

*Errol J. ...*

PROGRAM

FIRST INTERNATIONAL CONFERENCE  
ON ENVIRONMENTAL MUTAGENS

ASILOMAR  
PACIFIC GROVE, CALIFORNIA, USA

AUGUST 29 - SEPTEMBER 1, 1973

## PROGRAM

### FIRST INTERNATIONAL CONFERENCE ON ENVIRONMENTAL MUTAGENS

August 29 - September 1, 1973

(The time listed is the maximum time allowed for each speaker. 5 more minutes are allowed for discussion of the paper at the discretion of the chairman. All talks will be in Merrill Hall except where noted.)

#### WEDNESDAY, AUGUST 29, 1973

Afternoon: Arrival at Asilomar and registration

Dinner: 6 p.m. (Main Dining Room)

SESSION I: 7:30 - 9:30 p.m.

Welcoming address by A. Hollaender (20')

MUTAGENS IN THE BIOSPHERE, S.S. Epstein, Chairman (10')

Y. Tazima, "Naturally occurring mutagens" (25')

D. Parker, "The physical mutagens" (25')

L. Fishbein, "Mutagens and potential mutagens in the biosphere (25')

9:30 - 12 p.m.: Open Bar (Nautilus)

#### THURSDAY, AUGUST 30, 1973

Breakfast: 7:30 a.m.

SESSION II (all day): ENVIRONMENTAL MUTAGEN TESTING IN VARIOUS ORGANISMS

9 - 9:30 B. Ames, "General principles of mutagenesis"

II-A (9:30 - 11:15) MICROBIAL SYSTEMS, J.W. Drake, Chairman

B.J. Kilbey, "The dose-rate effects of mutagenic chemicals and their analysis" (15')

S. Kondo, "Environmental mutagen testing in E. coli and phage  $\lambda$ " (15')

T. Kada, Y. Sadaie, and Y. Shirasu, "Detection of frameshift mutagens in pesticides by 'Rec-Assay' procedures" (15')

Coffee Break (10:30) - 15 minutes

F. Sherman and J.W. Stewart, "Frameshift mutants of isocytocromes in yeast" (15')

II-B (11:15 - 12) INSECT SYSTEMS, O. Fahmy, Chairman

F. Sobels, "The advantages of Drosophila for mutation studies" (15') ✓

R. Smith, "The uniqueness of Habrobracon in experiments with chemical mutagens" (15') ✓

Lunch: 12 noon

II-C (1:30 - 2:30) PLANT SYSTEMS, A. Sparrow, Chairman

W.F. Grant, "Cytological effects of environmental mutagens--pesticides" (15')

A.H. Sparrow, L.A. Schairer, and R. Villalobos, "Comparison of somatic mutation rates induced in Tradescantia by chemical and physical mutagens" (15')

R. Rieger, "Selective effects of chemical mutagens on the chromosomes of Vicia faba as influenced by segment transposition" (15')

II-D (2:30 - 4:50) MAMMALIAN SYSTEMS, G. Röhrlborn, Chairman

W.L. Russell, "Genetic investigations of hycanthone in mice" (15')

Donald Clive, "Mutagenicity of hycanthone and several of its analogs in L5178Y mouse lymphoma cells" (15')

U.H. Ehling, "Differential spermatogenic response of mice to the induction of specific locus mutations by environmental mutagens" (15')

Coffee Break (3:20) - 20 minutes

W. Nichols, "Cytogenetic effects of environmental mutagens in mammalian systems" (15')

R. DeMars, "In vitro mutation and mutagenesis in mammalian cells" (15') ✓

G. Röhrlborn, "Comparative mutagenicity tests with isoniazide in various mammalian test systems" (15') ✓

5 - 5:45 p.m. Preferred Papers: Parallel sessions A and B (6, 10' talks)  
(in Merrill Hall and Nautilus)

Dinner: 6 p.m.

Evening: SESSION III (8:00 - 9:10) REPAIR AND OTHER MODIFYING FACTORS INVOLVED IN MUTAGENESIS, N. Loprieno, Chairman

F.J. deSerres, "Qualitative effects of U.V. sensitive strains of N. crassa on mutation induction at the ad 3B locus" (20')

Brian Cox, "Repair systems in *Saccharomyces*" (20')

Sheldon Wolff, "Absence of repair replication in *Vicia faba* after treatments with chemical mutagens" (15')

9:15 - 12 p.m.: Open Bar (Nautilus)

9:15 - 10:30: American-EMS business meeting (Merrill Hall)

## FRIDAY, AUGUST 31, 1973

Breakfast: 7:30 a.m.

