

**PROGRAM**  
**2006 International Conference**  
**“Frontiers of Pharmacology and Toxicology”**  
***Assessing the Efficacy and Safety of New Drugs***

**Renaissance Chicago Hotel, August 28 – 31, 2006**  
with Pre-Conference one-and-a-half day continuing education course

Saturday, August 26, 2006 Arrival and registration.

Sunday, August 27, 2006, arrival and registration continuing

**Continuing Education Course (One-and-a-half days)**

**Saturday-Sunday (August 26-27, 2006)**

**TOXICOLOGY IN DRUG DEVELOPMENT**

Chair: **Alex Lyubimov**, M.D., Ph.D., D.A.B.T., Director, Toxicology Research Laboratory, University of Illinois at Chicago, and **Wanda Haschek-Hock**, Ph.D., D.A.B.T., Professor of Pathobiology, University of Illinois, Champaign-Urbana, IL

**Monday, August 28, 2006**

8:00-8:30 AM           **Opening remarks:**

**Joseph E. Tomaszewski**, Division of Cancer Treatment and Diagnosis (DCTD); Chief, Toxicology and Pharmacology Branch, Developmental Therapeutics Program, **DCTD, National Cancer Institute**

**Asrar B. Malik**, Distinguished Professor and Head, Department of Pharmacology, University of Illinois at Chicago

**Alexander Lyubimov**, Director, Toxicology Research Laboratory, University of Illinois at Chicago

**Platform Session I**  
**CANCER TREATMENT AND DIAGNOSIS**

Chairpersons and keynote speakers: **Joseph E. Tomaszewski**, Ph.D., Deputy Director, Division of Cancer Treatment and Diagnosis (DCTD); Chief, Toxicology and Pharmacology Branch, Developmental Therapeutics Program, **DCTD, National Cancer Institute**, Bethesda, MD, USA; **David Jacobson-Kram**, Associate Director for Pharmacology and Toxicology, Office of New Drugs, Center for Drug Evaluation and Research, **U.S. FDA**.

8:30-9:05 AM           S01   **Pharmacological (PK/PD) aspects of phase zero clinical trials**  
Joseph E. Tomaszewski, Deputy Director, Division of Cancer Treatment and Diagnosis (DCTD); Chief, Toxicology and

Pharmacology Branch, Developmental Therapeutics Program, DCTD, National Cancer Institute, Bethesda, MD, USA;

- 9:05-9:40 AM S02 **Challenges of molecular risk assessment for cancer**  
David Jacobson-Kram, Associate Director for Pharmacology and Toxicology, Office of New Drugs, Center for Drug Evaluation and Research U.S. FDA
- 9:40-10:10 AM S03 **DNA Methylation biomarkers for early detection of cancer**  
Victor V. Levenson, Director, Northwestern University Biotechnology Laboratory, IL, USA
- 10:10-10:30 AM COFFEE BREAK
- 10:30-11:00 AM S04 **Toxicoproteomics-identification and prevalidation of potential early biomarkers in chemically induced hepatocarcinogenesis**  
M. Kröger<sup>1</sup>, K. Fella<sup>1</sup>, M. Glückmann<sup>2</sup>, V. Kruff<sup>2</sup>, Y. Walter<sup>2</sup>, P.-J. Kramer<sup>1</sup> and Matthew Willetts<sup>3</sup>, <sup>1</sup>Merck KGaA, Institute of Toxicology, Darmstadt, Germany, <sup>2</sup>Applied Biosystems, Mass Spectrometry and Proteomics, Darmstadt, Germany, <sup>3</sup>Applied Biosystems, Framingham, MA, USA
- 11:00-11:30 AM S05 **Linking efficacy with safety in discovery toxicology**  
Alex Bell, Discovery Toxicologist, Safety Assessment, Astra Zeneca, UK
- 11:30-12:00 PM LB1 **Combining *in silico* and experiential analysis of transcriptional regulation to reveal cellular mechanisms of toxicity**  
Myrtle Davis, Lilly Research Laboratories, Eli Lilly and Company, Greenfield, WI, USA
- 12:00-1:00 PM LUNCH ON YOUR OWN

