

UCSF – CHE SUMMIT  
ON ENVIRONMENTAL CHALLENGES TO  
REPRODUCTIVE HEALTH AND FERTILITY



January 28-30, 2007

Mission Bay Campus Conference Center, University of California, San Francisco

<http://www.ucsf.edu/coe/prhesummit.html>

Jointly sponsored by the Program on Reproductive Health and the Environment in the Department of Obstetrics, Gynecology and Reproductive Sciences at the University of California, San Francisco, and the Collaborative on Health and the Environment

### Overview

Increasingly, scientific evidence indicates that a number of reproductive health endpoints and disorders—including infertility and subfertility, sperm count/semen quality decline, pregnancy loss, adverse birth outcomes, early puberty, reproductive tract abnormalities, endometriosis, and cancers in women and men—are associated with environmental contaminants that many Americans are exposed to in their daily lives. Leading researchers and health professionals are concerned; they also recognize that a majority of health professionals, policy makers, reproductive and community health advocates, and the public are unaware of these research findings and implications for public health and patient care.

The Summit, a pioneering national, multidiscipline environmental reproductive health conference, will increase awareness and expertise among health professionals, basic and clinical researchers, public health professionals, policymakers, advocates, funders, and reproductive and community health leaders. It will further strategic thinking and efforts toward mitigating adverse environmental reproductive health impacts—particularly those that may have irreversible periconceptual, fetal, or early postnatal exposure origins (i.e., developmental origins). We seek to expand the number of informed voices in support of enhanced environmental reproductive health research agendas, education programs, and public health policy.

At the Summit, preeminent scientific and clinical investigators will provide a series of cogent overviews of the science linking environmental contaminants and metals with male and female reproductive health and fertility compromise across the lifespan. Presenters will also discuss critical research directions and tools, and translation of the science where plausible to the clinic and broader public health. Rather than a standard data presentation conference, the Summit will be an unusual “hybrid” convening designed to promote transdisciplinary learning, investigation and thinking among science, health, and lay ally experts (see *Background*, below).

This 2.5 day conference will be held at UCSF’s new Mission Bay Conference Center, and will highlight: *Critical Windows of Vulnerability to Environmental Exposures...New Conceptual Frameworks (e.g. low-level exposures, mixtures of chemicals, the role of epigenetics)...Genes and the Environment...Relevance of Wildlife and Experimental Animal Data...Definition and Measurement of Reproductive Health/Fertility Compromise...Periconception as a Critical Window: Advising the Pregnancy Planning Couple*. Interactive “Conversations on Stage” will pair researchers with clinicians, with reproductive health advocates, and with federal regulators, policy makers and funders, who will discuss their perspectives on the issues and how to work together effectively. Smaller “Breakout Groups” will afford the opportunity for more concentrated transdisciplinary discussion and agenda-setting around selected environmental reproductive health questions and issues, and help to shape follow-on initiatives and/or work groups coordinated by UCSF’s newly launched Program in Reproductive Health and the Environment.

### Objectives

**(20.5 AMA PRA Category 1 CME credits available\*\*)**

By the Summit’s conclusion, participants should be able to:

- Outline scientific information on the impacts of environmental contaminants on reproductive health endpoints, including: altered onset of puberty; endometriosis; impaired fertility and fecundity; sperm/semen

quality and the testis; pregnancy loss; reproductive system cancers; premature ovarian failure and/or menopause; neuroendocrine and immune system-related reproductive function; and selected pregnancy outcomes.

- Identify critical “windows of vulnerability” to environmental contaminant exposures and associated reproductive health compromise; contaminants of highest concern; and current human exposure assessment tools and results.
- Describe how science suggests new frameworks for understanding the relationship between environmental exposures and reproductive health impacts; and research directions that could help resolve gaps in scientific understanding.
- Discuss how some research results might translate to clinical care and policies that improve reproductive health, including improved pregnancy outcomes and child health.
- Demonstrate improved ability to educate patients, communities and the public on reduction of exposures that may be harmful, during periconceptional, fetal, postnatal, pubertal, and adult windows; and to consider environmental exposures as a possible factor in certain reproductive health problems.
- Discuss the potential of multi- and interdisciplinary partnership to: enhance environmental reproductive health research, education, clinical care, and public health policy; advance translation of environmental reproductive health science for community, environmental justice and reproductive health advocates, and for policy makers.

