

7<sup>TH</sup> ANNUAL INTERNATIONAL  
**BIOETHICS FORUM**

**EVOLUTION IN THE  
 21<sup>ST</sup> CENTURY**



April 17-18, 2008  
 BioPharmaceutical Technology Center  
 Madison, Wisconsin

**OVERVIEW**

Join us for a lively two days of information-sharing and discussion regarding this exciting — and often challenging — topic! We will learn about current scientific work, consider related legal/social policy issues and examine historical and present-day responses of faith communities.

- “Evolution in the 21st Century” is designed to allow participants to explore and extend their understanding of:
- Evolution and creationism – what is the historical context and what evidence do we have?
  - Diverse faith perspectives relative to various scientific perspectives of evolution: Can we reconcile evolution and religion?
  - The complexities of “biopolitics” and where we are headed in terms of basic rights relative to ourselves as individuals and the decisions we make about human enhancement.

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**CONTRIBUTORS**

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 Department of Medical History & Bioethics  
 Master of Science in Biotechnology Program  
 Small Business Development Center  
 Wisconsin Council of Churches  
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 Wisconsin Technology Council

**SCHEDULE OF EVENTS**

**THURSDAY, APRIL 17, 2008**

- 8:00-8:30am Registration and Continental Breakfast
- 8:30-8:45am Welcome – *William Linton*  
Forum Overview – *Robert Streiffer (Moderator)*
- 8:45-9:45am Introduction to the Evidence for Evolution – *Dana Geary*
- 9:45-10:45am Antirevolutionism: From Scientific Creationism to Intelligent Design – *Ronald L. Numbers*
- 10:45-11:00am Break
- 11:00-12:15pm Discussion Session I
  - A. Abrahamic Religions: Perspectives on Evolution Panel discussion – *Ronald L. Numbers, Jeff Hardin and Marc Swetzl*
  - B. Resources for Evolution Education: Getting Started – *Barbara Bielec and Kristin Jenkins*
  - C. LIFE: 3.5 Billion Years in the Making – *MaryRuth Korchiński and Laura J. Mitchell*
- Lunch
- 12:15-1:15pm Evolution: The Science Teacher’s Dilemma – *Eugene Scott*
- 1:15-2:15pm Break
- 2:15-2:30pm Discussion Session II
  - A. Buddhist Traditions: Perspectives on Evolution – *Venerable George Chanhoff and James Hughes*
  - B. Lessons from the Kitzmiller vs. Dover Creationism Trial – *John Haught, Robert T. Pennock and Eugene Scott*
  - C. Patenting Living Organisms – *Paulanne Chelf, Andrew Cohn and Lisa M. Gehrke*
- Reception (*hors d’oeuvres and beverages*)  
Sponsored by: *Michael Best & Friedrich, LLP*
- 3:45-5:00pm

**FRIDAY, APRIL 18, 2008**

- 8:00-8:30am Registration and Continental Breakfast
- 8:30-9:30am New Frontiers in Evolutionary Biology: Evo. Devo and the DNA Record of Evolution – *Sean Carroll*
- 9:30-10:30am Evolution and Faith: Can They Be Reconciled? – *Steve Paulson will interview John Haught*
- 10:30-10:45am Break
- 10:45-NOON Discussion Session III
  - A. Science vs. Religion: What’s Really at Stake in this Debate? – *Stew Paulson*
  - B. The Biopolitics of Human Enhancement Technologies – *James Hughes and Janet Staker Woerner*
  - C. Resources for Educational Settings: Intermediate/Advanced Level Content – *Barbara Bielec, Kristin Jenkins and Robert T. Pennock*
- Lunch
- 12:00-1:00pm Evolving Intelligent Behavior in Digital Organisms (and Beyond) – *Robert T. Pennock*
- 1:00-2:00pm Where Next? What’s in the Future of Human Evolution? – *James Hughes*
- 2:00-3:00pm Closing Remarks – *Robert Streiffer*
- 3:00-3:15pm Reception (*desserts and beverages*)
- 3:15-3:45pm

