

# **ENVIRONMENTAL MUTAGEN SOCIETY**

## **Thirty-Third Annual Meeting Frontiers Beyond the Human Genome**

**Hilton Hotel, Anchorage, Alaska  
April 27-May 2, 2002**

The Environmental Mutagen Society was founded in 1969 and is incorporated under the laws of the District of Columbia. Its purpose is to encourage the study of mutagens in the human environment, particularly as they may affect public health, and to engage in and sponsor research and the dissemination of information related to mutagens. Membership is open to all interested scientists.

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EMS Headquarters  
1767 Business Center Drive  
Suite 302  
Reston, VA 20190  
Phone: (703) 438-8220  
Fax: (703) 438-3113  
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Philip C. Hanawalt	

**ON-SITE**  
**REGISTRATION FEES**

Member	\$575	Graduate or	
Non-Member	\$750	Undergraduate Student	\$375
Post-Doctoral	\$475	Child/Guest (non-scientist)	\$150
		Onsite Glacier Tour	\$135

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#### **CONTRIBUTOR**

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## Thank you!

EMS sincerely appreciates the effort and hard work of the following people who have helped make this a successful and worthwhile meeting.

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William Bodell

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Toby Rossman

Roel Schaaper

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### **Other Key Individuals**

Dan Benz

John DeLuca

David DeMarini

Pamela Lee

Jeness Majeska

Josephine Simonetti

Liz Von Halle

Kandace Williams

Suzanne Wright

# SATURDAY, APRIL 27, 2002

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8:00 AM – 10:00 AM

**Strategic Planning Committee Meeting**  
Cook Inlet Board Room

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3:30 PM – 7:00 PM

**Registration**  
Promenade

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1:00 PM – 5:00 PM

**EMS Council Meeting**  
Aspen Room

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6:00 PM – 7:30 PM

**Student Mixer/Reception**  
Chart Room

## **Poster Set-up and Take-down Schedule**

Assigned poster number to match numbers on poster boards

<u>Session</u>	<u>Set-up</u>	<u>Take-down</u>
Sunday	by Noon	by 10:00 PM
Monday	by Noon	by 10:00 PM
Wednesday	by Noon	by 10:00 PM
Thursday	by Noon	by 10:00 PM

Poster presenters not attending another session during afternoon are encouraged to attend their posters. All Poster presenters should attend their posters during their 8:00 – 9:30 PM evening poster session.

# SUNDAY, APRIL 28, 2002

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7:30 AM – 5:00 PM

**Registration**  
Promenade

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7:00 AM – 8:30 AM

## **Breakfast Meetings**

2003 Program Committee  
Birch

Nominating Committee  
Prudhoe Bay Room

Student and Young Investigator Breakfast:  
*Professional Survival Skills*  
Spruce

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## **FUTURE MEETINGS**

May 10-15, 2003  
Fountainbleau Hilton  
Miami, Florida

2004  
To be announced

September 3-8, 2005  
Hyatt Regency San Francisco  
San Francisco, California

**SUNDAY, APRIL 28, 2002**

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8:30 AM – 12:30 PM

**Symposium**  
Alaska Room

**Mitochondrial Damage in Aging and Carcinogenesis**

*Chairs: George Martin, University of Washington*

*Douglas Wallace, Emory University*

Sponsored by The Ellison Foundation

8:30 AM – 9:00 AM

**Gerantogens and Aging Genes**

George Martin, University of Washington

9:00 AM – 9:30 AM

**Mitochondrial Pathobiology in Mice and Man**

Douglas Wallace, Emory University

9:30 AM – 10:00 AM

**Point Mutations in Mitochondria**

Giuseppe Attardi, California Institute of Technology

10:00 AM – 10:30 AM

**Fidelity of Human DNA Polymerase-Gamma and Mitochondrial DNA Mutagenesis**

William Copeland, National Institute of Environmental Health Sciences

10:30 AM – 11:00 AM

**Coffee Break** Promenade

11:00 AM – 11:30 AM

**Mitochondrial DNA Repair and Changes with Aging and Cancer**

Vilhelm Bohr, National Institute on Aging

11:30 AM – 12:00 Noon

**Age-Associated Accumulation of Mutations in Mouse Mitochondrial DNA**

Magomed Khaidakov, *US FDA, National Center for Toxicological Research*

# SUNDAY, APRIL 28, 2002

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9:00 AM – 12:30 PM

## Selected Platform Talks

Bristol Bay Ballroom

### Exposure, Detection, and Toxicity

*Chairs: Toby Rossman, New York University*

*Ronald Synder, Schering-Plough Research Institute*

#### Abstract

- 9:00 AM 161 **HOW AN ANIMAL MODEL FOR ARSENIC CARCINOGENESIS WAS DERIVED FROM GENETIC TOXICOLOGY STUDIES**  
Introduction  
Rossman TG, Uddin AN, Burns FJ, Bosland MC
- 9:30 AM 146 **DEVELOPMENT OF AN ALLELE-SPECIFIC AMPLIFICATION FOR MOUSE P53 CC TO TT MUTATION, A POTENTIAL BIOMARKER FOR ESTIMATING SKIN CANCER RISK**  
Parsons BL, Couch LH, Miller BJ, Howard PC
- 9:45 AM 130 **MEASURING THE MITOTIC INDEX OF HUMAN LYMPHOCYTE CULTURES BY FLOW CYTOMETRY USING THE HISTONE 3-P mAb BIOMARKER**  
Muehlbauer PA, Schuler MJ
- 10:00 AM 131 **FLOW CYTOMETRIC ASSESSMENT OF CELL CYCLE, MITOTIC INDEX AND ANEUPLOIDY IN HUMAN LYMPHOCYTE CULTURES USING THE HISTONE 3-P mAb BIOMARKER**  
Muehlbauer PA, Schuler MJ



## SUNDAY, APRIL 28, 2002

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### Abstract

- 10:15 AM 41 **FLOW CYTOMETRIC TECHNIQUE FOR MEASURING CYTOGENETIC DAMAGE IN HUMAN PERIPHERAL BLOOD SAMPLES**  
Dertinger SD, Torous DK, Hall NE, Murante FG, Gleason SE, Tometsko CR
- 10:30 – 11:00AM **Coffee Break** Promenade
- 11:00 AM 127 **Study OF GENOTOXICITY ASSOCIATED WITH CYP450 ISOZYME INDUCTION DUE TO LIVER INFECTION**  
Montero RD, Serrano L, Dávila VM, Plancarte A
- 11:15 AM 17 **DNA ADDUCT IN NASAL MUCOSA: A NEW MARKER IN HUMAN STUDIES ON AIRBORNE CARCINOGENS**  
Bonassi S, Peluso M, Neri M, Munnia A, Taioli E, Garte S, Buratti M
- 11:30 AM 35 **DETECTION OF RANDOM MUTATIONS *IN SITU***  
Davidson JF, Loeb LA, Heddle JA
- 11:45 AM 194 **FRAMESHIFT MUTATION DETECTED *IN SITU* IN TUMORS**  
Stringer JR, Hersh MN, Stringer SL
- 12:00 Noon **The Fanconi Anaemia Protein FANCD2 Associates with Damaged DNA *In Vivo***  
Meyn MS, Wang W
- 12:15 PM 237 **CYTOTOXICITY MEASUREMENTS IN GENETIC TOXICOLOGY ASSAYS: FURTHER EVALUATION**  
Summary Snyder RD

**SUNDAY, APRIL 28, 2002**

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1:30 PM – 5:30 PM

**Exhibits Open and Posters**  
**Exposure, Detection, and Toxicity**  
Aleutian Room

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1:30 PM – 5:30 PM

**Symposium**  
Alaska Room

**Epithelial Genetic Instability: News from Where it Matters**

*Chairs: Richard J. Albertini, University of Vermont*

*Raymond Monnat, University of Washington*

1:30 PM – 2:00 PM

**Introduction**

Richard J. Albertini, University of Vermont

2:00 PM – 2:30 PM

**Epithelial Mutagenesis in Human Kidney: What's the 'Take Home'?**

Raymond Monnat, University of Washington

2:30 PM – 3:00 PM

**Phylogeny of Cancer**

Darryl Shibata, University of Southern California

3:00 PM – 3:30 PM

**Chromosomal Instability and Telomere Shortening in Early Gastrointestinal Tumors**

Peter Rabinovitch, University of Washington

3:30 PM – 4:00 PM

**Coffee Break** Aleutian Room

4:00 PM – 4:30 PM

**Genomic Instability Secondary to Infection**

Thomas A. Albrecht, UTMB Galveston

## **SUNDAY, APRIL 28, 2002**

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4:30 PM – 5:00 PM

### **Human Mutation Load Assay (HMLA) Using the p53 Gene of Single Cells from Paraffin-Embedded Human Tissues**

Steve S. Sommer, City of Hope

5:00 PM – 5:30PM

### **DNA Polymerase I, an Enzyme that Can Preferentially Replicate Depurinated DNA**

Ulrich Hübscher, University of Zürich

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7:00 PM – 8:00 PM

### **Keynote Lecture**

Alaska Room

### **Mutations and Micronutrients**

*Bruce Ames*

*Children's Hospital Oakland Research Institute*

# SUNDAY, APRIL 28, 2002

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8:00 PM – 9:30 PM

## Exhibits Open

### Posters: Exposure, Detection, and Toxicity

(Posters Attended)

Aleutian Room

Poster	Abstract	
1	1	<b>COMPARISON OF GENE EXPRESSION PROFILE CHANGES INDUCED BY DIRECT-ACTING AND INDIRECT-ACTING GENOTOXINS IN MOUSE LYMPHOMA CELLS-COLLABORATIVE ILSI PROJECT</b> Aardema MJ, Hu T, Gibson DP, Torontali SM, Carr GJ, Tiesman JP
2	2	<b>COMBINED EFFECT OF <i>TYR113HIS</i> AND <i>HIS139ARG</i> POLYMORPHISMS IN THE MEH GENE ON HUMAN SENSITIVITY TO THE MUTAGENIC EFFECTS OF 1,3-BUTADIENE</b> Abdel-Rahman SZ, El-Zein RA, Ammenheuser MM, Yang Z, Ward JB
3	5	<b>EFFECTS OF CAROTENOID BIXIN ON DEVELOPMENT OF GST-P POSITIVE FOCI IN A MEDIUM-TERM RAT LIVER ASSAY</b> Agner AR, Scolastici C, Barbisan LF, Ribeiro LR, de Camargo JL, Salvadori DMF
4	12	<b>CELLULAR REPROGRAMMING IN F3 MICE WITH PATERNAL F0 RADIATION HISTORY</b> Baulch JE, Vance MM, Raabe OG, Overstreet JW
5	16	<b>DNA ADDUCT FORMATION BY BENZENE OXIDE</b> Bodell WJ, Dhanajaya N, Gaikwad N
6	19	<b>BIOMARKERS OF EXPOSURE TYPE AND DOSE</b> Brooks AL
7	23	<b>RAPID TURNOVER RATES OF CESIUM-137 AND STRONTIUM-90 IN MAMMALS</b> Chesser RK, Rodgers BE, Gaschak S, Bondarkov M

