



November 2009

Biotech News

- Researchers led by SBE member Professor Peter Zandstra develop a novel cell injection test-bed to evaluate the barriers to transplanted cell integration with cardiac tissue. The new method significantly reduces the time and effort needed to screen known or new cell populations and drugs for their cardiac cell therapy potential.
<http://www.news.utoronto.ca/lead-stories/u-of-t-researchers-define-barriers-to-successful-heart-cell-transplants.html>
- Bioengineers have uncovered the existence of "bistability," in which an individual cell has the potential to live in either of two states, depending on which state it was upon stimulation. This knowledge may enhance the future efficiency of synthetic circuits.
<http://news.duke.edu/2009/10/bistable.html>
- Engineers have developed micrometer-sized capsules to safely deliver drugs inside living cells. These "micro shuttles" can be loaded with a specific dose of medication and contents can then be released when needed.
<http://www.qmul.ac.uk/media/news/items/se/19445.html>
- Scientists develop new technique using three small drug-like chemicals dramatically improving speed (2x) and efficiency (200x) for transforming adult human cells into iPS cells (induced pluripotent stem cells).
<http://www.scripps.edu/news/press/101909.html>
- Researchers have discovered a technology that can detect cancerous tumors based on a peptide that targets acidity, and can then deliver treatment to them without harming the healthy cells surrounding them.
<http://www.uri.edu/news/releases/?id=5093>

Society News

It's not too late! The 2009 **AIChE Annual Meeting** will take place in Nashville, TN from November 8-13. Click here to learn more.

Special SBE Events include:

- SBE is currently sponsoring a \$1000 award for the **Best Use of a Biological Reaction to Power a Car** during this year's Chem-E-Car Competition. To learn more, [click here](#).
- SBE's Bioenergy Symposium: **Transportation Fuels from Coal and Biomass: Review of an NRC Report** — Monday, November 9th from 3:15-5:45 pm.
- Please join us in congratulating **James C. Liao** from UCLA, the **2009 James E. Bailey Award** recipient. Professor Liao will give his award lecture on Tuesday, November 10th at 6:00-7:00 pm. The title of his talk is "**A Tale of Two Energy Problems: Fuel Shortage and Obesity.**"
- The **SBE Hospitality Suite** will take place on the same evening as the award reception, at 9:00-11:00 pm. We hope to see you there!
- **SBE and Division 15** will be co-sponsoring a Poster Session Reception on Bioengineering on Wednesday, November 11th from 6:00-8:00 pm

SBE's Next Webinar features Professor Bill Bentley of the University of Maryland presenting "A Bottom Up Approach to Systems Biotechnology – Lessons Learned from Bacterial Signal Transduction" on **December 8th from 2-3pm EDT**. His presentation will focus on bottom up approaches to improve our chances to sense and intercept communication in pathogenic bacteria and prevent the spread of infectious disease. Check it out [here](#).

Call for Papers: 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 Boston, Harvard Medical School). To see a complete list of our invited speakers, check out the [conference website](#).

Save the date! The 5th International Conference on **Bioengineering and Nanotechnology (ICBN)** will take place in Biopolis, Singapore from **August 1-4, 2010**. Chaired by Prof. Jackie Ying, [click here](#) for more info.

Join now! Raise your profile in the biological engineering community and gain access to physical property data for biomass and biofuels by becoming an **SBE Green Corporate Member** today. Check out www.aiche.org/SBE/DIPPR today for more information!

Join us in congratulating **Dr. Kristi Anseth** of the **University of Colorado**, elected as a member of the Institute of Medicine of the National Academies as well as the National Academy of Engineering! For more info, [click here](#).

Biotechnology Progress, published six times a year in print and continuously online by Wiley-Blackwell on behalf of AIChE and SBE, is looking for candidates for an Associate Editor who can succeed to the Editorship. For more information, [click here](#).

SBE will be holding an election for its **Managing Board** in November. If you would like to nominate a candidate for consideration by the Election Committee, please email us at bio@aiiche.org with the candidate's name.

The SBE website offers several links to **software resources for bioengineers**. Check out our newest tool, **ExPCRT**, a tool for automated qPCR analysis and visualization. For more info, [click here](#).



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.



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.
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*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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