**Symposium I**  
**MOLECULAR MECHANISMS, PREVENTION, TREATMENTS AND**  
**DIAGNOSTICS FOR EMERGING INFECTIOUS DISEASES AND**  
**BIODEFENSE**

Chairpersons – **Mark J. Abdy**, D.V.M., Ph.D, Office of Vaccines Research & Review, **FDA/CBER**; **John Carney**, Ph.D., Acting Director, Drugs and Therapeutics Acquisitions, Office of Public Health Emergency Preparedness (**OPHEP**), Office of Research and Development Coordination (**ORDC**), **U.S. Department of Health and Human Services**; and **Olaf Schneewind**, M.D., Ph.D., Professor and Chair, Department of Microbiology, Director, NIH/NIAID Region V Great Lakes Regional Center of Excellence for Biodefense and Emerging Infectious Diseases Research, **The University of Chicago**

- 10:30-11:00 AM S09 **Project BioShield in novel program to acquire new medical**

**countermeasures for the Strategic National Stockpile**

John Carney, Acting Director, Drugs and Therapeutics Acquisitions, Office of Public Health Emergency Preparedness (OPHEP), Office of Research and Development Coordination (ORDC), U.S. Department of Health and Human Services, Washington, D.C., USA

- 11:00-11:30 AM S10 **Overview of the “Animal Rule” from a vaccine development perspective**  
Mark J. Abdy, Office of Vaccines Research & Review, FDA/CBER, USA
- 11:30-12:00 PM S11 **Using NMPDR for comparative systems biology of re-emerging pathogens**  
Ross Overbeek, Fellowship for Interpretation of Genomes, Burr Ridge, IL, USA
- 12:00-1:00 PM LUNCH ON YOUR OWN
- 1:00-1:30 PM TBD  
Olaf Schneewind, Professor and Chair, Department of Microbiology, The University of Chicago, IL, USA
- 1:30-2:00 PM **Development of an LcrV-derived plague vaccine with altered immune modulatory properties**  
Debra Anderson, Associate Director, NIH/NIAID Region V Great Lakes Regional Center of Excellence for Biodefense and Emerging Infectious Diseases Research, University of Chicago, IL, USA
- 2:00-2:30 PM LB2 **Evaluation of plasmid loss mechanisms in reference and poultry derived gram-negative bacteria**  
Douglas J. Cork, Akash Gupta, Jerry Mathers, BCPS Department, Illinois Institute of Technology, Chicago, IL, USA
- 2:30-3:00 PM S13 **Serologic approaches for anthrax diagnosis, treatment and vaccine evaluation**  
R.E. Biagini, V.A. Semenova, H. Li, S.D. Soroka, S.P. Fox, A.E. Boyer, J.R. Barr, J.L. Pirkle, J.P. Smith, D.L. Sammons, S.A. Robertson and Conrad P. Quinn, CDC, Atlanta, GA, USA
- 3:00-3:20 PM COFFEE BREAK
- 3:20-3:50 PM S12 **New classification of *B. cereus* group as a basis for *B. anthracis* and other related pathogens identification with DNA microarray**  
Sergei Bavykin, Center for Environmental and Security Science and Technology, Argonne National Laboratory, Argonne, IL, USA
- 3:50-4:20 PM S14 **Structures and superstructures: assembly of the *Bacillus anthracis* spore armor and its role in pathogenesis**

Adam Driks, Microbiology and Immunology Department, Loyola University Medical Center, Maywood, IL, USA

- 4:20-4:50 PM      S16    **Extending the *B. cereus* group genomics to novel strain complexes other than anthrax should also be targeted**  
Alex Sorokin, Génétique Microbienne, CRJ INRA, Jouy-en-Josas, France