## SUNDAY, APRIL 28, 2002

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Poster	Abstract	
8	36	<b><i>IN VIVO</i> GENOTOXICITY OF HARD METAL DUST: INDUCTION OF MICRONUCLEI IN RAT TYPE II EPITHELIAL LUNG CELLS</b> De Boeck M, Hoet P, Lombaert N, Nemery B, Lison D, Kirsch-Volders M
9	40	<b>FRAGMENTATION OF P3-N5 PHOSPHOR-AMIDATEM-CONTAINING DNA FOR HIGH-THROUGHPUT MALDI-TOF ANALYSIS OF GENOMIC SEQUENCE POLYMORPHISMS</b> Denissenko MF, Smylie KJ, Shchepinov MS, Worl RJ, Leppin AL, Cantor CR, Rodi CP
10	46	<b>MICRONUCLEUS FREQUENCY AND PROLIFERATION IN HUMAN LYMPHOCYTES AFTER EXPOSURE TO HERBICIDE 2,4-DICHLOROPHENOXYACETIC ACID</b> Duramad P, Holland NT, Hubbard A, Smith MT
11	54	<b>FULLY AUTOMATED ROBOTIC IMAGE ANALYSIS FOR <i>IN VITRO</i> AND <i>IN VIVO</i> GENOTOXICITY TESTING</b> Frieauff W, Hartmann A, Elhajouji A, Suter W
12	60	<b>LITERATURE REVIEW OF THE GENO-TOXICITY OF RODENT SKIN CARCINOGENS—DESIGN OF APPROPRIATE SITE-OF-CONTACT GENOTOXICITY TESTING</b> Gibson DP, Aardema MJ
13	62	<b>INCLUSION OF A PREINCUBATION METHODOLOGY IN THE BACTERIAL MUTATION MINISCREEN TO INCREASE SENSITIVITY AND ELIMINATION OF MUTAGENIC COMPOUNDS AT THE PRE-CLINICAL STAGE</b> Gladnick NL, Lavoie DA, Piner JC, Snyder R
14	65	<b>COMET ASSAY: <i>IN VITRO</i> INCUBATION OF HEPATOCYTES WITH APHIDICOLIN IMPROVES THE DETECTION OF DNA BULKY ADDUCTS INDUCED <i>IN VIVO</i></b> Godard T, Hassoun S, Lossouarn Y, Brault D, Périn F, Sarasin A, Thybaud V

## SUNDAY, APRIL 28, 2002

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<b>Poster</b>	<b>Abstract</b>	
15	67	<b>DETECTING DOUBLE-STRAND BREAKS WITH THE NEUTRAL COMET ASSAY: NOT AS SIMPLE AS IT LOOKS</b> Gontijo AMMC, Muotri A, Menck CFM, Salvadori DMF, Günter S
16	73	<b>METHYLATION INACTIVATES PENTAVALENT ARSENIC SPECIES BUT ACTIVATES TRIVALENT ARSENIC SPECIES TO POTENT GENOTOXICANTS</b> Harrington-Brock K, Winkfield E, Mass MJ
17	76	<b>EVALUATION OF GENETIC TOXICITY OF PROTON PARTICLE RADIATION</b> He H, Rupa DS, Lin S, Merchant M, Bakke J, Orduna J, Chang PY
18	81	<b>GENE EXPRESSION ANALYSIS OF JP-8 EXPOSED RAT HEPATOCYTES</b> Jackman SM, Christensen AH, Fryxell KJ, Grant GM, Chandhoke V, Nath J
19	83	<b>THE LACK OF CLASTOGENICITY OF ANILINE HCL IN THE MOUSE BONE MARROW METAPHASE ASSAY</b> Jones E, Fox V, Elliott BM
20	90	<b>TESTS OF PARTICULATE NICKEL COMPOUNDS FOR GENOTOXICITY IN THE DROSOPHILA WING SPOT ASSAY</b> Katz AJ, Chiu A, Beaubier J, Shi X
21	95	<b>TRIVALENT ARSENICALS ARE MUCH MORE POTENT GENOTOXICANTS <i>IN VITRO</i> THAN THEIR PENTAVALENT COUNTERPARTS</b> Kligerman AD, Doer AH, Mass MJ, Tennant AH
22	96	<b>EVALUATION OF A TISSUE PREPARATION METHOD FOR MEASUREMENT OF DNA DAMAGE BY ALKALINE ELUTION IN GLANDULAR STOMACH OF RATS</b> Kraynak AR, Barnum JE, Allen HL, Clair JH, Storer RD

## SUNDAY, APRIL 28, 2002

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Poster	Abstract	
23	102	<b>PROBLEMS IN DETERMINING THE MUTAGENECITY OF 1,2-DICHLOROETHANE (EDC) IN <i>DROSOPHILA MELANOGASTER</i></b> Lee WR
24	120	<b>APPLICATION OF ALLELE SPECIFIC COMPETITIVE-BLOCKER PCR TO DETECT TWO RARE <i>K-RAS</i> CODON 12 BASE SUBSTITUTIONS AT A SENSITIVITY OF 10<sup>-5</sup></b> McKinzie PB, Parsons BL
25	122	<b>DNA DAMAGE AND MICRONUCLEUS INDUCTION IN HUMAN LEUKOCYTES AFTER ACUTE <i>IN VITRO</i> EXPOSURE TO A 1.9 GHZ CONTINUOUS WAVE (CW) RADIOFREQUENCY FIELD</b> McNamee JP, Bellier PV, Gajda GB, Thansandote A
26	124	<b>SODIUM ARSENITE-INDUCED OXIDATIVE DNA DAMAGE ON HUMAN CELLS</b> Mei N, Tamae K, Hirano T, Kasai H
27	125	<b>A LOW VOLUME, HIGH-THROUGHPUT FORWARD MUTATION ASSAY IN <i>SALMONELLA TYPHIMURIUM</i> BASED ON FLUOROURACIL RESISTANCE</b> Miller JE, Vlasakova K, Glaab WE, Skopek TR
28		<b>Withdrawn</b>
29	134	<b>DEPENDENCE OF <sup>14</sup>C-BENZO[A]PYRENE BINDING TO HUMAN PERIPHERAL BLOOD LYMPHOCYTE DNA ON HEAT-TREATMENT</b> Nath RG, Myhr B, Luo F-Q, Hall C, Furman G
30	136	<b>A MODIFIED FLUCTUATION AMES TEST SUITABLE FOR ROUTINE SCREENING</b> Noble C, Glaab WE, Skopek TR, Sina JF
31	138	<b>GENOTOXIC ACTIVATION OF TRP-P-1 AND TRP-P-2 IN <i>SALMONELLA TYPHIMURIUM</i> UMU TESTER STRAIN OY1001/POR EXPRESSING HUMAN NADPH-CYTOCHROME P450 REDUCTASE</b> Oda Y, Guengerich FP, Shimada T

## SUNDAY, APRIL 28, 2002

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Poster	Abstract	
32	139	<b>DETECTION OF PBTA-TYPE MUTAGENS IN EFFLUENTS FROM SEWAGE PLANTS AND RIVER WATER</b> Ohe T, Watanabe T, Nukaya H, Terao Y, Sawanishi H, Tada A, Wakabayashi K
33	160	<b>BIG BLUEâ AS AN ENVIRONMENTAL SENTINEL: EXPOSURE TO CHORNOBYL FALLOUT</b> Rodgers BE, Wickcliffe JK, Chesser RK, Gaschak S, Baker RJ
34	162	<b>THE COMET ASSAY: GENOTOXIC DAMAGE OR NUCLEAR FRAGMENTATION?</b> Rundell MS, Mehta P, Wagner ED, Plewa MP
35	172	<b>DEVELOPMENT AND APPLICATION OF ECOGENOMICS INDICATORS</b> Sandhu SS
36	178	<b><i>IN VITRO</i> COMET ASSAY UNDER HUMAN AND RAT LIVER S9 FRACTIONS</b> Sekihashi K, Sasaki YF, Matsumoto Y, Satoh T, Suzuki S
37	185	<b>CHEMICAL ANALYSIS OF REVERSE OSMOSIS MEMBRANE AND XAD RESIN ADSORPTION CONCENTRATES OF WATER DISINFECTED BY CHLORINATION OR OZONATION/CHLORINATION PROCESSES</b> Simmons JE, Richardson SD, Schenck KM, Speth TF, Miltner RJ, Thruston AD
38	211	<b>GENOTOXICITY OF INSOLUBLE NICKEL COMPOUNDS: PREDICTIONS OF CARCINOGENIC POTENTIALS</b> Verma R, Clemens F, Kaspin L, Landolph JR
39	212	<b>INDUCTION OF MICRONUCLEI IN THE BLOOD AND BONE MARROW CELLS OF MICE EXPOSED TO JET FUEL JP-8</b> Vijayalaxmi, Hyde J, Rowland S, Cameron IL, Witten ML
40	214	<b>GENOTOXIC SYNERGY BETWEEN DIETARY HETEROCYCLIC AROMATIC AMINES AND ORGANOPHOSPHORUS INSECTICIDES</b> Wagner ED, Marengo M, McMillan S, Plewa MJ



## SUNDAY, APRIL 28, 2002

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Poster	Abstract	
41	215	<b>SODIUM ARSENITE-INDUCED EXPRESSION OF BETA2 INTEGRIN IN HL60 CELLS</b> Wang TC
42	217	<b>INDUCTION OF HPRT MUTATIONS IN C57BL/6 MICE BY INHALATION EXPOSURE TO BUTADIENE</b> Ward JB, Hastings Smith DA, Barker PJ, Padgett JW, Ammenheuser MM
43	219	<b>COMPARISON OF BRDU, PCNA AND TOPO II ALPHA LABELING FOR USE IN MONITORING CHEMICAL INDUCED CHANGES IN CELL PROLIFERATION IN THE <i>IN VIVO</i> RAT SKIN MICRONUCLEUS ASSAY</b> Weiner SK, Krull DL, Schuler MJ
44	221	<b>GENOTOXICITY OF IRON CHELATORS FOR STUDING THE MECHANISMS OF MUTAGENICITY OF IRON COMPOUNDS</b> Whittaker P, Dunkel VC, Seifried HE, Clarke JJ, San RHC
45	223	<b>N-HYDROXYMETHYL ACRYLAMIDE INDUCES GENETIC DAMAGE IN GERM CELLS BUT NOT SOMATIC CELLS OF MICE</b> Witt KL, Hughes L, Burka LT, McFee A, Bishop JB
46	224	<b>A HIGHER THROUGHPUT MICROTITER PLATE METHOD FOR THE <i>IN VITRO</i> ALKALINE ELUTION/RAT HEPATOCYTE ASSAY</b> Wright-Bourque JL, Kraynak AR, Gealy R, Barnum JE, Donohue BA, Storer RD
47	234	<b>MUTAGENS IN SOIL</b> White PA, Claxton L
48	235	<b>FISH ANALYSIS OF CHROMOSOME BREAKAGE AS BIOMARKER OF GENOTOXICITY OF URBAN AIR POLLUTION</b> Beskid O, Binkova B, Rossner P, Sram RJ
49	236	<b>EVALUATION OF THE CLASTOGENIC, DNA INTERCALATIVE AND TOPOISOMERASE II-INTERACTIVE PROPERTIES OF BIOFLAVONOIDS IN CHINESE HAMSTER V79 CELLS</b> Snyder RD
50		<b>DIFFERENTIAL ENDOREDUPPLICATION (ER) INDUCTION BETWEEN CHO CELLS AND HUMAN PERIPHERAL LYMPHOCYTES: A CASE STUDY</b> Yu RL, Soelster SG, Bunch RT, Aaron CS

