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BOARD ON BEHAVIORAL, COGNITIVE, AND SENSORY SCIENCES

Committee on the Science of Team Science

Workshop on Science Team Dynamics and Effectiveness

Monday, July 1, 2013
Keck Center, Room 100

Goal: This workshop will explore the large body of research on team dynamics and management that has important implications for the effectiveness of collaboration within large and small scientific teams. It will consider the research literature related to these topics, including the research focusing specifically on science teams and the research on teams in other types of organizational settings. It will address the following questions in the study charge:

- How do individual factors (e.g., openness to divergent ideas), influence team dynamics (e.g., cohesion), and how, in turn, do both individual factors and team dynamics influence the effectiveness and productivity of science teams?
- What factors at the team, center, or institute level (e.g., team size, team membership, geographic dispersion) influence the effectiveness of science teams?
- How do different management approaches and leadership styles influence the effectiveness of science teams? For example, different approaches to establishing work roles and routines and to the division of labor may influence team effectiveness.

Prepared papers, responses, and presentations are available at the study webpage:
<http://nationalacademies.org/teamscience>

8:00 a.m. *Sign-in and Badge Pick-up*

8:30 a.m. *Welcoming Remarks*

Mary Ellen O'Connell, NRC Division of Behavioral and Social Sciences and Education
Mimi McClure, National Science Foundation, Office of Cyberinfrastructure
Nancy Cooke, Arizona State University, Committee Chair

9:00 a.m. *Education and Training for Team Science*

Moderator: *Hannah Valantine, Stanford University School of Medicine*

9:00-9:05 Introductions

9:05-9:25 *Eduardo Salas, University of Central Florida:* Presentation of draft paper

9:25-9:40 Respondents

Maura Borrego, National Science Foundation

Michelle Bennett, National Heart, Lung, and Blood Institute, National Institutes of Health (NIH)

9:40-10:00 Questions, discussion

10:00-10:05 Moderator Reflections: *Hannah Valantine, Stanford University*

10:05- 10:20 a.m.	<i>Break</i>
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10:20 a.m. ***Exploring 3 Factors related to Team Processes and Outcomes***

Moderator: *Stephen M. Fiore, University of Central Florida*

10:20-10:25 Introductions

10:40-10:55 *Team Assembly*
Noshir Contractor, Northwestern University

10:25-10:40 *Social Relationships and Scientific Creativity*
Jill Perry-Smith, Emory University

10:55-11:10 *Understanding and Addressing “Fault Lines.”*
Yekaterina Bezrukova, Santa Clara University

11:10-11:40 Questions, Discussion

11:40-11:45 Moderator Reflections: *Stephen M. Fiore, University of Central Florida*

11:45 a.m.- 1:10 p.m. ***Working Lunch: Why Team Science?***

Moderator: *Kara Hall, National Cancer Institute, NIH*

11:45-12:00 Break and pick up box lunch

12:00-12:30 Keynote address: Convergence, Cancer Research, and the Koch Institute Experience at MIT
Tyler Jacks (NAS, IOM), the David Koch Institute for Integrative Cancer Research, Massachusetts Institute of Technology.

12:30-12:50 Questions, discussion

12:50-12:55 Moderator Reflections: *Kara Hall, NIH*

12:55-1:10	<i>Break</i>
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1:10 p.m. ***Team Leadership***

Moderator: *Jonathon Cummings, Duke University*

1:10-1:15 Introductions

1:15-1:35 Presentation of draft paper by David Day, University of Western Australia
Brian Uzzi, Northwestern University

1:35-1:50 Respondents
George Cody, Carnegie Institution for Science
T.W. Fraser Russell (NAE), University of Delaware, Emeritus

1:50-2:10 Questions, discussion

2:10-2:15 Reflections on the Session: *Jonathon Cummings*

2:15 p.m. ***Virtual Science Teams***

Moderator: *Judith S. Olson, University of California, Irvine*

2:15-2:20 Introductions

- 2:20-2:40 *Bradley Kirkman, North Carolina State University: Presentation of draft paper*
- 2:40-2:55 Responses
 Charles Christopher Hinnant, Florida State University
 Gary Olson, University of California, Irvine
- 2:55-3:15 Questions, discussion
- 3:15-3:20 Moderator Reflections: *Judith Olson, University of California, Irvine*

3:20- 3:35 p.m.	<i>Break</i>
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3:35 p.m. ***Multi-team Systems***
 Moderator: *Jeremy Sabloff (NAS), Santa Fe Institute*

- 3:35-3:40 Introductions
- 3:40-4:00 *Leslie DeChurch, Georgia Institute of Technology and Stephen Zaccaro, George Mason University:*
 Presentation of draft paper
- 4:00-4:10 Response: *Joseph Incandela, University of California, Santa Barbara and CERN (by WebEx)*
- 4:10-4:20 Response: *Jay Goodwin, Army Research Institute*
- 4:20-4:40 Questions, Discussion
- 4:40-4:45 Moderator Reflections: *Jeremy Sabloff, Santa Fe Institute*

4:45 p.m. ***Reflections on the Day***

- 4:45-4:55 *Nancy Cooke, Arizona State University (Committee Chair)*
- 4:55-5:30 General Perspectives on the Workshop
 Moderator: *Nancy Cooke, Arizona State University*
 Questions, Discussion

5:30 p.m.	<i>Adjourn</i>
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NOTE FOR PUBLIC MEETINGS: This meeting is being held to gather information to help the committee conduct its study. This committee will examine the information and material obtained during this, and other public meetings, in an effort to inform its work. Although opinions may be stated and lively discussion may ensue, no conclusions are being drawn at this time; no recommendations will be made. In fact, the committee will deliberate thoroughly before writing its draft report. Moreover, once the draft report is written, it must go through a rigorous review by experts who are anonymous to the committee, and the committee then must respond to this review with appropriate revisions that adequately satisfy the Academy's Report Review Committee and the chair of the National Research Council before it is considered a National Research Council report. Therefore, observers who draw conclusions about the committee's work based on today's discussions will be doing so prematurely.

Furthermore, individual committee members often engage in discussion and questioning for the specific purpose of probing an issue and sharpening an argument. The comments of any given committee member may not necessarily reflect the position he or she may actually hold on the subject under discussion, to say nothing of that person's future position as it may evolve in the course of the project. Any inferences about an individual's position regarding findings or recommendations in the final report are therefore also premature.

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