## **Symposium II**

### **ANIMAL MODELS FOR CANCER THERAPY AND PREVENTION**

Chair, **Melinda Hollingshead, Ph.D, NCI**

- 1:00-1:30 PM      S06    **Multiple approaches to assessing *in vivo* anti-cancer activity: the NCI developmental therapeutics**  
Melinda G. Hollingshead, Chief, Biological Testing Branch, DTP, DCTD, NCI, Bethesda, MD, USA
- 1:30-2:00 PM      S07    **Newer animal tumor models**  
Beverly A. Teicher, Vice President, Oncology Research  
Genzyme Corporation, Framingham, MA, USA
- 2:00-2:30 PM      S08    **The value of human tumor xenografts in the era of molecular targeted agents and pharmacodynamic endpoints**  
Angelika Burger, Department of Pharmacology and Experimental Therapeutics, University of Maryland School of Medicine, Baltimore, MD, USA
- 2:30-3:00 PM      LB5    **Drug testing in transgenic mouse models**  
Lyuba Varticovski<sup>1</sup>, Melinda G. Hollingshead<sup>2</sup>, Miriam R. Anver<sup>1</sup>,  
Anna I. Robles<sup>1</sup>, Carl J. Barrett<sup>3</sup>. <sup>1</sup>CCR, NCI Bethesda and DTP, NCI, Frederick, MD; <sup>3</sup>Novartis Oncology, Boston, MA

3:00-3:20 PM      COFFEE BREAK

3:20-4:50 PM      **PANEL DISCUSSION SESSION I. NEW CONSEQUENCES OF IMPROVED CANCER DIAGNOSTICS FOR TREATMENT AND CHEMOPREVENTION.**

Moderators: Allen Rudman, Ph.D., Associate Director, Office of Clinical Pharmacology and Biopharmaceutics, **CDER, FDA** and James A. Crowell, Ph.D., Chief, Chemopreventive Agent Development Research Group, **DCP, NCI**.

**POSTER SESSION AND EXHIBITS. RECEPTION**

**I. Cancer treatment and prevention. Countermeasures against radiation and infectious disease threats.**

**P01 NEUROPROTECTIVE EFFECT OF MIDAZOLAM IN THE TREATMENT OF CONVULSIONS INDUCED BY ORGANOPHOSPHATES**

M Kowalczyk<sup>1</sup>, M Brytan<sup>1</sup>, O Antkowiak<sup>1</sup>, and G Niewiadomska<sup>2</sup>.  
<sup>1</sup>Military Institute of Hygiene and Epidemiology, Warsaw, Poland,  
<sup>2</sup>Nencki Institute of Experimental Biology, Warsaw, Poland

**P02 NUTRITIONAL MODULATION OF THE THERAPEUTIC INDEX OF CPT-11 CHEMOTHERAPY**

H Xue, MB Sawyer, CJ Field, LA Dieleman, and VE Baracos. Cross Cancer Institute, Edmonton, AB, Canada; Department of Nutritional Science, University of Alberta, Edmonton, AB, Canada; Department of Medicine, University of Alberta, Edmonton, AB, Canada

**P03 CISPLATIN-INDUCED CYTOTOXICITY IN CYP2E1 EXPRESSING HepG2 CELLS INVOLVES ROS/ERK1/21/2 PATHWAY**

Y Lu, and AI Cederbaum. The Department of Pharmacology and Biological Chemistry, Mount Sinai School of Medicine, New York, NY, USA

**P04 NARINGIN TREATMENT INHIBITS THE DOXORUBICIN INDUCED DNA DAMAGE IN SWISS ALBINO MICE**

GC Jagetia and TK Reddy. Department of Radiobiology, Kasturba Medical College, India

**P05 A NOVEL TLR9 AGONIST AS EXPERIMENTAL THERAPY FOR PROSTATE CANCER**

ER Rayburn, H Wang, and R Zhang. Department of Pharmacology and Toxicology, Division of Clinical Pharmacology, University of Alabama at Birmingham, Birmingham, AL, USA

**P06 A NOVEL THERAPEUTIC AGENT, PA19 PROTEIN, EFFECTIVELY BLOCKS TUMOR FORMATION IN ATHYMIC MICE BY HUMAN CANCER CELL LINES DERIVED FROM A FIBROSARCOMA AND AN OVARIAN CARCINOMA**