# MONDAY, APRIL 29, 2002

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7:30 AM – 5:00 PM

## **Registration**

Promenade

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7:00 AM – 8:30 AM

## **Breakfast Meetings**

Education and  
Student Membership Committee  
Aspen

Finance Committee  
Prince William Board Room

Future Meetings Committee  
Prudhoe Bay Room

Public Relations  
and Communications Committee  
Cook Inlet Board Room

Student Breakfast Meeting:  
*Professional Survival Skills*  
Chart Room

# MONDAY, APRIL 29, 2002

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8:30 AM – 12:30 PM

## **Symposium** Alaska Room

### **Genetic Diversity and Disease**

*Chairs: JunJian Chen, US FDA,  
National Center for Toxicological Research  
Martyn Smith, University of California–Berkeley*

8:30 AM – 9:00 AM

#### **Introduction**

Fred F. Kadlubar, US FDA, National Center for Toxicological Research

9:00 AM – 9:30 AM

#### **SNPing in the Human Genome**

Debbie Nickerson, University of Washington

9:30 AM – 10:00 AM

#### **Genetic Architecture and Molecular Mutagenesis of the Human Mitochondrial Genome**

Junjian Chen, US FDA, National Center for Toxicological Research

10:00 AM – 10:30 AM

#### **Variations in DNA Repair are Extensive and Relevant to Individual Cancer Risks**

Harvey Mohrenweiser, Lawrence Livermore National Laboratory

10:30 AM – 11:00 AM

**Coffee Break** Promenade

11:00 AM – 11:30 AM

#### **Gene Environmental Interactions in Breast and Colorectal Cancer**

David Hunter, Harvard University

11:30 AM – 12:00 Noon

#### **Gene Environmental Interactions in Leukemia**

Martyn Smith, University of California–Berkeley

# MONDAY, APRIL 29, 2002

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8:30 AM – 12:00 PM

## Selected Platform Talks

Bristol Bay Ballroom

### DNA Damage and Repair

*Chairs: Bea Singer, University of California–Berkeley  
William Bodell, University of California–San Francisco*

- 8:30 AM                      **Introduction**    Bea Singer
- Abstract**
- 9:00 AM    **97**                      **THE FIDELITY OF Y FAMILY DNA POLYMERASES: FUNCTIONAL AND MECHANISTIC IMPLICATIONS**  
Kunkel TA
- 9:15 AM    **88**                      **THE PARTICIPATION OF EUKARYOTIC POLYNUCLEOTIDE KINASES IN DNA STRAND BREAKS REPAIR**  
Karimi-Busheri F, Whitehouse C, Caldecott K, Meijer M, Huang T, Young D, Weinfeld M
- 9:30 AM    **181**                      **HUMAN APURINIC/APYRIMIDINIC ENDONUCLEASE FOR THE ASSESSMENT OF BIOLOGICAL FUNCTIONS**  
Shen JC, Loeb LA
- 9:45 AM    **149**                      **IDENTIFICATION OF A NOVEL PROTEIN - PROTEIN INTERACTION BETWEEN TWO MULTI-FUNCTIONAL HUMAN DNA REPAIR PROTEINS, XERODERMA PIGMENTOSUM-G AND POLY(ADP-RIBOSE) POLYMERASE**  
Pluth JM, Davalos AR, Campisi J, Cooper PK

# MONDAY, APRIL 29, 2002

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## Abstract

- 10:00 AM 9 **AP ENDONUCLEASE, PARP AND XRCC1 PROTEINS INTERACT WITH A TRUNCATED DNA POLYMERASE  $\beta$ , A DNA REPAIR PROTEIN**  
Banerjee S, Bhattacharyya N
- 10:15 AM 117 **ANALYSIS OF GENETIC CHANGES INVOLVED IN CARCINOGEN-INDUCED MALIGNANT TRANSFORMATION OF A HUMAN FIBROBLAST CELL STRAIN IN CULTURE**  
McCormick JJ, Battle MA, O'Reilly S, Boley SE, Zhang J, Maher VM
- 10:30 AM – 11:00 AM **Coffee Break, Promenade**
- 11:00 AM 100 **CHARACTERIZATION OF CANCER-ASSOCIATED DNA POLYMERASE BETA MUTANTS**  
Lang T, Starcevic D, Lomos-Gross A, Glazer PM, Sweasy JB
- 11:15 AM 156 **IDENTIFICATION OF A SUBSET OF TYPE II I-COMPOUNDS AS DINUCLEOTIDES CONTAINING 8,5'-CYCLO-2'-DEOXY-ADENOSINE**  
Randerath K, Zhou GD, Somers RL, Robbins JH, Brooks PJ
- 11:30 AM 71 **HOT SPOTS FOR CHROMOSOMAL INSTABILITY IN HUMAN CELLS**  
Grosovsky AJ, Allen R, Ritter L, Moore S

**Summary** Bill Bodell

**MONDAY, APRIL 29, 2002**

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12:15 PM – 1:30 PM

**Business Meeting  
and Student Achievement Awards**

Spruce

*Boxed Lunches Provided*

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1:30 PM – 5:30 PM

**Exhibits Open**

**Posters: DNA Damage and Repair**

Aleutian Room

# MONDAY, APRIL 29, 2002

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1:30 PM – 5:30 PM

**Symposium**  
Alaska Room

## **Double-Stranded Breaks: The Ultimate End Game**

*Chairs: Mike Resnick, National Institute of Environmental Health Sciences*

*Larry Thompson, Lawrence Livermore National Laboratory*

1:30 PM – 2:00 PM

### **Double-Strand Breaks: The Ends Justify the Means**

Mike Resnick, National Institute of Environmental Health Sciences

2:00 PM – 2:30 PM

### **Homologous Recombination and Genomic Integrity in Mammalian Cells**

Maria Jasin, Sloan-Kettering

2:30 PM – 3:00 PM

### **The Role of RAD51 Paralogs in Homologous Recombinational Repair**

Larry Thompson, Lawrence Livermore National Laboratory

3:00 PM – 3:30 PM

### **Arrested Replication as a Source for DNA Strand Breaks**

Jim Cleaver, University of California–San Francisco

3:30 PM – 4:00 PM    **Coffee Break**            Aleutian Room

4:00 PM – 4:30 PM

### **Functions of RAD52 Group Proteins in Recombination and DNA Repair**

Patrick Sung, University of San Antonio

4:30 PM – 5:00 PM

### **Dynamic Interactions Between RAD52 Group Proteins in Living Cells**

Roland Kanaar, Erasmus University, The Netherlands

5:00 PM – 5:30 PM

### **Protein Interactions in Recombinational Repair in Human Cells**

David Schild, Lawrence Berkeley National Laboratory

**MONDAY, APRIL 29, 2002**

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7:00 PM – 8:00 PM

**Keynote Lecture**  
Alaska Room

**Genomic Views of Human History**

*Mary-Claire King*  
*University of Washington*



## **BIORELIANCE AD**

# MONDAY, APRIL 29, 2002

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8:00 PM – 9:30 PM

## Exhibits

### Posters: DNA Damage and Repair

(Posters Attended)

Aleutian Room

Poster	Abstract	
1	3	<b>POLYMORPHISMS IN THE DNA REPAIR GENE XRCC1 AND SUSCEPTIBILITY TO ALCOHOLIC LIVER CIRRHOSIS IN OLDER SOUTH-EASTERN BRAZILIANS</b> Abdel-Rahman SZ, Rossit AR, Cabral IR, Hackel C, da Silva RMA, Conforti-Froes NDT
2	4	<b>GLUTATHIONE S-TRANSFERASE POLYMORPHISMS IN GASTRIC CANCER IN TWO COLOMBIAN POPULATIONS</b> Acosta CP, Rodriguez XB, Torres MM, Salej J, Groot de Restrepo H
3	6	<b>SCREENING A MUTANT TAQ LIBRARY FOR ENZYMES WITH THE ABILITY TO INCORPORATE FLUORESCENTLY LABELED NUCLEOTIDES</b> Anderson JP, Glick E, Angerer B, Rigler R, Loeb LA
4	13	<b>DNA MISMATCH REPAIR PROTEIN INTERACTIONS WITHIN HUMAN NUCLEAR EXTRACTS</b> Bembenek NI, Williams KJ
5	22	<b>MITOCHONDRIAL DNA MUTATIONS IN PROSTATE CANCER AND ITS PRECURSOR LESIONS: A LASER CAPTURE MICRODISSECTION BASED APPROACH</b> Chen JZ, Mukunyadzi P, Gokden N, Greene G, Lang NP, Kadlubar FF
6	30	<b>ROLE OF TOPOISOMERASES IN THE REPAIR OF UV-INDUCED DNA DAMAGE IN <i>SACCHAROMYCES CEREVISIAE</i></b> Cline SD, Hanawalt PC

## MONDAY, APRIL 29, 2002

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Poster	Abstract	
7	31	<b>TRANSCRIPTIONAL PROFILING OF THE RADIOADAPTIVE RESPONSE IN HUMAN LYMPHOBLASTOID CELL LINES</b> Coleman MA, Yin E, Peterson LE, Sorensen K, Tucker JD, Wyrobek AJ
8	38	<b>SYNAPSIS OF DNA ENDS BY THE DNA-DEPENDENT PROTEIN KINASE</b> DeFazio LG, Stansel R, Griffith JD, Chu G
9	45	<b>HPRT AND TK MUTATION FREQUENCIES AND BONE MARROW MICRONUCLEUS FREQUENCY IN PMS2 MISMATCH REPAIR DEFICIENT MICE</b> Dobrovolsky VN, McKinzie PB, Shaddock JG, Mittelstaedt RA, Heflich RH, Parsons BL
10	50	<b>RADIOMIMETIC AGENTS ENHANCE THE FREQUENCY OF HOMOLGY-DIRECTED TRANSLOCATIONS IN <i>SACCHAROMYCES CEREVISIAE</i> <i>RAD9</i> CHECKPOINT AND KU70 MUTANTS</b> Fasullo MT
11	59	<b>ANALYSIS OF <i>IN VITRO</i> AND <i>IN VIVO</i> DNA STRAND BREAKS INDUCED BY TRIHALOMETHANES (THMS)</b> Geter D, Chang L, Granville C, George M, DeAngelo T
12	69	<b>DENSELY LOCATED DNA DAMAGE CAUSED A DELAY IN CELL-CYCLE PROGRESSION IN HUMAN LYMPHOBLASTOID CELLS</b> Goto S, Morimoto S, Tsukada T, Watanabe M, Hanaoka F, Yano Y, Yatagai F
13	77	<b>THE EFFECT OF DIETARY RESTRICTION WITHIN VARIOUS STAGES OF DEVELOPMENT AND GROWTH ON SENSITIVITY TO N-ETHYL-N-NITROSOUREA (ENU)</b> Hernandez LG, Heddle JA
14	80	<b>REPAIR OF DNA DOUBLE STRAND BREAKS IN HUMAN CELLS INDUCED BY RESTRICTION ENZYME I-SCEI</b> Honma M, Wang W, Sakuraba M, Tadokoro S, Izumi M, Yatagai F, Hayashi M

