



EC-US Task Force on Biotechnology Research

Workshop

A Global Look at Women's Leadership in Biotechnology Research

23-24 June, 2009

Genentech Hall
UCSF campus, Mission Bay
San Francisco, California

Co-Chairs:

Lydia Villa-Komaroff, Ph.D., CEO, Cytonome, Inc.

Lene Lange, Vice-Dean, Prof., Ph.D., University of Aalborg

23 June 2009

8:30 Coffee and light refreshments

9:00 Introductions and Welcome

- UCSF host representative
- **Judith St. John**, US Chair of the EC US Task Force on Biotechnology Research
- **Line Matthiessen-Guyader**, Directorate for Biotechnology, Agriculture and Food Research, European Commission's Research Directorate-General, EC Executive Secretary of the EC US Task Force on Biotechnology Research

9:15 Session 1: Setting the Stage

- **Lydia Villa-Komaroff**, Ph.D., CEO, Cytonome, Inc., USA
- **Lene Lange**, Vice-Dean, Prof., Ph.D., University of Aalborg, Denmark

9:45 Session 2: Women in Academic Biosciences

Chair and introduction : **Lene Lange**, Ph.D., Prof., University of Aalborg, Denmark

Rapporteurs: **Prof. Dr. Tamara Lah Tunrsek** , Managing Director at the National Institute of Biology, Slovenia ; **Kay Simmons** , USDA/ARS, USA

- **Elizabeth Hood** , Ph.D., Professor, Arkansas State University , USA
- **Andrew Collins** , Professor, Department of Nutrition School of Medicine, Oslo University , Norway
- **Fiona Murray** , Ph.D., Professor, MIT, USA
- **Glaudina Loots** , Health Innovation at the Department of Science and Technology, South Africa

12:30 Lunch

14:00 Session 3: Women in Biotechnology Industry

Chair and introduction : **Lydia Villa-Komaroff**, Ph.D., Cytonome, Inc., USA

Rapporteur: **Dan Jones**, USDA/CSREES , USA

- **Birgitte Ahring** , Biogasol, Denmark
- **Alicia Loffler** , Director of the Biotech Center at Kellogg Business School, USA
- **Laurel Smith-Doerr**, Ph.D., NSF and Boston University, USA

15:30 Session 4: Women as Biotechnology Entrepreneurs

Chair and introduction : **Frederique Claval** , Paris PIONNIERES, France

Rapporteur: **Bill Orts**, USDA, USA

- **Carmen Vela** , Managing Director, Ingenasa, Spain
- **Karen Talmadge** , founder Kyphon, USA
- **Dr. Sudha Nair** , Research Foundation and Golden Jubilee Biotech Park for Women Society, India

17:00 Return to hotel for dinner

19:00 Dinner (for invited participants)

24 June 2009

8:30 Session 5: Globalisation in Biotechnology Research and Women's Careers

Chair and introduction: **Nancy Hawkins**, Simon Fraser University,
Department of Molecular Biology and Biochemistry, Canada

Rapporteur: **Flavia Zucco**, CNR, Istituto di Neurobiologia e Medicina
Molecolare, Italy

- **Privahini Bradoo**, Harvard and Spark, USA
- **Frederique Claval**, Paris PIONNIERES, France
- **Natalie Dinicola**, Monsanto, Inc., St. Louis, MO, USA
- **Steve Casper**, Keck Grad School, USA

10:30 Coffee Break

11:00 Session 6: EC-US Task Force: Where do we go from here?

a. Rapporteurs' reports from Sessions 2 through 5

b. What are the recommendations to policy makers? What are the potential contributions of the Task Force in this arena?

Group discussion, conclusions, and recommendations

Panel:

- **Judith St. John**, US Chair of the EC US Task Force on
Biotechnology Research
- **Line Matthiessen-Guyader**, EC Executive Secretary of the EC US
Task Force on Biotechnology Research
- **Lydia Villa-Komaroff**, Ph.D., CEO, Cytonome, Inc.
- **Lene Lange**, Ph.D., Prof., University of Aalborg

13:00 Lunch/Adjourn

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A workshop investigating women's position in the top ranks of international biotechnology research is proposed. It will probe the roles and contributions of women in this field, the effect of the globalisation of the biotechnology industry on opportunities and barriers for women's advancement, the achievements towards gender balance at the top levels of leadership, and the remaining work still to be done. The potential roles for the EC-US Task Force on Biotechnology Research (Task Force) in promoting women's increased global participation and furthering women's leadership in biotechnology research and development will also be discussed.