IV Zlatkin, S O'Reilly, VM Maher and JJ McCormick. Carcinogenesis Laboratory, Department of Microbiology & Molecular Genetics and Department of Biochemistry & Molecular Biology, Michigan State University, East Lansing, MI, USA

**P07 RADIATION PROTECTION BY SUBCUTANEOUS ADMINISTRATION OF GENISTEIN: ENHANCEMENT OF HEMATOPOIETIC RECOVERY AND SURVIVAL IN LETHALLY IRRADIATED MICE**

MR Landauer<sup>1</sup>, TK Clarke<sup>1</sup>, SR Mog<sup>1</sup>, and TA Davis<sup>2</sup>. <sup>1</sup>Armed Forces Radiobiology Research Institute, Uniformed Services University,

Bethesda, MD, USA and <sup>2</sup>Naval Medical Research Center, Silver Spring, MD, USA

**P08 PORTABLE SYSTEM FOR MICROBIAL SAMPLE PREPARATION AND *BACILLUS CEREUS* GROUP PATHOGEN ANALYSIS WITH OLIGONUCLEOTIDE MICROARRAY**

S Bavykin<sup>1</sup>, G Yershov<sup>1</sup>, J Kelly<sup>2</sup>, A Kukhtin<sup>3</sup>, O Alferov<sup>1,4</sup>, B Chernov<sup>3</sup>, J Golova<sup>3</sup>, A Perov<sup>1</sup> and D Chandler<sup>1,3</sup>. <sup>1</sup>Center for Environmental and Security Science and Technology, Argonne National Laboratory, Argonne, IL, USA; <sup>2</sup>Loyola University Chicago, Chicago, IL, USA; <sup>3</sup>Akonni Biosystems, New Market, MD, USA; <sup>4</sup>Aurora Photonics Inc., Lake Barrington, IL, USA

**P09 EPIGENETICS AND CANCER CHEMOPREVENTION: PROMISE, PROSPECTS AND CHALLENGES**

S Gupta. Department of Urology, Case Western Reserve University & University Hospitals of Cleveland, OH, USA

**P10 CHEMOPREVENTIVE AGENT DEVELOPMENT PROGRAM: A CASE STUDY**

IM Kapetanovic and JA Crowell. Division of Cancer Prevention, NCI, Bethesda, MD, USA

**P11 CHEMOPREVENTIVE EFFECTS OF A SPECIFIC COX-2 INHIBITOR (CELECOXIB) AND A NOVEL HDAC INHIBITOR (SK-7041) ON AZOXYMETHANE-INITIATED AND DEXTRAN SULFATE SODIUM-PROMOTED MOUSE COLON CARCINOGENESIS**

J-S Lee<sup>1</sup>, H.S. Kim<sup>1</sup>, K-B Hahm<sup>2</sup>, Y-J Bang<sup>3</sup> and Y-J Surh<sup>1</sup>. <sup>1</sup>National Research Laboratory of Molecular Carcinogenesis and Chemoprevention, College of Pharmacy, Seoul National University, Seoul, South Korea; <sup>2</sup>Genomic Research Center for Gastroenterology, School of Medicine, Ajou University, Suwon, South Korea; <sup>3</sup>National Research Laboratory for Cancer Epigenetics, Cancer Research Institute, Seoul National University, Seoul, South Korea

**P12 DIRECT DETERMINATION OF SELENIUM IN RAT BLOOD PLASMA BY ZEEMAN ATOMIC ABSORPTION SPECTROMETRY**

K.K. Kabirov<sup>1</sup>, I.M. Kapetanovic<sup>2</sup>, and A. Lyubimov<sup>1</sup>. <sup>1</sup>Toxicology Research Laboratory, UIC, Chicago, IL, USA; <sup>2</sup>NCI, Bethesda, MD, USA