## MONDAY, APRIL 29, 2002

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Poster	Abstract	
15	84	<b>ARREST OF RNA POLYMERASES AT PROXIMALLY LOCATED, SITE-SPECIFIC DNA LESIONS</b> Kalogeraki VS, Hanawalt PC
16	85	<b>A NOVEL PROTEIN FROM <i>E. COLI</i> THAT PROTECTS FROM THE DNA DAMAGING AGENT N-METHYL-N'-NITRO-N-NITRO-SOGUANIDINE</b> Kanugula S, Pegg AE
17	98	<b>PROTEIN-PROTEIN INTERACTIONS OF THE HUMAN NER FACTORS HHR23A AND HHR23B</b> Lai YT, Wang T, Wu LC, Huang W
18	103	<b>CONSEQUENCES OF REPLICATION ARREST IN MAMMALIAN CELLS</b> Limoli CL
19	105	<b>ROLE OF XRCC2 IN HOMOLOGOUS RECOMBINATIONAL REPAIR</b> Liu N
20	126	<b>EFFECT OF HYDROXYUREA AND CATALASE ON CHROMOSOMAL DAMAGE AND G2 ARREST IN FANCONI ANEMIA LYMPHOBLASTS FROM GROUPS FA-A, FA-B, FA-C, FA-D1 AND FA-E</b> Molina B, Ortiz R, Gomez L, Legarreta L, Velasco ML, Carnevale A, Frias S
21	129	<b>DNA-PK CATALYTIC SUBUNIT IS AN ACTIVATING FACTOR OF KU-ASSOCIATED EXONUCLEASE ACTIVITY</b> Morozov V
22	133	<b>APPLICATION OF DNA MICROARRAY TO ANALYSIS OF EXPRESSION PROFILE AFTER UVC IRRADIATION TO HUMAN MONONUCLEAR CELLS IN BLOOD</b> Nakashima H, Eitaki Y, Sano Y, Nishiwaki Y, Takebayashi T, Kamakura M, Omae K

## MONDAY, APRIL 29, 2002

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Poster	Abstract	
23	140	<b>SITE DIFFERENCE OF SENSITIVITY TO COMET ASSAY IN RAT LIVER AND STOMACH</b> Ohsawa K ,Sugiura M, Nakagawa S, Sasaki YF, Kimura M
24	145	<b>GENOTOXICITY PROFILES OF COMMON ALKYL HALIDES AND ALKYL ESTERS</b> Osowski JJ, Ackerman JI, Reagan JK, Hlavacova A, Masucci ME, Ku WW, Aubrecht J
25	152	<b>FUNCTIONAL ANALYSIS OF PUTATIVE REGULATORY ELEMENTS IN THE REGULATION OF CHINESE HAMSTER APURINIC/APYRIMIDINIC ENDONUCLEASE GENE (CHPE1)</b> Purohit S, Arenaz P
26	157	<b>THE ROLE OF MMR IN THE RESPONSE OF HUMAN CELLS TO Phip TREATMENT</b> Rebetez M, Duc R, Morgenthaler-Leong PM
27	158	<b>PREDICTING CANCER RISK AND TREATMENT TOXICITY BY MICROARRAY ANALYSIS OF TRANSCRIPTIONAL RESPONSES TO DNA DAMAGE</b> Rieger KR, Tusher VG, Hong W, Tang J, Tibshirani R, Chu G
28	163	<b>IDENTIFICATION OF VARIANTS IN CKN1, CDKN1A AND NTHL1 CDNA USING HETEROZYGOUS SEQUENCING PROTOCOL</b> Ruttan CC, Yurkowski SL, Glickman BW
29	164	<b>BIFUNCTIONAL CHEMICALS AND DNA-DNA CROSS-LINK FORMATION</b> Rynö M, Harju U, Koivisto P, Tornaesus J, Hesso A, Peltonen K
30	167	<b>USING XPD GENE KNOCKOUT TO CONSTRUCT CHO CELLS THAT MIMIC CELLS FROM HUMAN UV-SENSITIVE DISORDERS</b> Salazar EP, Tebbs RS, Thompson LH

## MONDAY, APRIL 29, 2002

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Poster	Abstract	
31	168	<b>1,3-BUTADIENE AND ITS METABOLITES-INDUCED DNA DAMAGE IN HUMAN AND MOUSE CELLS</b> Salazar JJ, Ballinger SW, Postlethwait EM, Albrecht TB, Ward JB, Lloyd RS
32	171	<b>LACI TRANSGENE MUTAGENESIS IN MGMT-DEFICIENT MURINE TISSUES</b> Sandercock LE, Mark SC, Luchman HA, Samson LD, Jirik FR
33	177	<b>CO-INDUCIBLE EXPRESSION OF GENES IN A MISMATCH REPAIR DEFICIENT CELL LINE THAT IS EPIGENETICALLY SILENCED FOR HMLH1 EXPRESSION</b> Sedwick WD, Leahy P, Strickfaden S, Veigl ML
34	184	<b>APURINIC/APYRIMIDINIC ENDONUCLEASE ACTIVITY IN THE TEMPORAL LOBE OF PATIENTS WITH EARLY ONSET TEMPORAL LOBE EPILEPSY</b> Silber J, Bobola MS, Eraker D, Ojemann G, Berger M
35	191	<b>POLY(ADP-RIBOSE) POLYMERASE AND DNA DAMAGE-DEPENDENT GENE REGULATION</b> Soldatenkov VA, Chasovskikh S, Trofimova I, Potaman VN, Smulson M, Dritschilo A
36	193	<b>UV-SENSITIVE SYNDROME CELLS ARE DEFECTIVE IN TRANSCRIPTION-COUPLED REPAIR OF UV-INDUCED CYCLOBUTANE PYRIMIDINE DIMERS</b> Spivak G, Itoh T, Yamaizumi M, Hanawalt PC
37	195	<b>FUNCTIONAL INTERACTION BETWEEN KU PROTEIN AND DNA IN TUMOR TISSUES</b> Stronati L, Lamberti C, Gensabella G, Donninelli D, Tirindelli Danesi D
38	198	<b>P53 BINDS AND ACTIVATES THE XERODERMA PIGMENTOSUM P48 GENE IN HUMANS BUT NOT MICE</b> Tan T, Purcell T, Chu G

## MONDAY, APRIL 29, 2002

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Poster	Abstract	
39	201	<b>RESCUE OF THE MOUSE XRCC1 KNOCKOUT PHENOTYPE BY TRANSGENE COMPLEMENTATION</b> Tebbs RS, Estrella CE, Cleaver JE, Thompson LH
40	206	<b>THE DIRECT AND INDIRECT EFFECTS OF COCKAYNE SYNDROME GROUP B GENE IN BASE EXCISION REPAIR OF 8-HYDROXYGUANINE IN DNA</b> Tuo J, Chen C, Bohr V
41	208	<b>THE EFFECT OF P21<sup>WAF/CIP1</sup> ON PROLIFERATION, APOPTOSIS, DNA ADDUCT FORMATION AND DNA REPAIR IN MOUSE KERATINOCYTES EXPOSED TO CIS-DIAMMINEDICHLOROPLATINUM-II (CDDP)</b> van Gijssel HE, Weinberg WC, Divi RL, Olivero OA, Poirier MC
42	209	<b>TOXICITY OF 5-FLUORO-2-DEOXYCYTIDINE IN HMLH1 SILENCED COLON CANCER CELLS OCCURS COINCIDENT WITH INDUCED EXPRESSION OF HMLH1</b> Veigl ML, Boothman DA, Strickfaden S, Polinkovsky A, Sedwick WD
43	216	<b>CELL CYCLE DEPENDENCY OF THE DNA-DAMAGING EFFECTS OF THE TOPOISOMERASE II INHIBITORS, MERBARONE AND ETOPOSIDE</b> Wang L, Roy SK, Eastmond DA
44	225	<b>A COMPARITIVE STUDY OF DNA POLYMERASES KAPPA AND ALPHA-PRIMASE AT MICRO-SATELLITE SEQUENCES</b> Wylie KM, Hile SE, Eckert KA
45	226	<b>ROLE OF MISMATCH REPAIR PROTEINS IN SIGNALING P53 AND APOPTOSIS BY BLOCKING TRANSCRIPTION</b> Yanamadala S, Ljungman M

## MONDAY, APRIL 29, 2002

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Poster	Abstract	
46	232	<b>WHY DIDN'T THE HUMAN INTERVENTION STUDIES TELL US THAT DIETARY FIBRE PROTECTS AGAINST CANCER?</b> Ferguson L
47	233	<b>FURTHER CHARACTERIZATION OF AN EPITHELIAL CELL LINE FROM MUTA™ MOUSE</b> White PA, Douglas GR, Gingerich J, Soper L, Parfett C, Yu T, Seligy V
48	239	<b>NATURAL DNA POLYMERASE <math>\lambda</math>, AN ENZYME THAT CAN PREFERENTIALLY REPLICATE DEPURINATED DNA</b> Ramadan K, Shevelev, Maga G, Hübscher U
49	240	<b>DNA DAMAGE REPAIR-MEDIATED TRANSLOCATION IN KU/P53-DEFICIENT PRO-B CELL LYMPHOMAS</b> Difilippantonio MJ, Petersen S, Chen HT, Nussenzweig A, Ried T
50		<b>NUCLEOSOME POSITIONING AND REGULATORY PROTEIN BINDING MODULATE NUCLEOTIDE EXCISION REPAIR ON THE TRANSCRIBED STRAND OF THE MET17 PROMOTOR OF <i>SACCHAROMYCES CEREVISIAE</i></b> Powell N, Ferreiro J, Karabetsou N, Mellor J, Waters R

