

***Science Teacher and Researcher (STAR) Program:
Strengthening K-12 Science Teaching through Professional Research Opportunities***

**Regional Partnership Meeting
February 27, 2008
9:00 a.m. – 5:00 p.m.
Lawrence Berkeley National Laboratory**

Hosted by California Polytechnic State University, The California State University,
the U.S. Department of Energy Office of Science, and
National Aeronautics and Space Administration (NASA) Ames Research Center

Background: The purpose of the meeting is to explore and plan an expansion of the Teacher-Scientist initiative—a model for recruiting, preparing, and retaining outstanding new science and mathematics teachers through partnerships between universities, federal laboratories, industry, and K-12 education. The model involves implementation of the *Science Teacher and Researcher (STAR)* summer research internship program, which establishes a dual professional pathway for secondary school science and mathematics teachers to participate in paid, state-of-the-art research beginning during their pre-service preparation, continuing as part of their initial five years of teaching, and on an ongoing basis thereafter. They are engaged in the excitement of scientific research through active experimentation and inquiry and bring this orientation to learning, teaching, and participating in real science into their own classrooms.

Meeting Outcome: Establishment of regional partnerships between The California State University (CSU), federal laboratories and research centers, and industry partners to implement a scalable, sustainable, and assessable *Science Teacher and Researcher (STAR)* summer research internship program for improved recruitment, education, and retention of science and mathematics teachers in California.

Participants: The approximately 100 meeting participants will include: university representatives responsible for leading California's science and mathematics teacher recruitment and preparation initiatives; representatives of federal agencies, laboratories, and private sector corporations that provide paid research opportunities for science and mathematics teachers; K-12 leaders who support professional development; federal agencies, corporations, and foundations involved in science, technology, engineering, and mathematics (STEM) workforce initiatives; representatives of foundations involved in STEM workforce and education initiatives; and other invited guests.

Sponsors, Partners, and Endorsing Agencies: This invitational meeting is being convened by Warren Baker, president of California Polytechnic State University (Cal Poly), who has long advocated for a dual professional role for science and mathematics teachers. Co-sponsors, partners, and endorsing agencies include: The California State University Chancellor's Office, the California Council on Science and Technology (CCST), the U.S. Department of Energy (DOE) Office of Science, the Business Higher Education Forum (BHEF), Lawrence Livermore National Laboratory (LLNL), Lawrence Berkeley National Laboratory (LBNL), Stanford Linear Accelerator Center (SLAC), NASA Ames Research Center, Industry Initiatives for Science & Math Education (IISME), Raytheon Company, the California Space Authority (CSA), the National Association of Land Grant Universities and State Colleges (NASULGC), and the Woodrow Wilson Teaching Fellowship Program.

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for their support of this meeting.*

Agenda

9:00 a.m. Welcome and Introduction to The Teacher-Scientist Vision

Gary Reichard, Executive Vice Chancellor and Chief Academic Officer, The California State University

Warren J. Baker, President, California Polytechnic State University

9:15 a.m. The Science Teacher and Researcher (STAR) Program: Overview and Emerging Model

Presentation of the 2007 National Science Foundation supported pilot program at Lawrence Livermore National Laboratory, its evaluation, and an emerging model for 2008 and beyond.

Moderator: Susan Hackwood, Executive Director, California Council on Science and Technology

Presenters:

Susan Elrod, Director, Center for Excellence in Science and Mathematics Education (CESaME), Cal Poly

Laura Gilliom, Deputy Division Director, Lawrence Livermore National Laboratory

Reactor:

Michael Leung, Dean, College of Science, CSU East Bay

9:45 a.m. The Science Teacher and Researcher (STAR) Program: Impact of the Experience

Panelists will provide prepared comments describing highlights of the STAR or IISME summer research program based on their direct experience.

Moderator: Bonnie Konopak, Dean, College of Education, Cal Poly

Panelists:

Research Mentor (TBA)

STAR Student (TBA)

John Keller, Assistant Professor and former IISME Fellow, Cal Poly

Seth Bush, Assistant Professor, Cal Poly

Reactors:

Cindy Musick, U.S. Department of Energy Office of Science

James Houpis, Dean, College of Science, CSU Chico

10:30 a.m. Break

10:45 a.m. The STAR Program: Programmatic Considerations

Panelists will provide prepared comments on important program aspects and issues to consider for achieving an effective, scalable, sustainable, and assessable STAR program. Questions and discussion will follow, facilitated by Moderator.

Moderator: Donna Riordan, California Council on Science and Technology

Panelists:

Bill Valdez, Director of Workforce Development, Department of Energy Office of Science

Rollie Otto, Lawrence Berkeley National Laboratory

Angela Phillips Diaz, Special Assistant to the Chancellor, University of California Riverside, and former Director, Strategic Communications & Development, NASA Ames Research Center

Jennifer Bruckner, Executive Director, IISME

Reactors:

Francisca Sanchez, Associate Superintendent, San Francisco Unified School District

Julian Crocker, Superintendent, San Luis Obispo County Schools and President, California County Superintendents Educational Services Association

Harold Levine, Dean, School of Education, UC Davis and Associate Provost for Education Initiatives, UC Office of the President

12:00 p.m. *Lunch with Designated Regional Seating*

Preparing Teachers Who Will Close the Achievement Gap in Science and Mathematics

Keynote Speaker: Jack O'Connell, California State Superintendent of Public Instruction (invited)

Introduction by:

Warren J. Baker, President, California Polytechnic State University

Discussion with Participants Moderated by:

Don Iglesias, Superintendent, San Jose Unified School District

1:15 p.m. *Planning of Regional STAR Program Partnerships Between University, Federal Laboratory, and Industry Representatives in California: Working Session*

Small groups will be convened to provide feedback on STAR program elements, discuss implementation with regional partners, and consider campus and federal partner roles in Summer 2008 implementation (and beyond)

Facilitators:

David Andrews, Director, Science and Mathematics Education Center, CSU Fresno

Susan Brady, Director of Education Programs, Lawrence Berkeley National Laboratory

Sam Held, Program Manager, Oak Ridge Institute for Science and Education

Christine Ivie, Director of Education, NASA Ames Research Center

Jan Mokros, Director, Center for Science and Mathematics Education, San Francisco State University

Susan Schultz, Director of Education Programs, Stanford Linear Accelerator Center

3:00 p.m. *Planning of Regional STAR Program Partnerships Between University, Federal Laboratory, and Industry Representatives in California: Reports from Working Session*

Discussion of implications for achieving a scaled-up, sustainable, and assessable STAR program in California

Moderators:

Susan Elrod, Director, Center for Excellence in Science and Mathematics Education (CESaME), Cal Poly

Karen Stiner, U.S. Department of Energy Einstein Fellow

Presenters: Representatives from regional working groups

Reactors:

Philip S. Bailey, Dean, College of Science and Mathematics, Cal Poly

Joan Bissell, Director of Teacher Education and Public School Programs, The California State University

Howard Gobstein, Vice President for Science Policy, NASULGC, A Public University Association

4:30 p.m. *Implications and Next Steps for Developing the Teacher-Scientist Vision*

Brief comments will be provided by the concluding speakers on the deliberations of the Meeting and the consequences for action. Concluding comments by:

Bill Valdez, Director of Workforce Development, U.S. Department of Energy

Brenda Collins and Elizabeth Coe, Education Programs, NASA Ames Research Center

Beverly Young, Assistant Vice Chancellor, the California State University

Warren J. Baker, President, Cal Poly

5:00 p.m. *Adjournment*