

President's Council of Advisors on Science and Technology (PCAST)

FIFTEENTH MEETING

December 12, 2011

MINUTES Conference Call

Members Present: John P. Holdren (Co-Chair), Eric Lander (Co-Chair), Maxine Savitz (Vice Chair), Christine Cassel, Chris Chyba, S. James Gates Jr., Mark Gorenberg, Chad Mirkin, Ernest J. Moniz, Craig Mundie, Ed Penhoet, Barbara Schaal, Daniel Schrag,

Members Absent: Rosina Bierbaum, Shirley Ann Jackson, Richard C. Levin, Mario Molina, William Press (Vice Chair), Eric Schmidt, David E. Shaw, Ahmed Zewail

Staff: Danielle Evers, Amber Hartman Scholz, Deborah Stine

Public Attendance: Approximately 40 listeners.

Video Webcast Archive: The archive of the audio recording is available at www.whitehouse.gov/ostp/pcast.

The President's Council of Advisors on Science and Technology (PCAST) convened by teleconference in open session at 4:30pm with Dr. John Holdren and Dr. Eric Lander presiding on Monday, December 12, 2011.

Agenda Item 1: Welcome from PCAST Co-Chairs

Dr. Lander greeted the PCAST members and those members of the public in attendance on the call. Drs. Lander and Holdren thanked the working group and co-chairs for their efforts in crafting a report to PCAST on STEM undergraduate education.

Agenda Item 2: Public Comment

Two members of the public were registered to provide comments to PCAST but were not present on the call. Eric Lander informed the public that PCAST will be holding a public meeting in Washington, D.C. on January 6th, 2012 and welcomed those who wish to comment to register (on the PCAST website) to do so at that time.

Agenda Item 3: Undergraduate Science, Technology, Education, and Mathematics Education (STEM) Study Update

Undergraduate Science, Technology, Education, and Mathematics Education (STEM) working group Co-Chairs, Jim Gates, Chad Mirkin, and Jo Handelsman, presented the

“Engage to Excel: Producing One Million Additional College Graduates with Degrees in Science, Technology, Engineering, and Mathematics (STEM)” report to PCAST, which focuses on strategies targeted at the first two years of undergraduate education to improve retention and preparation of students to increase, by one million, the number of STEM graduates in the next decade. (The fourth co-chair, Peter Lepage, was not able to participate in the call.) Jim Gates and Chad Mirkin introduced the central recommendations of the report which include enactment of Federal government programs to provide incentives for higher education institutions to adopt research-based teaching practices and provide research experiences in the first two years of college, strategies for addressing the mathematics preparation gap facing students in higher education, collaboration of higher education institutions, the Federal government, and private investment to increase broad participation in STEM fields, and the creation of a council of leaders at the national level to address ongoing issues facing STEM undergraduate education.

PCAST members asked questions about how the report recommends approaching the math preparation gap in the first two years of college, how to best provide U.S. military veterans on-ramps to STEM degrees or certifications, and the optimal methods for engaging students in meaningful, inspiring, authentic STEM research. After a series of questions and general discussion regarding the report by PCAST members, a motion was made and seconded to approve the report pending editorial revisions. PCAST members unanimously and enthusiastically approved the report.

Dr. Lander adjourned the meeting at approximately 5:00 pm.

Respectfully Submitted:



Deborah D. Stine
Executive Director
President’s Council of Advisors on Science and Technology

Approved:

A handwritten signature in blue ink that reads "John P. Holdren". The signature is written in a cursive style with a large initial 'J'.

John P. Holdren
Co-Chair
President's Council of Advisors on Science and Technology

A handwritten signature in black ink that reads "Eric Lander". The signature is written in a cursive style with a large initial 'E'.

Eric Lander
Co-Chair
President's Council of Advisors on Science and Technology