Biotechnology is a growth industry that has global influence and increasingly involves collaborations that are multinational in scale. Marshalling a globally distributed, diverse, biotech-ready workforce will be essential if we want to fully harness the potential of the industry to address its great opportunities and most pressing challenges. Women are an essential part of that workforce. They demonstrate, in all parts of the globe, significant interest in the life sciences and have consistently been well represented in the workforce pipeline at the level of the first university degree. Nevertheless, despite what appears to be a strong affinity for and interest in biosciences and biotechnology, women tend to lose ground to their male counterparts in achieving higher degrees, advanced positions in academia, and success in industrial entrepreneurship.

With the predicted need for skilled biotechnology researchers, the concerns about the loss of talented women as researchers in the discovery and innovation communities have resulted in numerous actions undertaken on both sides of the Atlantic. In the years since the 1990 establishment of the Task Force, these actions have achieved significant, but mixed, progress. In the US, biomedical PhDs awarded to women have increased approximately 10% since 1986, to nearly half of all such degrees. However, the entry and progress of women in faculty appointments, while improved, has not kept pace.¹

¹ Association of Women in Science:

http://www.awis.org/news/documents/Leboy_WomenMedFaculty_Sept07.pdf

Only a handful of women lead US biotechnology companies,² although women do play leadership roles in research conducted in biotech firms.³ In the EU, the proportion of women in the Research Framework Programmes (FP) Advisory Groups rose from 4 % in FP4 (1994-98) to over 30% in FP7 (2007-2013). Also, the proportion of women in Monitoring Panels rose from 6 % in FP4 to 35 % in FP5 (1998-2002), and peaked at 50 % in FP6.⁴ However, women still hold only 15% of full professorships in Europe, and representation of women at the top levels of industry is similarly low.⁵ In both the US and Europe, women are perhaps the most underrepresented in the entrepreneurial community. In the US, women are majority owners of some 30% of businesses, but only 3.75% of venture-capital-backed businesses, down from 7.7% in 2002.⁶ Female bioentrepreneurs are equally scarce, if not more so, in Europe.⁷

Both the barriers to progress and the gains that have been made differ from region to region across the globe, due to differing social and political climates and the various change strategies that have been employed. Indeed, the globalisation of biotechnology itself has significantly changed the environment for biotechnology research, including the opportunities and barriers for women to advance in the field. As “lessons learned” have been documented from the many attempts to support and advance women in research and technology, a common theme that has emerged is the need for those who desire to effect change to network together; support one another; and to share what works, what doesn’t, and why. While national and regional events and organisations that promote and support women’s leadership in biotechnology research abound, international opportunities to confer and share experiences broadly, on all sectors and across regions, have been few. The proposed workshop will bring together top experts including biotech academics, biotech industry researchers and entrepreneurs, policymakers, and social scientists researching biotech contexts. The discussion between these experts—from the US, Europe and beyond, some of whom have researched the relevant issues and others of whom have made attempts to improve the situation for women in biotech—stands to contribute much to a broad understanding of women’s leadership in biotechnology; and, for example, may provide insights into how to take regional accomplishments to a global level.

² Tina Nova on Women & Careers in Science and Biotechnology. http://www-biology.ucsd.edu/about/tina_nova.pdf

³ Laurel Smith-Doerr. 2004. *Women’s Work: Gender Equity v. Hierarchy in the Life Sciences*. Boulder, CO: Lynne Rienner Publishers.

⁴ European Platform of Women Scientists.

http://www.epws.org/index.php?option=com_content&task=view&id=317&Itemid=4565

⁵ *The Way Forward: Women in Science*. European Molecular Biology Organization.

<http://www.embo.org/gender/wayforward/index.html>

⁶ Paul Davidson, USA Today, 10/25/2006. http://www.usatoday.com/money/smallbusiness/2006-10-25-bonus-springboard-women_x.htm

⁷ Sabine Louët, Bioe News, 03/06/2003.

<http://www.nature.com/bioent/bioenews/032003/full/bioent721.html>

Some Questions to Guide Speakers/Discussion – all sessions:

Women in biotechnology research —why does it matter?

What is current status of women in academia/industry/entrepreneurship? How has it changed in past 2 decades?

What are the reasons for the underrepresentation of women in top research positions?

What is the impact of globalisation?

What do current trends indicate that the future might look like, with or without interventions?

What are potential policy measures to help rebalance the situation?

What could private companies and public research institutions do to address the situation?

What measures have worked in the past, what has been tried and failed, and why?

What are the essential data to be collected to elucidate trends and establish causality?

How can we measure the effectiveness of gender management policies?