SESSION IV (9:00 - 12:00) EFFECTS ON HUMAN POPULATIONS AND POPULATION MONITORING, H.J. Evans, Chairman

J.V. Neel, "Developments in monitoring human populations for increased mutation rates" (25')

J.G. Brewen and R.J. Preston, "Cytogenetic effects of environmental mutagens in mammals and the extrapolation to man" (25')

Coffee Break (10:00) - 15 minutes

10:15 - 12:00 Preferred Papers: Parallel sessions C, D and E (21, 10' talks)  
(in North Woods)

Lunch: 12 noon

1:15 - 5:30 Bus trip to 17 Mile Drive, Carmel, and Point Lobos

6:00 Dinner (Banquet)

Evening: SESSION V (7:30 - 8:10 p.m.) THE RELATIONSHIP BETWEEN MUTAGENESIS AND CARCINOGENESIS, U. Saffiotti, Chairman (10')

B.N. Ames, W. Durston, E. Yamasaki, and F.D. Lee, "Carcinogens are mutagens: a simple test system" (25')

SESSION VI (8:15 - 8:30) REPORT ON THE STATUS OF THE ENVIRONMENTAL MUTAGENESIS INFORMATION CENTER, F. deSerres, Chairman

J.S. Wasson, "Environmental Mutagen Information Center" (10')

8:30 - 10:30 Preferred Papers: Parallel sessions F, G, and H (24, 10' talks)  
(in North Woods)

10:30 - 12 p.m. - Open Bar (Nautilus)

SATURDAY, SEPTEMBER 1, 1973

Breakfast: 7:30

SESSION VII (9 - 11:30) PANEL DISCUSSION ON GOVERNMENTAL, INDUSTRIAL, AND CONSUMER CONCERNS RELATING TO ENVIRONMENTAL MUTAGENESIS, E. Freese, Chairman

G. Flamm, "A tier approach to mutagen testing" (15')

C. Ramel, "The mercury problem--a trigger for environmental pollution control" (15')

M. Legator, "Regulatory requirements for mutagenicity testing. Premature or overdue?" (15')

B.A. Bridges, "Mutagenicity testing: Protocols, results and possible legislative action." (15')

Mitchell R. Zvon, "The contradictory impacts of health and environmental regulation on industry" (15')

Lin Beckwit, "Legislative aspects" (15')

Coffee Break (10:30) - 15 minutes

10:45 - 11:30 Panel discussion and questions

11:30 - 12:00 SUMMARY OF MEETING, C. Auerbach

12:00 noon - Lunch

Adjournment

PROFERRED PAPERS (10' talks, 5' discussion)

Thursday, 5 - 5:45 p.m.

Session A, Y. Tazima, Chairman (Merrill Hall)

A HIGHLY SENSITIVE TEST SYSTEM FOR CHEMICAL MUTAGENS USING SEROSAL CELLS  
IN THE SILKWORM.

Tazima, Y., K. Onimaru

SCMATIC CROSSING OVER IN GLYCINE MAX: A NEW TEST SYSTEM FOR ENVIRONMENTAL  
MUTAGENS.

Vig, Baldev K.

SAFETY PHILOSOPHY IN THE LABORATORY.

Huff, James Edward, and John S. Wassom

Thursday, 5 - 5:45 p.m.

Session B, F. de Serres, Chairman (Nautilus)

GENETIC EFFECT OF ORGANIC MERCURY ON YEAST.

Nakai, Sayaka, and Isamu Machida

INDUCTION OF MUTATIONS IN SUPERSENSITIVE STRAINS OF SCHIZOSACCHAROMYCES  
POMBE.

Nasim, A.

THE EFFECT OF pH ON HYCANTHONE METHANESULFONATE INDUCED INACTIVATION AND  
MITOTIC RECOMBINATION IN D5, A NEW DIPLOID STRAIN OF SACCHAROMYCES  
CEREVISIAE.

Shahin, M.M., and F.J. de Serres

Friday, 10:15 - 12:00 a.m.

Session C, A. Sparrow, Chairman <sup>TRIVON</sup> (~~Troyen~~ -- North Woods)

THE DYNAMICS OF MUTATION INDUCTION: THE LIPID/WATER PARTITION COEFFICIENTS  
OF ALKYLATING AGENTS.

Chandler, J. LR.

PHENCYCLIDINE AND ENVIRONMENTAL TERATOGEN.

Walker, Frank A., and Jill Ann Seig

PRELIMINARY FINDINGS: CHROMOSOMES OF PLUTONIUM WORKERS

Brandom, W.F., R.W. Bistline, A.D. Bloom, and P.G. Archer

THE CYTOGENETICS OF URANIUM MINERS EXPOSED TO <sup>222</sup>RADON.

