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# CASW

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COUNCIL FOR THE ADVANCEMENT OF SCIENCE WRITING, INC.

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## **NEW HORIZONS IN SCIENCE**

### **Twentieth Annual Briefing**

November 7 through November 11, 1982

Sheraton-Commander Hotel  
Cambridge, Massachusetts

Co-Chairmen:

Barbara J. Culliton

Ben Patrusky

Howard H. Hiatt, M.D.

Co-sponsored by:

The Alfred P. Sloan Foundation  
National Science Foundation

**SUNDAY, NOVEMBER 7**

**6:00 P.M. to 9:00 P.M.**

**Registration and Reception**

**Sheraton-Commander Hotel**

**MONDAY, NOVEMBER 8**  
**8:30 A.M. to 11:30 A.M.**

**THE NUMBERS GAME: DATA, INFERENCE AND  
INTERPRETATION**

This CASW-commissioned minicourse demystifies P values, parameters and other statistical conventions. It spells out insiders' tricks for spotting misleading data, recognizing poorly designed clinical trials and interpreting the numbers that make— or break— a story. There will be a specially prepared take-home resource packet.

**DATA FOR DECISIONS**

Frederick Mosteller, Ph.D., Roger I. Lee Professor and  
Chairman, Department of Health Policy and Management,  
Harvard School of Public Health, Boston

**LOW-DOSE EXTRAPOLATION**

Charles A. Rohde, Ph.D., Professor and Chairman, De-  
partment of Biostatistics, Johns Hopkins School of Hygiene  
and Public Health, Baltimore

**CLINICAL TRIALS**

Marvin Zelen, Ph.D., Professor and Chairman, Department of  
Biostatistics, Harvard School of Public Health, Boston

**OBSERVATIONAL STUDIES**

Alan M. Gittelsohn, Ph.D., Professor of Biostatistics, Johns  
Hopkins School of Hygiene and Public Health, Baltimore



**MONDAY, NOVEMBER 8**

**2:30 to 5:30 P.M.**

**MONOCLONAL T-CELLS: KEY TO CONTROL OF THE IMMUNE SYSTEM**

Harvey Cantor, M.D., Professor of Pathology, Harvard Medical School, Boston

This new breed of carbon-copy biology opens the way to novel treatment for a variety of chronic and degenerative disorders, including arthritis, hepatitis, multiple sclerosis and some cancers.

**LEUKOTRIENES**

K. Frank Austen, M.D., Theodore Bevier Bayles Professor of Medicine, Harvard Medical School; Physician-in-Chief, Robert B. Brigham Division, and Chairman, Department of Rheumatology and Immunology, Brigham and Women's Hospital, Boston

Recent discovery and synthesis of a class of potent biological agents is helping to unravel the mystery of asthma and other allergic and inflammatory reactions and promises new approaches for prevention and treatment.

**6:00 P.M.**

**TWENTIETH ANNUAL BANQUET AND COCKTAIL PARTY**

Presentation of the National Association of Science Writers' Science-in-Society Journalism Awards.

**TUESDAY, NOVEMBER 9**  
**8:30 A.M. to 11:30 A.M.**

**HUMAN CANCER GENES**

Robert A. Weinberg, Ph.D., Professor of Biology, Massachusetts Institute of Technology, Cambridge

At least 10 distinct genes have been identified as triggers of cancer and human malignancy. Scientists are making rapid strides in determining what turns these genes "on" to make cells go out of control.

**NEW PLANT 'HORMONES'**

Peter Albersheim, Ph.D., Professor of Biochemistry, University of Colorado, Boulder

Fragments of plant cells appear to serve as hormones involved in regulation of growth, development, reproduction and disease resistance. These newly discovered chemical messengers hold great potential for enhancing agricultural yields.

**2:30 P.M. to 5:30 P.M.**

**THE FUTURE OF PARTICLE PHYSICS**

Sheldon L. Glashow, Ph.D., Professor of Physics, Harvard University, Boston

New accelerators with collision energies up to 2000 billion electron volts are coming on line this decade. How might they contribute to solving the mystery of grand unification?

**COMPUTERS THAT LEARN**

Patrick Winston, Ph.D., Director, Artificial Intelligence Laboratory, Massachusetts Institute of Technology, Cambridge

Now computers can learn from experience and alter their subsequent behavior accordingly.

**6:30 P.M.**

Cocktail Party at the New England Aquarium. Hosted by *The Boston Globe*.



**WEDNESDAY, NOVEMBER 10**  
**8:30 A.M. to 11:30 A.M.**

**BRAIN GRAFTING**

Richard Jed Wyatt, M.D., Chief, Adult Psychiatry Branch, National Institute of Mental Health, Saint Elizabeth's Hospital, Washington, D.C.

Neuroscientists have been grafting tissue into the brains of animals to determine if this technique can help against a welter of human disorders, including Parkinson's disease, blindness and memory loss. In some cases, normal function has been restored.

**ASTRONOMY AND ASTROPHYSICS: THE NEXT DECADE**

George Field, Ph.D., Director, Center for Astrophysics, Harvard-Smithsonian Astrophysical Observatory; Professor of Astronomy, Harvard University, Cambridge

A look at the research likely to engage astronomers and cosmologists in the '80s--and the programs and facilities recommended by a special committee of the National Academy of Sciences to support these efforts.

**2:30 P.M. to 5:30 P.M.**

**COSMIC JETS, BLACK HOLES AND GALACTIC EVOLUTION**

Martin J. Rees, Ph.D., Plumian Professor of Astronomy and Experimental Philosophy, and Director, Institute of Astronomy, Cambridge University, Cambridge, England

Streams of gas millions of light years long, products of violent explosions at the center of galaxies, are used by scientists to help understand how galaxies originated, evolved and clustered.

**FROM QUASAR TO NAVSTAR: AN ODYSSEY IN GEODESY**

Peter F. MacDoran, President, ISTAC, Inc., Pasadena, California

The inventor of a technique based on signals from quasars and NAVSTAR defense satellites reports on its potential role in earthquake prediction, the search for fossil fuels, tsunami detection, weather hazard forecasting and aircraft collision avoidance.

**6:00 P.M. to 7:00 P.M.**

**Hospitality Suite Open**

**THURSDAY, NOVEMBER 11**  
**8:30 A.M. to 11:30 P.M.**

**THREE-MILE ISLAND: THE PSYCHOLOGICAL IMPACT**

Herbert C. Schulberg, Ph.D., Professor of Psychiatry and Psychology, University of Pittsburgh School of Medicine, Pittsburgh

Did the nuclear accident of '79 have long-term effects on the mental health of the community? Recent findings probably will have significant influence on pending judicial decisions.

**EARLY MAN: THE VIEW FROM AFAR**

Jon E. Kalb, Research Scientist Associate, Vertebrate Paleontology Laboratory, Balcones Research Center, Texas Memorial Museum, University of Texas, Austin

Important findings about the evolution of man are emerging from a newly reported archaeological dig in Afar, Ethiopia. The site, representing one of the most continuous records of human habitation known, also holds an almost complete record of land-vertebrate evolution during the past six million years.

**ADJOURNMENT**



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