 EST.** In memory of Professor Jay Bailey for his many pioneering contributions to biotechnology, the award is presented to an individual who has had an important impact on bioengineering and whose achievements have advanced this profession in any of its aspects.
- The **SBE Hospitality Suite** will take place on the same evening as the award reception, at 9-11pm. We hope to see you there!
- Due to popular demand, SBE will once again offer its **Biology for Chemical Engineers course**, designed for professionals who would like to learn more about biotechnology in medicine. The curriculum includes biomolecules, biotechnology tools and products, systems biology, immunology, diseases and therapeutics. The instructor is Dr. Mike Amos, biosciences advisor to the director of the Chemical Science and Technology Laboratory (CSTL) at the National Institute of Standards and Technology (NIST). Additional information is coming soon!

Save the date for SBE's 2nd International **Conference on Stem Cell Engineering** at the Hyatt Harborside Hotel in Boston, MA from **May 2-5, 2010**, co-chaired by Peter Zandstra, University of Toronto and George Daley, Children's Hospital, Harvard Medical School. This Gordon-style conference will emphasize how efforts in stem cell biology and engineering can combine to aid in the development of stem cell therapeutics and bioprocesses. Confirmed, invited speakers include: Biomaterial-Cell Interactions in Tissue Engineering

- Daniel Anderson (MIT)
- Kristi Anseth (University of Colorado)
- James J Collins (Boston University)
- Dennis Discher (University of Pennsylvania)
- Connie Eaves (BC Cancer Agency)
- Paul Frenette (Mount Sinai School of Medicine)
- Wei-Shou Hu (University of Minnesota)
- Gordon Keller (University of Health Network)
- Hang Lu (Georgia Institute of Technology)
- Doug Melton (Harvard University)
- David Mooney (Harvard University)
- Charles (Chuck) Murry (University of Washington)
- Ingo Roeder (University of Leipzig)
- Lee Rubin (Harvard University)
- David Schaffer (University of California, Berkeley)
- Austin Smith (Cambridge University)
- Gordana Vunjak-Novakovic (Columbia University)
- Amy Wagers (Harvard University)

Check out the [conference website](#) for more information!

Attend the **American Institute for Medical and Biological Engineering's Council of Societies 4th Annual Federal Symposium on September 14-15, 2009** in Washington. As a member of SBE, you can participate in this symposium organized by AIMBE to meet face-to-face with members of Congress and their staff and raise awareness of the long-term value of medical and biological engineering. To register, contact Benjamin Corb, AIMBE's Director of Public policy at bcorb@aimbe.org.

[Join Now](#)

Not a current SBE member? It's never too late to join or renew. Costs are \$75 for regular members, \$25 for graduate students, \$10 for AIChE, ACS and IBE members, or free for undergraduates. Join now at <http://www.aiche.org/apps/ecommerce/bio/index.asp>.

Member benefits include:

- Subscription to SBE's semi-annual BioSupplement to Chemical Engineering Progress.
- Discounts on leading biological engineering conferences including SBE and SBE cosponsored meetings and courses.
- Access to online membership directory.
- A voice in education, employment and technology advancement topics.

Comments?

SBE's *e-Connections* is edited by Adrian Andrew Fay, Web Science Editor, with input from SBE staff. Contact us at bio@aiiche.org

*The Society for Biological Engineering (SBE) is a new technological community of AIChE
Its mission is to promote the integration of biology with engineering and realize its benefits
through bioprocessing, biomedical, and biomolecular applications.
For comments and contributions to SBE Connections, email bio@aiiche.org*

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