**P13 LOVASTATIN EXPOSURE FOLLOWING GAVAGE VS DIETARY ADMINISTRATION IN FEMALE RATS**

M. Lindeblad<sup>1</sup>, T. Martín-Jiménez<sup>1</sup>, I.M. Kapetanovic<sup>2</sup>, Y-F Chen<sup>1</sup>, and A. Lyubimov<sup>1</sup>. <sup>1</sup>University of Illinois at Chicago, IL, USA; <sup>2</sup>NCI, Bethesda, MD, USA

**P14 QUANTITATIVE STRUCTURE ACTIVITY RELATIONSHIPS OF 3-NITROFLAVONES, ACTING AS POTENTIAL INHIBITORS OF ANGIOGENESIS, TARGET OF CANCER INHIBITION**

M Lichtenberg<sup>1</sup>, D Dauzonne<sup>2</sup>, V Zoote<sup>3</sup>, C Gerhäuser<sup>1</sup>, and RV Bensasson<sup>4</sup>. <sup>1</sup>Division of Toxicology and Cancer Risk Factors, German Cancer Research Center (DKFZ), Heidelberg, Germany; <sup>2</sup> CNRS-Institut Curie, Paris, France, <sup>3</sup>Swiss Institute of Bioinformatics, Molecular Modeling Group, Lausanne, Switzerland; <sup>4</sup>Muséum National d'Histoire Naturelle, Laboratoire de Chimie et Biochimie des Substances Naturelles, Paris, France

**II. Efficacy, safety, toxicity and mechanisms of action of different therapeutic agents.**

- P15 PROTEIN KINASE G ACTIVATION IS A KEY REGULATORY STEP IN LEUKOCYTE DEGRANULATION**  
M Nanamori, X Du and RD Ye. Department of Pharmacology, University of Illinois, Chicago, IL, USA
- P16 ACTIVATION STATE-DEPENDENT INTERACTION BETWEEN G $\alpha$ i AND p67<sup>phox</sup>**  
C Marty,<sup>1</sup> T Kozasa,<sup>1</sup> MT Quinn<sup>2</sup> and RD Ye<sup>1</sup>. <sup>1</sup>Department of Pharmacology, College of Medicine, University of Illinois, Chicago, IL, USA; and <sup>2</sup>Department of Veterinary Molecular Biology, Montana State University, Bozeman, MT, USA
- P17 DIFFERENTIAL MAPPING OF THE AMINO ACIDS MEDIATING AGONIST AND ANTAGONIST COORDINATION WITH THE HUMAN THROMBOXANE A<sub>2</sub> RECEPTOR PROTEIN**  
FT Khasawneh and GC Le Breton. Department of Pharmacology, School of Medicine, University of Illinois at Chicago, Chicago, IL, USA
- P18 DELETION OF CALPAIN 1 GENE INHIBITS PLATELET SIGNALING BY UPREGULATING PROTEIN TYROSINE PHOSPHATASE-1B**  
SM Kuchay, NY Kim, AH Chishti. Department of Pharmacology, University of Illinois at Chicago, Chicago, IL, USA
- P19 QUANTIFICATION OF VESICULAR CAVEOLIN-1-GFP TRAFFICKING IN ENDOTHELIAL CELLS**  
YS Husain, SM Vogel, AB Malik, and RD Minshall. Depts. of Pharmacology and Anesthesiology, University of Illinois College of Medicine, Chicago, IL, USA
- P20 IMPROVED ELIMINATION OF FORMATE IN METHANOL POISONING BY INTRAVENOUS INFUSION OF FORMATE DEHYDROGENASE CONJUGATED WITH LINEAR MONO METHOXY POLY ETHYLENE GLYCOL**  
A Muthuvel, R Rajamani and R Sheeladevi, Institute of Basic Medical Sciences, University of Madras, TamilNadu, India.
- P21 ACUTE ETHANOL PRETREATMENT INCREASES FAS MEDIATED APOPTOSIS AND LIVER INJURY IN MICE**

X Wang and AI Cederbaum. Department of Pharmacology and Biological Chemistry, Mount Sinai School of Medicine, New York, NY, USA