Brandom, W.F., G. Saccomanno, P.G. Archer and V.E. Archer

IN VIVO CYTOGENETIC STUDIES WITH 6-MERCAPTOPYRINE.

Holden, H.E., V.A. Ray, M.G. Wahrenburg and J.D. Zelenski

PRODUCTION OF CHROMOSOME TYPE ABERRATIONS IN THE LIVER CELLS OF THE CHINESE HAMSTER BY DIMETHYLNITROSAMINE (DMN).

Brooks, Antone L., and Vicki Cregger

CYTOGENETIC STUDIES IN PREIMPLANTATION EMBRYOS OF CHINESE HAMSTERS.

RESULTS OF CONTROLS AND AFTER TREATMENT OF FATHERS WITH AN ALKYLATING AGENT.

Schmid, W., and F. Binkert

Friday, 10:15 - 12:00 a.m.

Session D, W. Nichols, Chairman (<sup>MERRILL</sup>~~Acacia~~ -- North Woods)

TESTICULAR CHANGES IN MICE AFTER TREATMENT WITH MITOMYCIN C.

Léonard, A., and N. Gilliavod

GENETIC EFFECTS OF CHRONIC TRITIATED WATER (HTO) INGESTION IN MICE.

Carsten, A.L., E.P. Cronkite, and A. Gremillion

USING AN INVERSION FOR ASSESSING RECESSIVE MUTATIONS IN MICE

Roderick, Thomas H.

A SEQUENTIAL PROCEDURE FOR THE DETECTION OF TRANSLOCATION HETEROZYGOTES IN MALE MICE.

Generoso, W.M., W.L. Russell, and D.G. Gosslee

METHODS FOR SEPARATION OF MOUSE TESTIS CELLS AND NUCLEI.

Meistrich, Marvin L.

STRAIN DIFFERENCES IN TOXICOLOGICAL SENSITIVITY TO A CHEMICAL MUTAGEN.

Soares, E.R., K.P. Petersen, and T.H. Roderick

MUTAGENIC RESPONSE OF KNOWN CARCINOGENS.

Kennedy, G.L., Jr., D.W. Arnold, and M.L. Keplinger

Friday, 10:15 - 12:00 a.m.

Session E, M. Legator, Chairman (<sup>AND</sup>~~Weather~~ -- North Woods)

THE MUTAGENIC ACTIVITY OF 6-MERCAPTOPYRINE IN HOST-MEDIATED AND DOMINANT-LETHAL ASSAYS.

Ray, V.A., H.E. Holden, J.H. Ellis and M.L. Hyneck

A DOMINANT LETHAL STUDY OF THE ANTIANDROGEN SCH 13521

Beall, James R.

INDUCTION OF DOMINANT LETHAL MUTATION IN MALE MICE BY ETHYL ALCOHOL.

Badr, Fouad M., and Raaga S. Badr

INTRASANGUINEOUS MUTAGENICITY TESTS WITH BACTERIA.

Mohn, G.

DIFFERENTIAL RESPONSE OF YEAST CELLS INJECTED INTO THE TESTES OF RATS AND THE PERITONEUM OF MICE AND RATS TO MUTAGENS.

Fahrig, R.

DIETARY EFFECTS ON THE MUTAGENICITY OF N-NITROSO COMPOUNDS IN THE HOST MEDIATED ASSAY.

Zeiger, Errol

IN VITRO LIVER MICROSOME ACTIVATION OF CHEMICAL MUTAGENS.

Brusick, D., F. Gletten and U. Weeks

Friday, 8:30 - 10:30 p.m.

Session F, R. de Mars, Chairman (~~Taylor~~ <sup>MERRILL</sup> -- North Woods)

AZAGUANINE RESISTANT LYMPHOCYTES: A POPULATION FOR DIRECT ASSAY OF SOMATIC CELL MUTATION

Albertini, Richard J., and Robert DeMars

INDUCTION OF HYPOXANTHINE-GUANINE-PHOSPHORIBOSYL-TRANSFERASE (HGPRT)-DEFICIENT MUTANTS IN DIPLOID AND TETRAPLOID CHINESE HAMSTER CELL LINES.

Van Zeeland, A.A., and J.W.J.M. Simons

MUTAGENESIS TO 8-AZAGUANINE RESISTANCE IN CULTURED HUMAN DIPLOID CELLS.

Kuroda, Y.