### Participants

Those concerned with reproductive health, development and medicine; environmental health; periconceptional, fetal and early postnatal origin of adult disorders; and child development, including:

- Researchers and clinicians/health professionals (in practice and in-training) in obstetrics-gynecology, urology, family medicine, pediatrics, occupational medicine, internal medicine, public health, and related disciplines.
- Environmental health scientists, and scientists (*and their mentees*) from across a broad range of reproduction-related investigative disciplines, e.g., reproductive biology, endocrinology, toxicology, genetics/epigenetics, and epidemiology.
- Representatives of patient, women’s and reproductive health, and community and environmental health organizations.
- Health and environment policy makers; public health professionals.
- Environmental health funders.
- Professional Society Partner and Affiliated Society representatives to the Summit (lists below).

### Organizers

The Summit is jointly sponsored and presented by the UCSF School of Medicine’s Department of Obstetrics, Gynecology and Reproductive Sciences and its Program on Reproductive Health and the Environment (PRHE), under the direction of **Linda C. Giudice**, MD, PhD, MSc, Professor and Chair; and by the Collaborative on Health and the Environment (CHE). UCSF’s Dept of Obstetrics, Gynecology and Reproductive Sciences includes: the Center for Reproductive Sciences and the Women’s Health Clinical Research Center. PRHE development is being assisted by the UCSF’s National Center of Excellence in Women’s Health. As the first program of its kind in the country, PRHE is uniquely positioned to co-host this national forum on environmental challenges to reproductive health and fertility. PRHE’s academic model is transdisciplinary: It integrates basic, translational, epidemiological, and health policy research with health professional and public education, health care, and community partnership toward the advancement of environmental reproductive and developmental health. CHE is a national nonpartisan network of over 2000 individuals and organizations interested in increasing scientific and public dialogue concerning the role of environmental contaminant factors in human health/disease. Summit co-directors are: **Alison Carlson**, Facilitator, CHE Fertility/Pregnancy Compromise Work Group and Senior Fellow, Commonweal Health & Environment Program; **Dixie Horning**, Executive Director, UCSF National Center of Excellence in Women’s Health; and **Tracey Woodruff**, PhD, MPH, Research Scientist, UCSF Institute for Health Policy Studies (on sabbatical from US EPA). The Summit’s manager is **Mary Wade**.

## Background

Prior to being recruited by UCSF in October 2005, Dr. Giudice was Division Chief of Reproductive Endocrinology and Infertility and Founding Director of the Women's Health @ Stanford Program, where she began her partnership with CHE Fertility. Together they sponsored the landmark Vallombrosa Workshop, titled *Understanding Environmental Contaminants and Human Fertility Compromise: Science and Strategy*, in February 2005. The 45 nationally-recognized environmental reproductive health researchers; clinicians; professional society representatives; reproductive health support/advocacy group leaders; and environment and health funders who participated unanimously supported expanding the workshop content and format into a national summit. Key Vallombrosa participants are now serving as Summit advisors. Important workshop outcomes include: *The Vallombrosa Consensus Statement on Environmental Contaminants and Human Fertility Compromise*, a consensus document on the state of environmental reproductive health science and priorities for future investigation; a companion lay monograph titled *Challenged Conceptions: Environmental Chemicals and Fertility*; and a June 2006 issue of the journal *Seminars in Reproductive Medicine*, with articles summarizing the scientific presentations at Vallombrosa. Links to these documents can be found online at: [www.healthandenvironment.org/working\\_groups/fertility](http://www.healthandenvironment.org/working_groups/fertility).

## Co-Chairs

**Linda C. Giudice**, MD, PhD, MSc, Professor and Chair, Obstetrics, Gynecology and Reproductive Sciences, University of California/San Francisco. **Philip R. Lee**, MD, Founding Chairman, Collaborative on Health and the Environment; Chancellor and Professor (of Social Medicine) Emeritus, UCSF; Former US Assistant Secretary of Health, Education and Welfare.

## Vice-Chairs

*Appointed representatives of Professional Society Partners of the Summit and other leading advisors:* **Sally Perreault Darney**, PhD (American Society of Andrology); **Michael P. Diamond**, MD (American Society for Reproductive Medicine); **Andrea C. Gore**, PhD (The Endocrine Society); **Louis J. Guillette, Jr.**, PhD (Society for the Study of Reproduction); **Jerrold J. Heindel**, PhD (NIEHS/NIH/DHHS); **Germaine M. Buck Louis**, PhD (Society for Pediatric & Perinatal Epidemiologic Research, and NICHD); **Ted Schettler**, MD, MPH (Science and Environmental Health Network); **Shanna H. Swan**, PhD (Collaborative on Health and the Environment).