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**covance AD**

## TUESDAY, APRIL 30, 2002

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7:00 AM – 8:30 AM

### **Breakfast Meetings**

DNA Repair Group  
Katmai Room

Exhibitors' Breakfast  
Prince William Board Room

Molecular Epidemiology Group  
Dillingham Room

Risk Assessment Group  
Cook Inlet Board Room

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8:30 AM – 6:00 PM

### **High-Speed Catamaran Glacier Tour**

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7:00 PM – 10:00 PM

**Banquet Dinner: Hilton Hotel**  
Alaska Ballroom

EMS and Hollaender Awards

Speaker  
Carl Hild: The Alaskan Wilderness

# WEDNESDAY, MAY 1, 2002

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7:30 AM – 5:00 PM

**Registration**  
Promenade

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7:00 AM – 8:30 AM

## **Breakfast Meetings**

Awards and Honors Committee  
Prudhoe Bay Room

Germ-Cell/Stem Cells/  
Human Genetics Group  
Birch

Membership and Professional  
Development Committee  
Willow

Organization Committee  
Cook Inlet Board Room

Student New Investigator Committee  
Fireweed Room

**WEDNESDAY, MAY 1, 2002**

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8:30 AM – 12:30 PM

**Symposium**  
Alaska Room

**Complex DNA Lesions: Repair and Mutagenesis**

*Chairs: Peter Glazer, Yale University*

*Robb Moses, Oregon Health Sciences University*

8:30 AM – 9:00 AM

**Mutagenesis and Recombination Induced by DNA Triple Helix Formation**

Peter Glazer, Yale University

9:00 AM – 9:30 AM

**Unusual DNA Conformations are Mutagenic: Implications for Hereditary Neurological Diseases and Polycystic Kidney Disease**

Robert Wells, Texas A&M University

9:30 AM – 10:00 AM

**CAG Expansion in Human Disease is Caused by Stabilization of Hairpins with a Mismatch Repair Complex During Gap Repair**

Cynthia McMurray, Mayo Clinic

10:00 AM – 10:30 AM

**Fanconi Anemia Gene Function in Repair of Interstrand Crosslinks**

Robb Moses, Oregon Health and Science University

10:30 AM – 11:00 AM **Coffee Break** Promenade

11:00 AM – 11:30 AM

**Recognition and Processing of Interstrand Cross-Links in Mammalian Cells**

Randy Legerski, MD Anderson

11:30 AM – 12:00 Noon

**Break-and-Repair Pathways of Immunoglobulin Gene Switch Recombination and Somatic Hypermutation**

Nancy Maizels, University of Washington

12:00 Noon – 12:30 PM

**ADP-Ribosylation of DNA by Pierisin, an Apoptogenic Peptide from Cabbage Butterfly**

Takashi Sugimura, National Cancer Institute, Japan

# WEDNESDAY, MAY 1, 2002

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9:00 AM – 12:30 PM

## Selected Platform Talks Bristol Bay Ballroom

### Health Effects and Epidemiology

*Chairs: Curt Harris, National Institutes of Health*

*Miriam Poirier, National Institutes of Health*

#### Abstract

- 9:00 AM 179 **EFFECTS OF THE ANTI-MUTAGENS VANILLIN AND CINNA-MALDEHYDE ON SPONTANEOUS MUTATION IN *E. COLI LACI* STRAINS AND ON GLOBAL GENE EXPRESSION IN SALMONELLA TA104 AND HUMAN HEPG2 CELLS**  
Shaughnessy DT, DeMarini DM
- 9:15 AM 68 **FIRST TRIMESTER OF PREGNANCY EXPOSURE TO TOBACCO SMOKE AND RISK OF CHILDHOOD CNS TUMORS: A META-ANALYSIS**  
Gontijo AMMC, Einarson TR
- 9:30 AM 47 **MATERNAL EXPOSURES TO GLYCOL ETHERS: CLINICAL AND CYTOGENETIC FINDINGS**  
El-Zein RA, Abdel-Rahman SZ, Morris DL, Legator MS
- 9:45 AM 56 **EFFECT OF INDIVIDUAL GLUTATHIONE S-TRANSFERASE GSTM1, GSTT1 AND GSTP1 POLYMORPHISMS ON THE GENOTOXICITY OF HYDROQUINONE**  
Gaspar J, Silva MC, Faber A, Rueff J

## WEDNESDAY, MAY 1, 2002

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### Abstract

- 10:00 AM    **32**    **GENETIC POLYMORPHISM OF GLUTATHIONE S-TRANSFERASE (GST) A1 THAT PREDICTS LOW HEPATIC EXPRESSION OF GSTA1 IS ASSOCIATED WITH INCREASED SURVIVAL OF BREAST CANCER FOLLOWING CYCLOPHOSPHAMIDE CHEMOTHERAPY**  
Coles B, Joseph L, Sweeney C, Stone A, Fares M, Hutchins L, Ambrosone C
- 10:15 AM       **DEVELOPMENTAL PATTERN OF O6-METHYLGUANINE-DNA METHYLTRANSFERASE ACTIVITY IN HUMAN BRAIN AND IMPLICATIONS FOR NEUROCARCINOGENESIS**  
Silber J, Bobola MS, Blank A
- 10:30 AM – 11:00 AM    **Coffee Break**, Promenade
- 11:00 AM    **21**    **MUTANT FREQUENCIES AND SPECTRA OF MUTATIONS IN THE LIVER LACI AND CII GENES OF LAMBDA/LACI TRANSGENIC MICE TREATED AS NEONATES WITH 4-AMINOBIPHENYL**  
Chen T, Mittelstaedt RA, Heflich RH, Moore MM, Parsons BL
- 11:15 AM    **28**    **RESIDUAL MUTAGENICITY OF THE ALASKAN OIL SPILL ORGANICS**  
Claxton LD, Warren S, Kremer F, Short JW
- 11:30 AM    **218**    **TOXICOGENOMICS AND THE CHEMICAL EFFECTS IN BIOLOGICAL SYSTEMS (CEBS) KNOWLEDGE BASE**  
Waters MD, Tennant RW and the staff of the NTC

## WEDNESDAY, MAY 1, 2002

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### Abstract

- 11:45 AM 78 **SPONTANEOUS TANDEM-BASE MUTATIONS SHOW TISSUE SPECIFIC FREQUENCIES, ACCUMULATE WITH AGE AND OCCUR PREFERENTIALLY AS G:C TO T:A AND GG TO TT MUTATIONS AT SPECIFIC SITES**  
Hill K, Wang J, Halangoda A, Sommer S
- 12:00 Noon 7 **PERSISTENT BIOLOGICAL EFFECTS FROM EXPOSURE TO ENVIRONMENTAL MUTAGENS**  
Au WW
- 12:15 PM 25 **PREDICTING TREATMENT TOXICITY IN CANCER PATIENTS FROM MICRO-ARRAYS**  
Chu G, Tusher VG, Rieger K, Hong WJ, Tang J, Tibshirani R
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1:30 PM – 5:30 PM

### Exhibits

**Posters: Health Effects and Epidemiology**

Aleutian Room

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**WEDNESDAY, MAY 1, 2002**

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1:30 PM – 5:30 PM

**Symposium**  
Alaska Room

**When Polymerases are Arrested,  
Who is at Fault, and What are the Options?**

*Chairs: Joann Sweasy, Yale University  
Phil Hanawalt, Stanford University*

1:30 PM – 2:00 PM

**Introduction** - Phil Hanawalt, Stanford University

2:00 PM – 2:30 PM

**Amino Acid Residues Distant from the Active Site Govern Fidelity in  
DNA Polymerase Beta**

Joann Sweasy, Yale University

2:30 PM – 3:00 PM

**Crystal Structure of a Lesion Bypass Polymerase: Implications for  
Fidelity and Processivity**

Janice Pata, Yale University

3:00 PM – 3:30 PM

**Why Do Polymerases Pause and Misincorporate at 0<sup>6</sup>-alkyl G:  
Kinetic Analysis with Replicative Polymerases?**

Fred Guengerich, Vanderbilt University

3:30 PM – 4:00 PM    **Coffee Break**    Aleutian Room

4:00 PM – 4:30 PM

**Endogenous DNA Damage and Mutagenesis: Role of Polymerase and  
the 3' to 5' Exonuclease in Mutations; Avoidance and DNA Synthesis**

Kristin Eckert, Pennsylvania State University



**WEDNESDAY, MAY 1, 2002**

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4:30 PM – 5:00 PM

**Human DNA Polymerase ETA (XPV): Interactions with Damaged DNA and Other Protein Factors**

Fumio Hanaoka, Osaka University, Japan

5:00 PM – 5:30 PM

**RNA Polymerase Behavior at Lesion Sites in DNA: Implications for Transcription Coupled DNA Repair**

Silvia Tornaletti, Stanford University

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**WEDNESDAY, MAY 1, 2002**

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7:00 PM – 8:00 PM

**Keynote Lecture**

Alaska Room

**Viral Quasispecies and Error Threshold**

*Manfred Eigen*  
*Max-Planck Institut*

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**SRI AD**

# WEDNESDAY, MAY 1, 2002

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8:00 PM – 9:30 PM

## Posters

### Health Effects and Epidemiology

(Posters Attended)

Aleutian Room

Poster	Abstract	
1	15	<b>SOMATIC MUTATION FREQUENCIES IN TRANSGENIC BIG BLUE MICE EXPOSED TO CHORNOBYL RADIATION</b> Bickham AM, Wickliffe JK, Rodgers BE, Chesser RK, Gaschak S, Baker RJ
2	20	<b>MUTAGENICITY MONITORING OF URBAN AIR PARTICLES PM10 IN THE CZECH REPUBLIC</b> Cerna M, Pastorkova A, Smid J, Binkova B
3	27	<b>RE-EVALUATION OF MOUSE LYMPHOMA L5178Y TK+/- MUTATION ASSAY DATA USING CRITERIA FROM A CONSENSUS AGREEMENT</b> Clarke JJ, San RHC, Seifried HE, Dunkel VC, Whittaker P
4	42	<b>VARIABILITY IN FILTER ARRAY DATA</b> Dial SL, Velasco C, Moore MM, Harris AJ
5	44	<b>MITOCHONDRIAL DAMAGE IN UMBILICAL CORD AND CORD BLOOD LYMPHOCYTES OF INFANTS EXPOSED IN UTERO TO ZIDOVUDINE (AZT) AND LAMIVUDINE (3TC)</b> Divi RL, Walker VE, Gerschenson M, Nakashima K, Wade N, O'Neill JP, Poirier MC
6	52	<b>FREQUENT P53 ONCOGENIC SINGLE BASE MUTATIONS IN THE PRECANCEROUS VULVAR LESION LICHEN SCLEROSUS</b> Feng JT, Tapp RA, Carlson JA, Wilson VL
7	55	<b>MUTATIONS IN THE K-RAS GENE IN LUNG CARCINOMAS FROM NONSMOKING WOMEN EXPOSED TO COAL COMBUSTION IN CHINA</b> Gao WM, Keohavong P, Lan Q, Li XM, Roop BC, DeMarini DM, Mumford JL

