November 2007

Biotech News

- Scientists transform human skin cells to cells indistinguishable from embryonic stem cells, potentially avoiding the U.S. embryonic stem cell controversy. It must still be determined if the new cells do not significantly differ from embryonic cells.
  http://www.news.wisc.edu/14474

- International scientific team discovers some unexpected forms of liquid-crystal, ultra-short DNA that self-orient and stack into columns when placed in water. This finding could explain how DNA- or RNA-like molecules emerged from a pre-biotic solution of ancient organic molecules.
  http://www.colorado.edu/news/releases/2007/463.html

- Engineering team let by Professor Sangeeta Bhatia of MIT has engineered tissues that model the full-size liver using micropatterning technology, devising a novel way to create tiny colonies of living human liver cells that model the full-sized organ. This work could give pharmaceutical companies an improved test for liver toxicity.
  http://web.mit.edu/newsoffice/2007/liver-1119.html
  Dr. Bhatia will be speaking at SBE's International Conference on Stem Cell Engineering on January 21, 2008. For more information, go to http://www.aiche.org/StemCellEng**.**

- Molecular biologists discover that bacteria talk to each other through CAI-1 – a simple molecule brand new to biology. This discovery may eventually enable scientists to break lines of communication and thereby treat cholera and other bacterial diseases.
  http://www.princeton.edu/main/news/archive/S19/50/60I75/index.xml?section=newsreleases

- Scientists map all 70,000 nucleosomes in yeast and create a software program that predicts where the nucleosomes should be.
  http://www.news.utoronto.ca/bin6/071126-3514.asp

- **SBE Special Section** in the AIChE magazine *Chemical Engineering Progress* "From Chinese Hamsters to Therapeutic Proteins." Articles include:
  - Singapore: An Emerging Leader in Biomedical Sciences
  - Recombinant Protein Therapeutics from CHO Cells – 20 Years and Counting
  - Deciphering the Mechanisms of Therapeutic Protein Production

SBE Events

Two deadlines are rapidly approaching for SBE's 1st International Conference on Stem Cell Engineering on January 20-23, 2008 in Coronado, CA.

- Call for Papers Closes December 10, 2007
- Early Bird Registration Closes December 15, 2007

This conference has attracted some of the world's leading experts in the area, including:

- George Daley, Children's Hospital of Boston
- Fed Gage, Salk Institute
- Douglas Lauffenburger, MIT
- Irving Weissman, Stanford University

Submit a paper to attend (http://aiche.confex.com/aiche/sce08/cfp.cgi) or register now at http://www.aiche.org/StemCellEng.

Call for Papers now Open – SBE's 4th International Conference on Bioengineering and Nanotechnology will be held on July 22024, 2008 at the University College of Dublin, Ireland. Topics will include nanosystems for drug delivery, nanomaterials for cellular engineering and nanotools for bioengineering. Keynote speakers include:

- Ruth Duncan, Professor of Biology and Drug Delivery at the Welsh School of Pharmacy, Cardiff University, UK and Director of the Centre for Polymer Therapeutics. Professor Duncan's research has transferred 6 polymer anticancer conjugates into clinical trial and the first 2 polymer-based gamma camera imaging agents.

- Jérôme Bibette, Professor, Colloids and Divided Materials Laboratory, ESPCI, Paris, France. Professor Bibette's research is focused on making and assembling colloids to become precursors for new materials and to offer new routes for biomedical diagnostics.

- Jeff Hubbell, Professor of Biomedical Engineering and director of the Institute for Biomedical Engineering of the ETH and the University of Zurich, Switzerland. Professor Hubbell's laboratory is directed toward biomaterials issues in tissue engineering, cell-based therapies, drug delivery, and medical devices.

Find out more at http://www.aiche.org/icbn.

AIMBE Annual Event

Members of SBE receive discounted registration to the Annual Meeting of the American Institute for Medical and Biological Engineering (AIMBE) on "The Global Impact of Medical and Biological Engineering, February 20-22, 2008 in Washington, DC. This forum will highlight and analyze the impact of the global economy to corporate and academic medical and biological engineering communities. SBE's James E. Bailey 2006 Award Winner Dr. Robert Langer of MIT will give the keynote speech on "Creating and Implementing Breakthrough Medical Technology." Also speaking is SBE's Advisory Board Member Dr. Shu Chien of UC, San Diego on "Biomedical Sciences and Bioengineering in the Far East." To learn more, go to http://www.aimbe.org/annualevent.

A complete bio-event calendar can be found at http://www.aiche.org/SBE/Events/index.aspx

Join SBE

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

Comments?

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