## Professional Society Partners

American College of Obstetricians and Gynecologists; American Society of Andrology; American Society for Reproductive Medicine; The Endocrine Society; Society for Gynecological Investigation; Society for Pediatric & Perinatal Epidemiologic Research; Society for the Study of Reproduction.

## Affiliated Societies

American Academy of Environmental Medicine; American Academy of Pediatrics; AAP/District 9; Association of Reproductive Health Professionals; American College of Nurse Midwives; Canadian Fertility & Andrology Society; Endometriosis Association; International Society for Environmental Epidemiology; Society for Male Reproduction and Urology; Society for Reproductive Endocrinology and Infertility; Society for Women's Health Research.

## Advisory Group

**Mary Lou Ballweg**, Endometriosis Association

**Susan Benoff**, PhD, Fertility Research Laboratories; Center for Oncology and Cell Biology, Feinstein Institute for Medical Research, North Shore-LIJ Health System

**Sally Perreault Darney**, PhD, Reproductive Toxicology Laboratory, NHEERL, US EPA

**Michael P. Diamond**, MD, Dept. of Obstetrics and Gynecology; Division of Reproductive Endocrinology and Infertility, Wayne State University

**Edith T. Eddy**, MEd, The Compton Foundation, Inc.

**Tina Eshaghpour**, Women's Foundation of California

**Laura Fenster**, PhD, Occupational Health Branch, California Dept of Health Services

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**Elena Gates**, MD, Dept. of Obstetrics, Gynecology and Reproductive Sciences; General Gynecology, University of California, San Francisco  
**Andrea C. Gore**, PhD, College of Pharmacy; Division of Pharmacology and Toxicology, University of Texas at Austin  
**Louis J. Guillette, Jr**, PhD, Dept. of Zoology, University of Florida, Gainesville; Howard Hughes Medical Institute  
**Russ Hauser**, MD, ScD, MPH, Environmental and Occupational Epidemiology, Harvard School of Public Health  
**Steve Heilig**, MPH, San Francisco Medical Society; Collaborative on Health and the Environment  
**Jerrold J. (Jerry) Heindel**, PhD, Scientific Program Administrator, Division of Extramural Research & Training, NIEHS, National Institutes of Health  
**Nancy P. Hemenway**, International Council for Infertility Information Dissemination (INCIID)  
**Patricia Hunt**, PhD, School of Molecular Biosciences, Washington State University, Pullman  
**Joseph C. Isaacs**, MSPH, RESOLVE, Inc.: The National Infertility Association  
**Sarah Janssen**, MD, PhD, MPH, Natural Resources Defense Council  
**Arthur Leader**, MD, FRCSC, Dept of Obstetrics, Gynecology and Medicine, University of Ottawa  
**Michael Lerner**, PhD, Commonweal Institute; Collaborative on Health and the Environment  
**Germaine M. Buck Louis**, PhD, MS, Epidemiology Branch, Division of Epidemiology, Statistics and Prevention Research, NICHD, National Institutes of Health  
**Nancy Milliken**, MD, School of Medicine; National Center of Excellence in Women's Health; Dept. of Obstetrics, Gynecology and Reproductive Sciences, University of California, San Francisco  
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**Kirsten Moore**, MPA, Reproductive Health Technologies Project  
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**Lisa Rosenthal**, The American Fertility Association  
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**Wayne C. Shields**, Association of Reproductive Health Professionals  
**Rhonda Schlangen**, Planned Parenthood Global Partners  
**Rebecca Z. Sokol**, MD, Keck School of Medicine, University of Southern California  
**Gina Solomon**, MD, MPH, Natural Resources Defense Council; University of California, San Francisco  
**Shanna H. Swan**, PhD, Dept. of Obstetrics and Gynecology; Center for Reproductive Epidemiology, University of Rochester  
**Katherine Tick**, Director of Development, National Center of Excellence in Women's Health, University of California, San Francisco  
**Gayle C. Windham**, PhD, Division of Environmental and Occupational Disease Control, California Dept. of Health Services  
**Julie Wirth**, PhD, MS, Dept of Epidemiology, Michigan State University; Michigan Dept of Health Services

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 Some Summit faculty travel support has been provided by US EPA Reproductive Toxicology Division.

**For More Information**

***Registration, Hotels, Mission Bay Conference Center, Transportation, Program Updates***

See <http://www.ucsf.edu/coe/prhesummit.html>

Specific questions may be directed to Mary Wade, Summit Manager:

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\*\* The University of California, San Francisco, School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. The University of California designates this educational activity for a maximum of 20.5 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity. For the purpose of recertification, the American Nurses credentialing center accepts AMA PRA Category 1 Credits issued by organizations accredited by the ACCME.