THE ROLE OF 8-AZAGUANINE IN THE SELECTION OF HYPOXANTHINE GUANINE PHOSPHORIBOSYL TRANSFERASE (HGPRT)-DEFICIENT MUTANTS FROM DIPLOID HUMAN CELLS.

Simons, J.W.J.M., A.A. Van Zeeland, and M.C.C. Van Diggelen

THE RELATIONSHIP BETWEEN GENE AND CHROMOSOME MUTATIONS IN CHINESE HAMSTER CULTURED CELLS EXPOSED TO AFLATOXIN B1.

Vélazquez, A., C. de Nava, R. Coutiño, and I. Pulido

CYTOGENETIC INVESTIGATIONS OF MUTAGENIC ACTION OF CAFFEINE IN ENDOREDUCATED CHINESE HAMSTER CELLS.

Palitti, F., M. Rizzoni, M. Gatti, and C. Olivieri

CHEMICAL DOSIMETRY IN L5178Y MOUSE LYMPHOMA CELLS.

Patterson, James B., and Donald Clive

Friday, 8:30 - 10:30 p.m.

Session G, F. Mukai, Chairman (~~Acosta~~ <sup>TRIVON</sup> -- North Woods)

MUTAGENIC EFFECTS OF AZIRIDINE-DERIVED RODENT ANTIFERTILITY COMPOUNDS.

Barnett, Muriel J., W.A. Maxwell, and W.A. Skinner



THE MUTAGENICITY OF SOME HALO-ETHERS AND HALO-KETONES.

Mukai, Frank H., and Irene Hawryluk

MUTATION AND LETHALITY PRODUCED BY A TRYPTOPHAN PHOTOPRODUCT.

Yoakum, G., A. Eisenstark, and R.B. Webb

THYMINE HYDROPEROXIDE AS A MUTAGEN.

Thomas, Harvey, and Roger M. Herriott

MUTAGENIC ACTIONS OF LOW FREQUENCY MECHANICAL VIBRATION IN DROSOPHILA MELANOGASTER.

Keller, E.C., Jr.

SELECTIVE MUTAGENICITY OF CARCINOGENS.

Fahmy, O.G., and Myrtle J. Fahmy

DEPENDENCE OF ALKYLATION AND MUTAGENESIS ON GERM CELL STAGE.

Lee, William R., Charles S. Aaron, and Frank C. Janca

FREQUENCY PATTERN ANALYSIS OF TRANSLOCATIONS AND SEX-LINKED RECESSIVE LETHALS INDUCED BY TRIETHYLENE MELAMINE AND ETHYL METHANESULFONATE IN DROSOPHILA MELANOGASTER.

Ikebuchi, M., T. Nishimori, Y. Teranishi, and Y. Nakao.

Friday, 8:30 -- 10:30 p.m.

AND

Session H, G. Flamm, Chairman (~~Heather~~ -- North Woods)

- ✓ BHT TOXICITY STUDIES ON MAMMALIAN CELLS.  
Rajaraman, R., and D.E. Rounds
- ✓ RADIOSENSITIZATION OF MURINE LUKEMIA AND LYMPHOMA CELLS BY PHENOLIC ANTI-OXIDANTS - BUTYLATED HYDROXYANISOLE (BHA) AND PROPYL GALLATE (PG).  
Kamra, O.P., and T. Ghose
- ✓ RADIOSENSITIZING PROPERTY OF BUTYLATED HYDROXYTOULENE (BHT) AND BUTYLATED HYDROXYANISOLE (BHA) IN DROSOPHILA MELANOGASTER.  
Prasad, Om, and O.P. Kamra ✓ ALIKHANIAN T40 ES. PERUZZIAN
- ✓ THE MUTAGENICITY OF OXIDES OF NITROGEN AND METHYLBENZENEAMINE IN SALMONELLA TYPHIMURIUM.  
Rinehart, Robert R., Murray J. Towle, Frank J. Ratty, and Edward Mack
- ✓ NITROSO-CARBARYL, A NEW MUTAGEN OF ENVIRONMENTAL SIGNIFICANCE.  
Elespuru, R., J. Setlow, and W. Lijinsky
- ✓ TESTING FOR FOOD ADDITIVE-INDUCED MUTATIONS IN DROSOPHILA MELANOGASTER.  
Valencia, Ruby, Seymour Abrahamson, Pamela Wagoner, and Laurie Mansfield
- ✓ BISULFITE-INFLICTED DAMAGE TO NUCLEIC ACIDS.  
Shapiro, Robert
- ✓ PHOTODYNAMICALLY INDUCED GENETIC EFFECTS OF CHLORPROMAZINE IN ESCHERICHIA COLI AND YEAST.  
Zetterberg, L.G.