## WEDNESDAY, MAY 1, 2002

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Poster	Abstract	
8	57	<b>CYP2E1 GENETIC POLYMORPHISM AND SQUAMOUS CELL CARCINOMA OF HEAD AND NECK IN BRAZIL</b> Gattás GJF, Siraque MS, Soares-Vieira JA, Kohler P, Curioni OA, Carvalho MB, Wünsch-Filho V
9	58	<b>GENETIC POLYMORPHISMS OF GSTM1 AND GSTT1 AND THE RISK OF HEAD AND NECK CANCER IN BRAZIL</b> Gattás GJF, Siraque MS, Soares-Vieira JA, Kohler P, Guarniero FB, Carvalho MB, Wünsch-Filho V
10	66	<b>DNA SINGLE STRAND BREAKS IN NASAL MUCOUS CELLS AND LEUKOCYTES OF CHARCOAL WORKERS IN BRAZIL</b> Gomes L, Kato M, Gattas GJF, Rego MAV
11	70	<b>GENOTOXICITY OF 1,3-DICHLOROPROPANE, 2,2-DICHLOROPROPANE, AND 1,1-DICHLOROPROPENE IN SALMONELLA, THE E. COLI PROPHAGE-INDUCTION ASSAY AND HUMAN HEPG2 CELLS</b> Granville CA, Warren SH, Huggins-Clark G, George SE, Claxton LD, DeMarini DM
12	82	<b>THE INVOLVEMENT OF P53 ALTERATIONS IN BARRETT'S OESOPHAGUS</b> Jenkins GJS, Griffiths AP, Parry JM, Baxter JN, Doak SH
13	92	<b>GLOBAL PROFILING OF METHYLATION STATUS IN LUNG CANCER TISSUES</b> Keshava N, Huffman D, Wu ZL, Ong T
14	93	<b>AGE-ASSOCIATED ACCUMULATION OF MUTATIONS IN MOUSE MITOCHONDRIAL DNA</b> Khaidakov M, Manjanatha MG, Heflich RH, Aidoo A
15	94	<b>STRAND BREAK REPAIR PHENOTYPE ASSAY: APPLICATION IN OCCUPATIONAL BIOMONITORING</b> Kirsch-Volders M, Vande Aka P, Emmery M, Touil N, De Boeck M

## WEDNESDAY, MAY 1, 2002

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Poster	Abstract	
16	99	<b>CRITICAL DETERMINANTS OF BASE-SUBSTITUTION MUTATION SPECTRA IN SMOKER LUNG TP53</b> Lake RS, Leverette RD
17	101	<b>CHEMOPREVENTIVE EFFECTS OF ALOE AND PROPOLIS IN SMOKERS</b> Lee KR, Lee BM
18	107	<b>XRCC1 GENOTYPE AND ITS FUNCTIONAL IMPLICATIONS IN DNA REPAIR CAPACITY AND PROSTATE CARCINOGENESIS</b> Lockett KL, Hall MC, Grossman L, Lohman K, Hu JJ
19	119	<b>ASSESSMENT OF DEPLETED URANIUM (DU) MUTAGENICITY AT THE HPRT LOCUS IN GULF WAR VETERANS</b> McDiarmid MA, Albertini RJ, Jacobson-Kram D, Sullivan LM, Gucer PW
20	135	<b>A NOVEL POLYMORPHISM IN HUMAN GLUTATHIONE S-TRANSFERASE A2 THAT AFFECTS THE CATALYTIC PROPERTIES OF THE ENZYME</b> Ning B, Wang C, Kadlubar F, Coles B
21	148	<b>BACTERIAL AND MAMMALIAN CELL CYTOTOXICITY AND GENOTOXICITY OF ORGANIC EXTRACTS OF DISINFECTED DRINKING WATER</b> Plewa MJ, Kargalioglu Y, Jazwierska P, Nelson R, Wagner ED
22	150	<b>RADIATION-INDUCED DNA DAMAGE AND REPAIR IN LYMPHOCYTES OF BREAST CANCER PATIENTS IN COMPARISON WITH ACUTE SKIN REACTIONS AFTER RADIATION THERAPY</b> Popanda O, Ebbeler R, Twardella D, Helmbold I, Schmezer P, Bartsch H, Chang-Claude J
23	151	<b>SEARCH FOR MUTATIONS IN GENES INVOLVED IN DNA REPLICATION FROM HUMAN SPORADIC COLORECTAL CANCERS AND COLON CANCER CELL LINES</b> Popanda O, Magdeburg R, Dai JC, Flohr T, Hagemüller E, Thielmann HW

## WEDNESDAY, MAY 1, 2002

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- | Poster | Abstract |  |
|--------|----------|--|
| 24     | 153      | <b>ABNORMAL LOCALIZATION OF THE SEQUENCE D13Z1/D21Z1 ON THE CENTROMERIC 22 REGION IN A FATHER OF A TRISOMIC 21 CHILD</b><br>Ramos S, Mújica M, Del Castillo V, Molina B, Frias S   |
| 25     | 154      | <b>THALIDOMIDE: A MUTAGEN AT LOW CONCENTRATION?</b><br>Ramos-Morales P, Muñoz-Moya JA, Muñoz-Hernández A, Rivas-Martínez H, Hernández-Bernal BR, Herrera-Bazán J   |
| 26     | 155      | <b>THE EFFECT OF TOBACCO SMOKE EXPOSURE DURING PREGNANCY ON CHROMOSOME DAMAGE IN MOTHERS AND THEIR NEWBORNS</b><br>Ramsey MJ, Bennett LM, Bigbee WL, Harger GF, Tucker JD  |
| 27     | 165      | <b>THIRTY-TWO YEARS OF EMS ANNUAL MEETINGS</b><br>Salamone MF, Von Halle ES, Wassom JC, Benz RD  |
| 28     | 166      | <b>ANEUPLOIDY IN LYMPHOCYTES FROM HODGKIN'S DISEASE PATIENTS TREATED WITH NITROGEN MUSTARD, ONCOVIN, PROCARBAZINE AND PREDNIZONE (MOPP) CHEMOTHERAPY</b><br>Salas C, Ordaz G, Molina B, Niembro A, Rivera-Luna R, Carnevale A, Frias S   |
| 29     | 169      | <b>ALU INSERTIONS AND HUMAN GENOMIC DIVERSITY</b><br>Salem AH, Roy-Engel AM, Carroll ML, Garber RK, Nguyen SV, Deininger PL, Batzer MA   |
| 30     | 170      | <b>ANEUPLOIDY FOR CHROMOSOMES X,Y,18,21 IN SPERM FROM TWO HODGKIN'S DISEASE PATIENTS TREATED PRE-PUBERALLY WITH NITROGEN MUSTARD, ONCOVIN, PROCARBAZINE AND PREDNIZONE (MOPP) CHEMOTHERAPY</b><br>Sanchez S, Ramos S, Molina B, Niembro A, Rivera-Luna R, Carnevale A, Frias S |

## WEDNESDAY, MAY 1, 2002

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- | Poster | Absrtact |   |
|--------|----------|---|
| 31     | 174      | <b>THE COMET ASSAY WITH EIGHT MOUSE ORGANS: RESULTS WITH 39 CURRENTLY USED FOOD ADDITIVES</b><br>Sasaki YF, Sekihashi K, Kawaguchi S, Iwama K, Tsuda S                                |
| 32     | 175      | <b>RECOVERY OF MUTAGENICITY FROM DISINFECTED WATER SAMPLES BY XAD RESIN ADSORPTION COMPARED TO REVERSE OSMOSIS</b><br>Schenck KM, Speth TF, Miltner RJ, Sivaganesan M, Simmons JE     |
| 33     | 176      | <b>FORMATION OF TAMOXIFEN-DNA ADDUCTS IN ORGANS OF MONKEYS DOSED ORALLY WITH TAMOXIFEN FOR 30 DAYS</b><br>Schild LJ, Divi RL, Poirier MC  |
| 34     | 180      | <b>NTP CENTER FOR THE EVALUATION OF RISKS TO HUMAN REPRODUCTION</b><br>Shelby MD, Jahnke GD, Iannucci AR, Moore JA  |
| 35     | 187      | <b>SEMEN QUALITY AND CHROMOSOMAL INTEGRITY OF SPERM DECREASES WITH AGE AMONG HEALTHY MEN</b><br>Sloter E, Eskenazi B, Nath J, Moore II D, Kidd S, Wyrobek AJ                          |
| 36     | 188      | <b>ASSOCIATION BETWEEN DIFFERENT TYPES OF CHROMOSOMAL ABERRATIONS IN HUMAN PERIPHERAL LYMPHOCYTES AND CANCER IN DIFFERENT LOCATIONS</b><br>Smerhovsky Z, Landa K, Rossner P, Juzova D |
| 37     | 189      | <b>CURRENT ISSUES FOR THE SAFETY EVALUATION OF GENE THERAPY</b><br>Smith CC, Lynch AM, Gooderham NJ   |
| 38     | 196      | <b>ANTIMUTAGENIC EFFECT MAY VARY AMONG <i>LENTINULA EDODES</i> (BERK) PEGLER DIFFERENT LINEAGES</b><br>Sugui MM, Lima PLA, Delmanto RD, Eira AF, Salvadori DMF, Ribeiro LR            |



## WEDNESDAY, MAY 1, 2002

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Poster	Abstract	
39	199	<b>POLYMORPHISMS IN SULT1A1 ARE ASSOCIATED WITH AROMATIC-DNA ADDUCTS AND BREAST CANCER RISK IN A MOLECULAR EPIDEMIOLOGIC CASE-CONTROL STUDY</b> Tang D, Cho S, Chen SQ, Rundle A, Phillips D, Perera FP
40	200	<b>SINGLE BASE INSTABILITY IN NORMAL HUMAN TISSUES</b> Tapp RA, Feng JT, Carlson JA, Wilson VL
41	202	<b>MICROARRAY-BASED GENOTYPING FOR INDIVIDUAL SUSCEPTIBILITY</b> Ruttan CC, Glickman BW
42	203	<b>STAGE-DEPENDENT TRANSCRIPTIONAL PROFILING OF MALE GERM CELLS</b> Tomascik-Cheeseman LM, Marchetti F, Coleman MA, Yin E, Nath J, Wyrobek AJ
43	210	<b>STRUCTURAL AND NUMERICAL CHROMOSOMAL ABNORMALITIES IN SPERM FOLLOWING ACCIDENTAL OCCUPATIONAL EXPOSURE TO <sup>192</sup>IRIDIUM</b> Velazquez-Wong AC, Slotter E, Tomascik-Cheeseman LM, Araujo-Solis MA, Wyrobek AJ, Salamanca-Gomez F
44	213	<b>A COMPREHENSIVE ANALYSIS OF RECENTLY INTEGRATED HUMAN LINE ELEMENTS</b> Vincent BJ, Myers JS, Batzer MA
45	220	<b>INCREASED INFLUENCE OF GENETIC VARIATION ON PARAOXONASE GENE EXPRESSION IN NEONATES</b> Wetmur JG, Kumar M, Berkowitz G, Chen J
46	222	<b>BIG BLUE AT CHORNOBYL: TRANSGENIC MUTATIONS FOLLOWING CHRONIC EXPOSURE TO LOW-DOSE ENVIRONMENTAL RADIATION</b> Wickliffe JK, Bickham AM, Rodgers BE, Chesser RK, Gaschak S, Baker RJ