**P22 REPRODUCTIVE TOXICITY OF 2,3,7,8 TETRACHLORODIBENZO-*p*-DIOXIN (TCDD) IN MALE MOUSE OFFSPRING**

MH Jin<sup>1</sup>, HK Ko<sup>1</sup>, HJ Jeon<sup>2</sup> and SW Han<sup>2</sup> <sup>1</sup>Brain Korea 21 project for Medical Science, Yonsei University College of Medicine, Seoul, South Korea; <sup>2</sup>Department of Urology, Yonsei University College of Medicine, Seoul, South Korea

**P23 A NON-INVASIVE TECHNIQUE TO PREDICT THE MUTAGENICITY AND TERATOGENICITY USING ONION**

DM Ravichand<sup>1</sup>, AA Phansalkar<sup>1</sup>, V Sheshayamma<sup>1</sup> P Satischandran<sup>1</sup>, SS Singh<sup>2</sup>. <sup>1</sup>Department of Pharmacology, Osmania Medical College, Koti, India <sup>2</sup>Department of Biochemistry, Osmania University, India

**P24 USE OF cDNA MICROARRAYS TO STUDY THE INFLUENCE OF ESTROGENS AND THE MECHANISM OF FEMALE-SPECIFIC HEPATOCARCINOGENS IN THE MOUSE LIVER**

M Feld and N. Drinkwater. McArdle Laboratory for Cancer Research, Madison, WI, USA

**P25 AN *IN VIVO* TRANSGENIC BIOASSAY FOR DETECTING ANTIANDROGENS**

DY Hwang, JS Cho, CK Kim, SB Shim, SW Jee, SH Lee, SJ Seo and YK Kim. Division of Laboratory Animal Resources, Korea Food and Drug Administration, National Institute of Toxicological Research, Seoul, South Korea

**P26 PARATHYROID HORMONE THERAPY: NEW APPLICATIONS IN BONE MARROW TRANSPLANTATION**

E Reina<sup>1</sup>, K Genrich<sup>1</sup>, A Moadsiri<sup>1</sup>, D Polchert<sup>1</sup>, T Pundy<sup>1</sup>, S Setty<sup>1</sup>. T MacVittie<sup>2</sup>, and A Bartholomew<sup>1</sup>. <sup>1</sup>University of Illinois at Chicago, Chicago, IL, USA and <sup>2</sup>University of Maryland, Baltimore, MD, USA

**P27 EVALUATION OF DURATION LIFE OF ANIMALS INFECTED WITH THE VACCINE STRAIN OF ANTHRAX BACILLI**

E Vorobeychikov<sup>1</sup>, A Vasilenko<sup>2</sup>, A Sinita<sup>1</sup>, A Stepanov<sup>1</sup>, M Volkov<sup>1</sup>. <sup>1</sup>Laboratory of Technologies Improving Health Products, Saint Petersburg, Russia; <sup>2</sup> Saint-Petersburg Pasteur Research Institute of Epidemiology and Microbiology, Russia

**LB3 SYNTHESSES OF HIGH AFFINITY ESTROGEN RECEPTOR PROTACS**

MK Mann and JA Katzenellenbogen. Department of Chemistry, School of Chemical Sciences, University of Illinois at Urbana-Champaign, Urbana, IL, USA

**LB4 IMPORTANT ROLE OF MAST CELLS IN FIBROHISTIOCYTIC TUMORS**

Lidija Zolotarevski<sup>1</sup> and Vesna Jačević<sup>2</sup>. <sup>1</sup>Institute of Pathology and Forensic Medicine & <sup>2</sup>National Poison Control Centre, Military Medical Academy, Belgrade, Serbia.

