



Workshop on

# PARADOXES IN EARLY STAGE CARCINOGENESIS: NEW OPPORTUNITIES FOR CANCER PREVENTION AND EARLY DETECTION

Division of Cancer Prevention - National Cancer Institute

July 28, 2008 • Neuroscience Center • 6001 Executive Boulevard • NIH - Rockville, MD



Please note: Due to Government regulations, food and drinks will not be served in the conference room. Participants can purchase food and drinks in the nearby cafeteria. The cafeteria opens at 7:00 a.m.

7:00 – 8:00 a.m.

## Registration

8:00 – 8:10 a.m.

## Welcome and Goals of the Workshop

Workshop Moderators: Jacob Kagan and Stuart G. Baker  
Division of Cancer Prevention  
National Cancer Institute

8:10 – 8:20 a.m.

## Opening Remarks

Dr. Peter Greenwald  
Director  
Division of Cancer Prevention  
National Cancer Institute

## Keynote Speakers

8:20 – 8:40 a.m.

## The Human Cancer Genome and the Somatic Mutation Theory

Carlo M. Croce  
Institute of Genetics  
The Ohio State University

8:40 – 9:00 a.m.

## The Tissue Organization Field Theory

Ana Soto  
Tufts University School of Medicine

9:00 – 9:20 a.m.

## Panel Discussion

Chair: Barry Kramer  
Associate Director for Disease Prevention  
National Institutes of Health

9:20 – 9:40 a.m.

## Coffee Break



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## Session 1. Paradoxes Related to Genetic Instability and Cancer

Chair: Larry Loeb  
University of Washington

- 9:40 – 10:00 a.m.      **Polyploidy and Aneuploidy—Causes or Consequences of Cancer?**  
David Pellman  
Harvard Medical School
- 10:00 – 10:20 a.m.      **The Role of JC Virus in Gastrointestinal Neoplasia: Can a Neoplastic Phenotype Precede the First Mutation?**  
C. Richard Boland  
Baylor University Medical Center
- 10:20 – 10:40 a.m.      **Genetic Instability in mtDNA in Cancer and Aging**  
Larry Loeb  
University of Washington
- 10:40 – 11:00 a.m.      **Panel Discussion**

## Session 2. Paradoxes in Inherited Cancers Related to DNA Repair

Moderator: Sudhir Srivastava  
Division of Cancer Prevention  
National Cancer Institute

- 11:00 – 11:20 a.m.      **Xeroderma Pigmentosum and Trichothiodystrophy: Different Mutations in the Same Nucleotide Excision Repair Gene Resulting in Normal or Increased Cancer Risk**  
Kenneth H. Kraemer  
Center for Cancer Research  
National Cancer Institute
- 11:20 – 11:40 a.m.      **Phenotypic Consequences of Mutations in Mismatch Repair Genes—HNPCC as an Example**  
Raju Kucherlapati  
Harvard Medical School



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11:40 – 12:00 p.m.      **Panel Discussion**

12:00 – 1:20 p.m.      **Lunch**

## **Session 3. Paradoxes Associated with Transplantation and Foreign-Body Experiments**

Chair: Carlos Sonnenschein  
Tufts University School of Medicine

1:20 – 1:40 p.m.      **Paradoxes in Foreign-Body Carcinogenesis**  
Stuart G. Baker  
Division of Cancer Prevention  
National Cancer Institute

1:40 – 2:00 p.m.      **Carcinogenesis Through Stroma/Epithelial Interactions**  
Carlos Sonnenschein  
Tufts University School of Medicine

2:00 – 2:20 p.m.      **Panel Discussion**

## **Session 4: Paradoxes in Field Cancerization**

Chair: Claudio Conti  
The University of Texas M. D. Anderson Cancer Center

2:20 – 2:40 p.m.      **Paradoxes in Initiation and Promotion Experiments:  
Why Are There Many Distinct Pre-Cancerous Lesions at  
the Onset of Promotion?**  
Claudio Conti  
The University of Texas M. D. Anderson Cancer Center

2:40 – 3:00 p.m.      **Can Morphogens Explain Field Cancerization?**  
Gijs R. van den Brink  
Leiden University Medical Center, the Netherlands

3:00 – 3:20 p.m.      **Panel Discussion**

3:20 – 3:40 p.m.      **Coffee Break**



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## **Session 5: Paradoxes in Spontaneous Regression**

Chair: Hy Levitsky  
Johns Hopkins University School of Medicine

3:40 – 4:00 p.m.

### **The Molecular–Cellular Network and Spontaneous Regression**

Ping Ao  
University of Washington

4:00 – 4:20 p.m.

### **The Role of Immunology in Spontaneous Regression**

Hy Levitsky  
Johns Hopkins University School of Medicine

4:20 – 4:40 p.m.

### **Microenvironment and Its Role in Tumor Regression**

Derek C. Radisky  
Mayo Clinic

4:40 – 5:20 p.m.

### **Panel Discussion – Wrap-Up**

5:20 p.m.

### **Adjourn**