## WEDNESDAY, MAY 1, 2002

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<b>Poster</b>	<b>Abstract</b>	
<b>47</b>	<b>229</b>	<b>EFFECTS OF SAMPLE AGE AND ELECTROPHORESIS CONDITIONS ON SEMEN COMET ASSAY</b> Young KE, Xun L, Rothmann SA, Perreault SD, Robbins WA
<b>48</b>	<b>238</b>	<b>ROLE OF H2AX IN IMMUNOGLOBULIN CLASS SWITCH RECOMBINATION AND GENOMIC STABILITY</b> Petersen S, Casselas R, Chen HT, Difilippantonio MJ, Celeste A, Ried R, Honjo T, Nussenzweig M, Nussenzweig A

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## NOTES

## THURSDAY, MAY 2, 2002

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7:30 AM – Noon

**Registration**  
Promenade

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7:00 AM – 8:30 AM

### **Breakfast Meetings**

2003 Program Committee (Second Meeting)  
Birch

EMS Executive Board  
Cook Inlet Board Room

Hollaender Committee  
Prince William Board Room

Technology Group  
Prudhoe Bay Room

Transgenic and *In Vivo* Mutagenesis  
Interest Group  
Chart Room

**THURSDAY, MAY 2, 2002**

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8:30 AM – 12:30 PM

**Symposium**  
Alaska Room

**New Perspectives**  
**from Functional Genomics and Proteomics**

*Chairs: Leona Samson, Massachusetts Institute of Technology*  
*Cynthia Afshari, National Institute of Environmental Health*  
*Sciences*

8:30 AM – 9:00 AM

**Functional Genomics and Alkylation Resistance**  
Leona Samson, Massachusetts Institute of Technology

9:00 AM – 9:30 AM

**Probing the Mechanism of Action of Non-Mutagenic Carcinogens with cDNA Microarrays**  
Cynthia Afshari, National Institute of Environmental Health Sciences

9:30 AM – 10:00 AM

**Transcriptional Responses to Low-Dose Radiation Exposure—A Model for Genotoxic Stress Responses at Sub-Toxic Doses**  
Al Fornace, National Institutes of Health

10:00 AM – 10:30 AM

**Proteomics without Polyacrylamide: Qualitative and Quantitative Analysis**  
David Goodlett, Institute for Systems Biology

10:30 AM – 11:00 AM   **Coffee Break**   Promenade

11:00 AM – 11:30 AM

**Loss of Genomic Integrity in Pre-Neoplastic Cells**  
Thea Tlsty, University of California—San Francisco

11:30 AM – 12:00 Noon

**Recombineering: Applications for Functional Genomics in the Post-genome Era**  
Neil Copeland, National Cancer Institute

# THURSDAY, MAY 2, 2002

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9:00 AM – 12:30 PM

## Selected Platform Talks

Bristol Bay Ballroom

### Mechanisms of Mutagenesis

*Chairs: Tom Kunkel and Roel Schaaper*

*National Institute of Environmental Health Sciences*

- 9:00 AM                    **Introduction**    Roel Schaaper
- Abstract**
- 9:30 AM    **53**            **BIOCHEMICAL CHARACTERIZATION OF MURINE DNA POLYMERASE IOTA AND ITS COMPARISON TO HUMAN POLYMERASE IOTA**  
Frank EG, McDonald JP, Woodgate R
- 9:45 AM    **104**           **HUMAN DNA POLYMERASE EPSILON LOCALIZES WITH DNA REPLICATION AND PCNA IN LATE, BUT NOT EARLY S PHASE**  
Linn S, Fuss J
- 10:00 AM   **74**           **HUMAN DNA POLYMERASE BETA CATALYZES EXPANSION OF CTG/CAG TRINUCLEOTIDE REPEATS AT STRAND BREAKS**  
Hartenstine MJ, Goodman MF, Petruska J
- 10:15 AM   **64**           **HIGH THROUGHPUT *IN VITRO* PRODUCTION AND SCREENING OF POLYMERASES**  
Glick EG, Anderson JPA, Loeb LA
- 10:30 AM – 11:00 AM    **Coffee Break**    Promenade

**Abstract**

- 11:00 AM **86**      **ERROR PRONE TRANSLESION SYNTHESIS PAST THE PRIMARY ACROLEIN DERIVED HYDROXYPROPANO DE-OXYGUANOSINE ADDUCTS IN MAMMALLIAN CELLS**  
Kanuri M, Minko IG, Nechev LV, Harris TM, Harris CM, Lloyd RS
- 11:15 AM **110**      **EFFECT OF LOSS OF TRANSLESION SYNTHESIS POLYMERASES OR A PROTEIN INVOLVED IN DAMAGE AVOIDANCE ON THE FREQUENCY OF MUTATIONS INDUCED IN HUMAN CELLS BY CARCINOGENS**  
Maher VM, Li Z, Wang XD, McNally K, McCormick JJ, Lawrence CW, Xiao W
- 11:30 AM **137**      **INVOLVEMENT OF DNAPOLIV (DINB) OF *ESCHERICHIA COLI* IN CHEMICALLY-INDUCED MUTAGENESIS**  
Nohmi T, Kim SR, Matsui K, Gruz P, Shimizu M, Yamada M
- 11:45 AM **207**      **IDENTIFICATION OF *IN VIVO* MUTANTS FROM MOUSE SPLENIC LYMPHOCYTES BY SINGLE BURST ANALYSIS OF THE FORWARD MUTATIONAL ASSAY FOR GENE *A* OF  $\phi$ X174**  
Valentine CR, Raney JL, Shaddock JG, Dobrovolsky VN
- 12:00 Noon **186**      **QUANTITATIVE CHARACTERIZATION OF ABERRANT SPLICING IN HUMANS**  
Skandalis A, Uribe E, Ninniss P

**Summary**      Tom Kunkel

**THURSDAY, MAY 2, 2002**

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1:30 PM – 5:30 PM

**Posters on Mechanisms of Mutagenesis**

Aleutian Room

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1:30 PM – 5:30 PM

**Symposium**

Alaska Room

**Nanotechnology and Single-Molecules**

*Chairs: John Essigmann, Massachusetts Institute of Technology*

*Sidney Aaron, Pharmacia*

1:30 PM – 2:00 PM

**Introduction**

John Essigmann, Massachusetts Institute of Technology

2:00 PM – 2:30 PM

**Biomolecular Diagnostics of Nucleic Acid in Single Cells *In Situ***

Jim Tucker, Lawrence Livermore National Laboratory

2:30 PM – 3:00 PM

**Chemosensors: Nano-Receptors in the Service of Analytical Chemistry**

Anthony Czarnik, Sensors for Medicine & Science, Inc.

3:00 PM – 3:30 PM

**Canary B-Cell Sensor for Rapid Identification of Pathogens**

Eric Schwoebel, Lincoln Laboratories, Massachusetts Institute of Technology

3:30 PM – 4:00 PM

**Coffee Break** Promenade

4:00 PM – 4:30 PM

**Single-Molecule DNA Sequencing**

Rudolf Rigler, Karolinska Institute



**THURSDAY, MAY 2, 2002**

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4:30 PM – 6:00 PM

**EMS Council Meeting**  
Aspen

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7:00 PM – 8:00 PM

**Keynote Lecture**  
Alaska Room

**Genomics, Proteomics, and Systems Biology**

*Leroy Hood*  
*Institute for Systems Biology*

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# THURSDAY, MAY 2, 2002

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8:00 PM – 9:30 PM

## Posters

### Mechanisms of Mutagenesis

(Posters Attended)

Aleutian Room

Poster	Abstract	
1	10	<b>AQUEOUS EXTRACTS OF MUSHROOM <i>AGARICUS BLAZEI</i> MURRILL DOES NOT ALTER POST-INITIATION DEVELOPMENT OF HEPATIC PRENEOPLASTIC LESION INDUCED BY DIETHYLNITROSAMINE</b> Barbisan LF, Spinardi-Barbisan ALT, Moreira ELT, Salvadori DMF, Ribeiro LR, da Eira AF, de Camargo JLV
2	11	<b>ROLE OF NAD(P)H:QUINONE OXIDOREDUCTASE-1 (NQO1) IN GENETIC SUSCEPTIBILITY TO BENZENE-INDUCED TOXICITY</b> Bauer AK, Faiola B, Abernethy DJ, Marchan R, Pluta LJ, Wong VA, Roberts K, Jaiswal AK, Gonzalez FJ, Butterworth B, Recio L
3	14	<b>DNA POLYMERASE KAPPA IS ASSOCIATED WITH REPLICATION FOCI</b> Bergoglio V, Bavoux C, Verbiest V, Ohmori H, Hoffmann JS, Cazaux C
4	18	<b>EFFECT OF INTERRUPTIONS ON THE MUTATION RATES OF MICROSATELLITES IN MISMATCH REPAIR PROFICIENT (MMR<sup>+</sup>) AND DEFICIENT (MMR<sup>-</sup>) MAMMALIAN CELLS</b> Boyer J, Stephanovic L, Smith GA, Castro A, Farber RA
5	24	<b>MITOCHONDRIAL DAMAGE IN YEAST INDUCED BY PROTEASE INHIBITORS</b> Cheung HC, Iavorovska O, Zullo SJ, Wood LV, von Borstel RW, von Borstel RC
6	26	<b>PATTERNS OF GENE EXPRESSION FOLLOWING DIFFERENT OXIDANTS IN HUMAN BREAST CANCER CELLS</b> Chuang YE, Chen Y, Gadisetti CV, Russo A, Miller L, Liu ET, Mitchell JB

## THURSDAY, MAY 2, 2002

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Poster	Abstract	
7	33	<b>THE EFFECT OF CALORIE RESTRICTION ON CHEMICALLY INDUCED MUTATION</b> Cooney G, de Boer JG
8	34	<b>PATERNAL EXPOSURE TO CYCLOPHOSPHAMIDE AND DIEPOXYBUTANE INDUCES CHROMOSOMAL DAMAGE AND ALTERS THE MRNA PROFILE DURING EARLY MOUSE DEVELOPMENT</b> Cosentino L, Marchetti F, Coleman M, Raja R, Yin E, Bishop JB, Wyrobek AJ
9	39	<b>HEAVY METALS STIMULATE GENOMIC DAMAGE BY HUMAN MOBILE ELEMENTS</b> Deininger P, Kale S, Dugan C, El-Sawy M
10	43	<b>MOLECULAR GENOTOXICITY PROFILE OF CISPLATIN AND SODIUM CHLORIDE IN LY5178Y CELLS</b> Dickinson DD, Thiffeault CJ, Osowski JJ, Mauthe RJ, Aubrecht J
11	48	<b>CHROMOSOMAL INSTABILITY IN PROSTATE CANCER</b> El-Zein RA, Gu Y, Sierra MS, Spitz MR, Strom SS
12	49	<b>MUTAGENESIS IN A HUMAN P53 GENE CARRIED IN YEAST</b> Elespuru RK
13	51	<b>MUTANT FREQUENCY IN THE TRANSGENIC TARGET/REPORTER GENE LACZ DURING PLASMACYTOMAGENESIS</b> Felix K, Potter M, Janz S
14	61	<b>5-FLUOROURACIL FORWARD MUTATION ASSAY IN <i>SALMONELLA</i>: DETERMINATION OF MUTATIONAL TARGET AND SPONTANEOUS MUTATIONAL SPECTRA</b> Glaab WE, Mitchell LS, Miller JE, Vlasakova K, Skopek TR