## SPEAKERS

**BARBARA BIELEC, M.S.**  
K-12 Program Coordinator, BTCI

**SEAN CARROLL, PH.D.**  
Professor, Genetics and Molecular Biology, UW-Madison

**PAULANNE CHELF, M.S.**  
Senior Intellectual Property Manager,  
Wisconsin Alumni Research Foundation

**VENERABLE GEORGE CHURINOFF, M.A.**  
Deer Park Buddhist Center, Oregon, WI

**ANDREW COHN, M.S.**  
Director of Government and Association Relations,  
Wisconsin Alumni Research Foundation

**MUHAMMAD EMRAN, M.D.**  
Family Practice Residency Program, Aurora Health Care, Milwaukee, WI

**DANA H. GEARY, PH.D.**  
Professor, Paleobiology, UW-Madison

**LISA M. GEHRKE, J.D., M.A.**  
President, Getrke & Associates, S.C.

**JEFF HARDIN, PH.D.**  
Professor, Zoology, UW-Madison

**JOHN HAUGHT, PH.D.**  
Distinguished Research Professor, Senior Fellow, Science and Religion,  
Georgetown University

**JAMES HUGHES, PH.D.**  
Executive Director, Institute for Ethics and Emerging Technologies;  
Associate Director, Institutional Research and Planning and  
Visiting Lecturer in Public Policy, Trinity College

**KRISTIN JENKINS, PH.D.**  
Program Manager, Education and Outreach Group,  
National Evolutionary Synthesis Center

**MARRIUTH KOTEINICKI**  
Graduate Student/Teaching Assistant,  
Paleontology, Department of Geology and Geophysics, UW-Madison

**WILLIAM LINTON**  
Chairman and CEO, Promega Corporation

**LAURA J. MITCHELL**  
Graduate Student, Paleogeography,  
Department of Geology & Geophysics, UW-Madison

**RONALD L. NUMBERS, PH.D.**  
Hilldale and William Coleman Professor of History of Science and Medicine,  
UW-Madison

**STEVE PAULSON**  
Executive Producer, *To the Best of Our Knowledge*, Wisconsin Public Radio

**ROBERT T. PENNOCK, PH.D.**  
Professor, Lyman Briggs College and Departments of Philosophy,  
Computer Science and Engineering, and Ecology,  
Evolutionary Biology and Behavior, Michigan State University

**EUGENIE C. SCOTT, PH.D.**  
Executive Director, National Center for Science Education

**MARC SWETLITZ, PH.D.**  
Congregation Beth Shalom, Naperville, Illinois

**ROBERT STREIFFER, PH.D.**  
Associate Professor, Department of Medical History and  
Department of Philosophy, UW-Madison

**JANET STAKER WOERNER, M.S.**  
Principal and Founder, Converging Communications

## CONCURRENT SESSIONS: DESCRIPTIONS

**THURSDAY, APRIL 17**

**DISCUSSION SESSION I**

**11:00-12:15PM**

### A. Abrahamic Religions:

#### Perspectives on Evolution Panel Discussion

Panelists will share Jewish, Christian, and Muslim perspectives on evolution. Why is evolution an important topic each faith, or why not? What challenges and opportunities does evolution offer? Panelists and participants will discuss the similarities and differences in the ways Judaism, Christianity, and Islam engage the topic of evolution.

### B. Resources for Evolution Education: Getting Started

This session is intended for people working with the general public, including educators, clergy and the media. Participants will learn about web based general information sources, lessons and activities, and other resources. Find out where you can learn more about evolution, try hands-on activities on deep-time, selection and variation, and receive a CD of educational resources from the 2007 Evolution Symposium "Evolution: Applications in Human Health and Populations."

### C. LIFE: 3.5 Billion Years in the Making

Buried deep within our Earth's history are some of the most extraordinary and peculiar creatures that have ever lived. Using real fossils, panelists will explore the evolution of life from its microscopic origins 3.5 billion years ago to its enormous marvels of the more recent geologic past. What drives evolution? What causes extinction? This session investigates the processes that mold life on Earth and uses hands-on examination of fossils to tell the incredible story of how life got to be where it is at today.

**DISCUSSION SESSION II**

**2:30-3:45PM**

### A. Buddhist Traditions: Perspectives on Evolution

Venerable George Churinoff and James Hughes will describe some of the texts that convey a Buddhist approach to the origin of life and the universe. They will address the (un)importance of these origin myths for Buddhism, as well as Buddhist attitudes towards the future biological and psychological evolution of *Homo sapiens*. Buddhist attitudes towards genetic engineering and other human enhancement technologies will be addressed in the context of Buddhist attitudes towards the self and myths about the future of the human race.

