



The Voice of the Stem Cell Community

**The Stem Cell Education Summit
Saturday, November 14th,
NABT Professional Development Conference**

8:00a -8:15a

Welcome and Meeting Overview

Bernard Siegel, Executive Director, Genetics Policy Institute and Marion V. "Bunny" Jaskot, President-elect, NABT

8:15a- 9:30a Keynote Address:

Current stem cell research and the promise of stem cell based therapies for amelioration of many devastating human diseases from Lou Gehrig's disease to Alzheimers disease.

MARIO R. CAPECCHI was born in Verona, Italy in 1937. He received his B.S. degree in chemistry and physics from Antioch College in 1961 and his Ph.D. degree in biophysics from Harvard University in 1967. His thesis work, under the guidance of Dr. James D. Watson, included the analysis of the mechanisms of nonsense suppression; the initiation of protein synthesis, including the demonstration of Formylmethionine tRNA as the initiator of protein synthesis; and the mechanisms of protein termination. Dr. Capecchi is best known for his pioneering work on the development of gene targeting in mouse embryo-derived stem (ES) cells. In 2007, Dr. Capecchi was awarded the Nobel Prize in Physiology or Medicine with Oliver Smithies and Martin Evan. Dr. Capecchi is a Howard Hughes Medical Institute Investigator and a Distinguished Professor of Human Genetics at the University of Utah School of Medicine, and will be awarded the 2009 NABT Distinguished Service Award.

9:30a- 10:45a Expert Panel Discussion: *The State of Stem Cell Science: Adult, Embryonic & Induced Pluripotent Stem Cells: What is the Science and How Does it Translate to Cures?*

- *Gabriella Cezar, DVM, PhD- University of Wisconsin-Madison, WI*
- *Mark Noble, PhD- UR Stem Cell & Regenerative Medicine Institute, University of Rochester Medical Center, Rochester, NY*
- *Rupa Shevde, PhD- WiCell Research Institute, Madison, WI*

11:15a- 12:30p Concurrent Stem Cell Workshops

- ***The Science of Stem Cells—Introductory Hands-on Activities***
Inexpensive, readily available materials such as UNO cards and the Connect 4 game will be used as part of this inquiry-based, hands-on workshop. Classroom-ready activities move from a basic understanding of stem cells to

how DNA chip technology is used by researchers to determine which genes are being expressed or not expressed as a stem cell differentiates to become an insulin-secreting cell in the Islets of Langerhans. Video clips and animations from several HHMI DVDs including Potent Biology: Stem Cells, Cloning, and Regeneration are used to support concepts introduced in the activities. Attendees will receive the HHMI Potent Biology DVD and a CD-ROM with stem cell activities appropriate for high school, honors, AP and introductory college biology students.

Mary Colvard, HHMI, Chevy Chase, MD

- **A Tour of Online Resources for Teachers**

By showcasing educational Web sites, including www.StemCellResources.org, created by New Jersey educators, learn how to keep yourself current as you turn your biology students on to the 21st century topics of stem cell research and regenerative medicine.

Then, be one of the first to download the newest modular stem cell units on four broad topics created by the California Institute for Regenerative Medicine (CIRM). Along with these units, CIRM is debuting its Education Portal website containing resources for high school students and teachers. Explore through these resources and the CIRM stem cell outreach program, which reaches thousands of students per year in California and other states. Participants are requested to bring their laptops for this interactive experience.

Sharon Weiss and Rob Richard, Biology Teacher's Association of New Jersey. Don Gibbons and Laurel Barchas, California Institute for Regenerative Medicine, San Francisco, CA

- **Stem Cell Research Policy-Making: Toward a Multidisciplinary Understanding**

The policy-making conflict that has plagued stem cell research in the U.S. traces back to as early as the 1970s and exemplifies Santayana's admonition that ignorance of history dooms one to suffer its repetition. In the historic conflict over stem cell research we see a battle of ideas from science, medicine, economics, government, and law, ethics, religion, literature, art, and other humanities. While stem cell science and medicine offers so much promise for public health – the current economics of which threatens the long-term prosperity of our society - the debate over its ethical, legal, and social implications illustrates societal breakdown. This multi-disciplinary presentation will explore how life science educators can collaborate with their colleagues to help cure this problem.

Alan Jakimo Sidley Austin LLP, New York, NY

**12:30- 1:30p Invited Speaker: Representative Diana DeGette
US Stem Cell Policy: Past, Present, and Future**

Chief Deputy Whip Diana DeGette is serving her 7th term in Congress as Representative for the First District of Colorado. As Vice Chair of the powerful Committee on Energy and Commerce, an exclusive congressional committee with vast jurisdiction over health care, trade, business, technology, food safety, and consumer protection, she is one of the leading voices in the health care debate in this country. U.S. Rep. DeGette is also the chief architect of legislation

to expand stem cell research, which has been passed twice with broad, bipartisan support in Congress.

1:30p- 4:30p Stem Cells: Science and Ethics Hands-on Workshop

This session will provide an overview of a curricular resource on stem cell science and ethics geared towards secondary science classrooms. We will review interactive lessons on basic stem cell biology, hands-on activities utilizing planaria as a model organism for regeneration, illustrations of various techniques related to stem cell research, engaging case studies, and discussion formats that allow an exploration of the ethical, social, and political issues surrounding the use of embryonic stem cells. The materials were developed by educators, scientists, and ethicists, and have been reviewed for scientific accuracy.

The lesson materials were made possible by a Science Education Partnership Award grant from the National Center for Research Resources at the National Institutes of Health. The Northwest Association for Biomedical Research (NWABR) is a non-profit organization that promotes understanding of biomedical research and its ethical conduct.

Jeanne Ting Chowning, Northwest Association for Biomedical Research, Seattle, WA

1:30p- 2:45p Stem Cells and Society: Ethics, Politics, Economics, and Advocacy

- *Alan Jakimo, Sidley Austin LLP, New York, NY*
- *Lori P. Knowles, Canadian Stem Cell Network, Ottawa, ON, Canada*
- *Patricia Morton, PhD- Rutgers University, W.M Keck Center for Collaborative Neuroscience, Piscataway, NY*
- *Bernard Siegel, Genetics Policy Institute, Wellington, FL*

3:00p- 4:15p Stem Cell Careers in the Coming Decade

- *Gabriella Cezar, DVM, PhD- University of Wisconsin-Madison, WI*
- *Sarah Haecker, PhD- Genetics Policy Institute, Wellington, FL*
- *Brandon Pletsch, Radius Medical Animations, Baltimore, MD*
- *Bernard Siegel, Genetics Policy Institute, Wellington, FL*
- *Jamie Shuda, EdD, Institute for Regenerative Medicine & The Netter Center for Community Partnerships- University of Pennsylvania, Philadelphia, PA*