## THURSDAY, MAY 2, 2002

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Poster	Abstract	
15	75	<b>RELATION BETWEEN CARCINOGENICITY AND MUTATION SPECTRUM IN VARIOUS ORGANS OF LAMBDA/LACZ TRANSGENIC MICE(MUTA™ MOUSE)</b> Hashimoto K, Ohsawa K, Kimura M, Kohara A, Suzuki T
16	79	<b>THE POSSIBILITY OF DIRECTED EVOLUTION BY TRANSCRIPTIONAL BYPASS</b> Holmquist GP
17	87	<b>MUTAGENESIS OF 1,2-EPOXY-3-BUTENE INDUCED N1-DEOXYINOSINE ADDUCTS IN SIMILIAN KIDNEY CELLS</b> Kanuri M, Harris CM, Harris TM, Lloyd RS
18	89	<b>FINE MAPPING OF LOH EVENTS IN SPONTANEOUS TK- MUTANTS OF THE HUMAN LYMPHOBLASTOID CELL LINE TK6</b> Kato T, Honma M, Morimoto S, Yatagai F
19	91	<b>GENE EXPRESSION PATTERNS IN NORMAL HUMAN LIVER CELLS EXPOSED TO TETRACHLOROETHYLENE USING MICROARRAY ANALYSIS</b> Keshava N, Ong T
20	106	<b>MECHANISM OF THE ENHANCEMENT OF TOXIC AND MUTAGENIC EFFECTS OF DIBROMOETHANE BY O<sup>6</sup>-ALKYLGUANINE-DNA ALKYLTRANSFERASE</b> Liu L, Pegg AE, Williams K, Guengerich PF
21	108	<b>EFFECT OF THE TRANSGENIC OVEREXPRESSION OF POLYMERASE <math>\beta</math> MUTANTS ON LACI MUTANT FREQUENCIES</b> Luchman HA, Sandercock LE, Mark SC, Baross A, Sweasy JB, Jirik FR
22	109	<b>THE EFFECT OF COMPLEX MIXTURE OF POLYCYCLIC AROMATIC HYDROCARBONS (PAH) ON THE METABOLIC ACTIVATION, DNA BINDING AND CARCINOGENICITY IN MCF-7 CELLS IN CULTURE</b> Mahadevan B, Pecaj A, Reddy AP, Bailey GS, Baird WM

## THURSDAY, MAY 2, 2002

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Poster	Abstract	
23	111	<b>HMMS2, A PROTEIN ESSENTIAL FOR A MAJOR ERROR-FREE PATHWAY BY WHICH HUMAN CELLS AVOID REPLICATING PAST FORK-BLOCKING DNA DAMAGE</b> Maher VM, Li Z, McCormick JJ, Xiao W, Xiao W
24	112	<b>DETECTION OF SPONTANEOUS AND ENU INDUCED AM3 REVERTANTS IN TRANSGENIC CELL CULTURES</b> Malling HV, Delongchamp RR, Valentine CR
25	113	<b>MUTATIONAL ANALYSES OF A (TTCC/AAGG)<sub>n</sub> MICROSATELLITE IN HUMAN LYMPHOBLASTOID CELLS FOLLOWING TREATMENT WITH HYDROGEN PEROXIDE AND N-ETHYLN-NITROUREA</b> Maneval ML, Eckert KA
26	114	<b>PATERNALLY TRANSMITTED CHROMOSOMAL ABERRATIONS IN MOUSE ZYGOTES ARE PREDICTIVE OF EMBRYONIC FATE</b> Marchetti F, Cosentino L, Bishop JB, Wyrobek AJ
27	115	<b>ELEVATED <i>LACI</i> MUTANT FREQUENCIES, AND PREDOMINANCE OF G:C → A:T TRANSITION MUTATIONS IN <i>MSH6</i><sup>-/-</sup> SMALL INTESTINAL EPITHELIAL CELLS</b> Mark SC, Sandercock LE, Luchman HA, Edelmann W, Jirik FR
28	116	<b>ABSENCE OF LACZ TRANSCRIPTION IN LIVER, LUNG AND KIDNEY OF MUTAMOUSE AND PUR288 PLASMID MOUSE</b> Martus HJ, Blecher D, Grenet O, Suter W
29	118	<b>UP-REGULATION OF HEPATOCYTE GROWTH FACTOR RECEPTOR GENE (C-MET) EXPRESSION IN HUMAN FIBROSARCOMAS BY TRANSCRIPTION FACTOR SP1</b> McCormick JJ, Liang H, Lou Z, Liu Y, Maher VM
30	121	<b>GENOTOXIC EFFECTS OF NITRIC OXIDE, HYDROGEN PEROXIDE AND THEIR GENERATORS IN G12 CELLS</b> McLain TR, Saliim ET, Klein CB, Abu-Shakra A

## THURSDAY, MAY 2, 2002

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Poster	Abstract	
31	123	<b>TRANSCRIPTIONAL MUTAGENESIS AND YEAST PRIONS</b> Meadows KL, Allen K, Chernoff YO, Doestch PW
32	132	<b>LYCOPENE INHIBITION OF SPONTANEOUS MUTAGENESIS IN MISMATCH REPAIR DEFICIENT CELLS</b> Mure K, Rossman TG, Klein CB
33	141	<b><i>IN VITRO</i> CHROMOSOMAL MISSEGREGATION AND MICRONUCLEUS INDUCTION BY THE DIETARY FLAVONOL Fisetin</b> Olaharski AJ, Eastmond DA
34	142	<b>QUANTITATION OF TELOMERIC DNA DAMAGE INDUCED BY LONG TERM NUCLEOSIDE ANALOG EXPOSURE</b> Olivero OA, Kim Y, Humsi J, Poirier MC
35	143	<b>GENOTOXICITY OF ANTIRETROVIRAL NUCLEOSIDE ANALOG DRUG COMBINATIONS</b> Olivero OA, Tejera AM, Fernandez JJ, Poirier MC
36	144	<b>ACTIVATION OF HOMOLOGOUS AND NON-HOMOLOGOUS RECOMBINATION BY HIGH- AND LOW-LET IRRADIATION IN SPD8 CHINESE HAMSTER CELLS</b> Olsson G, Czene S, Harms-Ringdahl M
37	147	<b>DEREGULATED DNA POLYMERASE <math>\beta</math> INDUCES CHROMOSOME INSTABILITY AND TUMORIGENESIS</b> Pillaire MJ, Bergoglio V, Lacroix-Triki M, Raynaud-Messina B, Bieth A, Cazaux C, Hoffmann JS
38		<b>Withdrawn</b>

## THURSDAY, MAY 2, 2002

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Poster	Abstract	
39	173	<b>DETECTION OF <i>IN VIVO</i> GENOTOXICITY OF ENDOGENOUSLY FORMED N-NITROSO COMPOUNDS AND ITS SUPPRESSION BY TEAS AND FRUIT JUICES</b> Sasaki YF, Sekihashi K, Kawaguchi S, Kabasawa K, Ohsawa K, Kimura M, Tsuda S
40	182	<b>REDUCTION OF DNA DAMAGE WITHIN THE PROSTATE OF ELDERLY DOGS RECEIVING SUPRANUTRITIONAL SELENIUM IS ASSOCIATED WITH INCREASED APOPTOSIS OF EPITHELIAL CELLS</b> Shen S, Cooley DM, Glickman LT, Morris JS, Oteham C, Schlittler D, Waters DJ
41	183	<b>MUTAGENESIS OF MOUSE PRIMORDIAL GERM CELLS BY ENU</b> Shibuya T, Suzuki S, Matsumoto H, Endo-Takeda W, Sui H, Hara T, Niwa O
42	190	<b>A GENETIC TOXICOLOGY BATTERY INCLUDING THE SYRIAN HAMSTER EMBRYO CELL TRANSFORMATION ASSAY TO PREDICT RODENT CARCINOGENICITY WITH SD-2590 AND THE EFFECTS OF THE ANTIOXIDANT, (-)-EPIGALLOCATECHIN GALLATE</b> Soelter SG, Oshiro Y, Cocco RL, Bunch RT
43	197	<b>IDENTIFICATION OF A NOVEL ADDUCT, N-(DEOXYGUANOSIN-N2-YL)-4-AMINO-BIPHENYL (DG-N=N-ABP) BY POSTLABELING ANALYSES OF HUMAN UROEPITHELIA EXPOSED TO PROXIMATE METABOLITES OF THE ENVIRONMENTAL CARCINOGEN 4-AMINO-BIPHENYL</b> Swaminathan S, Hatcher JF
44	227	<b>DNA DAMAGE INDUCED BY REACTIONS OF URANYL ACETATE WITH ASCORBATE</b> Yazzie M, Reuss G, Gamble SL, Civitello ER, Stearns DM

## THURSDAY, MAY 2, 2002

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<b>Poster</b>	<b>Abstract</b>	
45	228	<b>MECHANISMS OF DESMUTAGENIC EFFECT BY PHEOPHYTIN</b> Yoshikawa K, Sakai T, Terashita T
46	230	<b>IS CHROMOSOMAL ANEUPLOIDY INDUCED BY BENZENE METABOLITES RANDOM OR SELECTIVE?</b> Zhang L, Yang W, Hubbard A, Wang Y, Smith MT
47	231	<b>INCREASED MORPHOLOGICAL TRANSFORMATION RESPONSE OF SYRIAN HAMSTER EMBRYO (SHE) CELLS TO KNOWN CARCINOGENS BY REDUCING INCUBATION TIME OF THE TARGET CELLS</b> Zhang H, Borman HD, Myhr BC
48	241	<b>DNA END-PROCESSING DURING NON-HOMOLOGOUS END-JOINING IN A CELL FREE SYSTEM</b> Budman J

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EMS Exhibitors  
**2002 Anchorage, Alaska**

Exhibit hours:

Sunday, April 28: 1:30 PM to 5:30 PM, and 8:00 PM to 9:30 PM

Monday, April 29: 1:30 PM to 5:30 PM and 8:00 PM to 9:30 PM

Wednesday, May 1: 1:30 PM to 5:30 PM

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**BioReliance** Pat Mulligan

14920 Broschart Road, Rockville, MD 20850

Phone: 301-610-2632 Fax: 301-610-2590

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# **HOTEL FLOORPLAN**

## **HOTEL FLOOR PLAN**