### B. Lessons from the Kitzmiller vs. Dover Creationism Trial

The 2005 Kitzmiller vs. Dover trial tested the constitutionality of including so-called "Intelligent Design (ID) Theory" in public school

science classrooms, and ruled that doing so violated the separation of church and state just as teaching creationism does. This session will review some of the key findings of this historic trial followed by an open discussion of where the creationism controversy stands today.

### C. Patenting Living Organisms

This session will explore legal requirements and current legislative issues related to patenting living organisms with the United States and European patent systems. It will also concern US patent law as it relates to stem cells and methods for obtaining them, contrasting this with patent law in other countries.

**FRIDAY, APRIL 18, 2008**

**DISCUSSION SESSION III**

**10:45-NOON**

### A. Science vs. Religion: What's Really at Stake in this Debate?

Steve Paulson, the executive producer of the nationally-syndicated public radio show "To the Best of Our Knowledge," has interviewed many of the leading figures in the science and religion debate. He'll discuss some of its most hotly contested issues: evolution, consciousness, scientific materialism, and what we mean by the words "God" and "religion." We'll also hear excerpts of Steve's interviews with notable scientists, atheists and religious scholars, including E.O. Wilson, Richard Dawkins, Karen Armstrong, Francis Collins, Daniel Dennett, Paul Davies and Sam Harris.

### B. Computer Based Evolution Education Materials: Working with Advanced Learners

This session is intended for instructors at the advanced high school or college level. Participants will be introduced to Avida, an artificial life software platform used to study the evolutionary biology of self-replicating and evolving computer programs (digital organisms), and its applications for student designed experiments. Participants will also receive information about the BioQUEST Consortium, EvoBeaker and other computer based educational materials.

### C. The Biopolitics of Human Enhancement Technologies

Bioethics is giving way to biopolitics. The new biopolitics started with the mobilizations for and against the Hoe v. Wade decision, and have been accelerated by the arguments around human enhancement technologies. The new biopolitics have a diverse group of religious and secular "bioconservatives" on one side, and liberal bioethicists, libertarians, transhumanists and technoprogressives on the other. Debates driving biopolitical polarization are disagreement about (a) "humanness" vs. "personhood" as a basis for rights-bearing, (b) the importance of the "natural," (c) the capacity of human reason to improve on the human body, and (d) the legitimate grounds for restricting individual bodily autonomy, cognitive liberty and reproductive rights.

## 7TH ANNUAL INTERNATIONAL BIOETHICS FORUM

# EVOLUTION IN THE 21ST CENTURY

## REGISTRATION FORM

On-line registration option also available: [www.btcic.org](http://www.btcic.org)

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### Registration Fee: \$75.00

Please make check out to: **Bioethics Forum/BTCI**

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## PLEASE INDICATE

*Your 1st and 2nd choices for the concurrent sessions:*

- |   |                       |  |                        |
|---|-----------------------|--|------------------------|
| <b>Thursday</b>   | Discussion Session I  | <b>Friday</b>  | Discussion Session III |
| <input type="checkbox"/> A. Abrahamic Religions: Perspectives on Evolution Panel Discussion |                       | <input type="checkbox"/> A. Science vs. Religion: What's Really at Stake in this Debate?                 |                        |
| <input type="checkbox"/> B. Resources for Evolution Education: Getting Started              |                       | <input type="checkbox"/> B. Computer Based Evolution Education Materials: Working with Advanced Learners |                        |
| <input type="checkbox"/> C. LIFE: 3.5 Billion Years in the Making                           |                       | <input type="checkbox"/> C. The Biopolitics of Human Enhancement Technologies                            |                        |
| <b>Thursday</b>   | Discussion Session II |  |                        |
| <input type="checkbox"/> A. Buddhist Traditions: Perspectives on Evolution                  |                       |  |                        |
| <input type="checkbox"/> B. Lessons from the Kitzmiller vs. Dover Creationism Trial         |                       |  |                        |
| <input type="checkbox"/> C. Patenting Living Organisms                                      |                       |  |                        |

## SEND COMPLETED FORM TO:

**BTCI, 5445 East Cheryl Parkway, Madison, WI 53711**

For more information please visit: [www.btcic.org](http://www.btcic.org)  
or call: **608-273-9737**.

*Registration and discussion session assignments will be confirmed by postcard prior to the forum.*