**TUESDAY, AUGUST 29**

**Symposium III**  
**CANCER CHEMOPREVENTION**

Chairperson – **James A. Crowell**, Ph.D., D.A.B.T., Division of Cancer Prevention, **DHHS, National Cancer Institute**, Bethesda, MD, USA; **Gary D. Stoner**, Ph.D., Department of Internal Medicine, Division of Hematology and Oncology, College of Medicine and Public Health, **Ohio State University**, Columbus, OH, USA

- 8:30-9:05 AM      S17      **Identifying and developing potential cancer preventive agents**  
James A. Crowell, Division of Cancer Prevention, DHHS, National Cancer Institute, Bethesda, MD, USA
- 9:05-9:40 AM      S18      **A new mantra for controlling prostate cancer: custom tailoring of chemoprevention cocktail**  
Hasan Mukhtar, Department of Dermatology, University of Wisconsin, Madison, WI, USA
- 9:40-10:10 AM      S19      **Recent advances in mechanisms of cell death by dietary isothiocyanates**  
Shivendra V. Singh, University of Pittsburgh Cancer Institute, Pittsburgh, PA, USA
- 10:10-10:30 AM           COFFEE BREAK
- 10:30-10:50 AM      S20      **Nuclear receptor capacity to perceive dietary signals is disrupted in solid tumours by epigenetic mechanisms**  
Moray J. Campbell, Institute for BioMedical Research, The Medical School, University of Birmingham, Birmingham, UK
- 10:50-11:10 AM      S21      **Cellular signaling molecules as potential targets for cancer chemoprevention with edible phytochemicals**  
Young-Joon Surh, National Research Laboratory of Molecular Carcinogenesis and Chemoprevention, College of Pharmacy, Seoul National University, Seoul, Korea
- 11:10-11:30 AM      S22      **Pharmacogenomic evaluation of chemopreventive agents, diindolymethane and tamoxifen in livers from female rats dosed orally for 13 weeks**  
Raj Krishnaraj<sup>1</sup>, Zarema Arbieva<sup>1</sup>, Izet M. Kapetanovic<sup>2</sup>, and Alex Lyubimov<sup>1</sup>. <sup>1</sup>University of Illinois at Chicago, IL, USA; <sup>2</sup>NCI, Bethesda, MD, USA
- 11:30-12:00 PM      S23      **Induction of matrix metalloproteinase-7 by green tea catechins and effects of dietary factor combinations**

Hajime Ohigashi, M Kim and A Murakami. Division of Food Science and Biotechnology, Graduate School of Agriculture, Kyoto University, Kyoto, Japan

12:00-1:00 PM

LUNCH ON YOUR OWN

1:00-1:20 PM

S24

**Weak ligands as HDAC inhibitors: useful for chemoprevention?**

Roderick H. Dashwood, Department of Environmental and Molecular Toxicology, and Linus Pauling Institute, Oregon State University, Corvallis, OR, USA

1:20-1:40 PM

**Selenium and human cancer prevention**

Piet A. van den Brandt, Department of Epidemiology, Maastricht University, Maastricht, The Netherlands

1:40-2:00 PM

S26

**Skin cancer prevention by silibinin**

Rajesh Agarwal, Department of Pharmaceutical Sciences, School of Pharmacy, University of Colorado Health Sciences Center, Denver, CO, USA

2:00-2:30 PM

S27

**Prevention of gastrointestinal tract cancers with lyophilized berries**

Gary D. Stoner, Department of Internal Medicine, Division of Hematology and Oncology, College of Medicine and Public Health, Ohio State University, Columbus, OH, USA

2:30-2:50 PM

COFFEE BREAK

2:50-3:10 PM

S28

**Novel naturally occurring agents as potential cancer chemopreventives**

Clarissa Gerhäuser, E Bertl, and H Bartsch. Division of Toxicology and Cancer Risk Factors, German Cancer Research Center (DKFZ), Heidelberg, Germany

3:10-3:30 PM

S29

**Single-dose pharmacokinetics of lycopene in healthy volunteers**

Keith A. Rodvold, University of Illinois at Chicago, Chicago, IL, USA

3:30-3:50 PM

S30

**Phase II studies of preventive agents in prostate cancer methodology and first results**

Fritz H. Schröder, and W. van Weerden. Department of Urology, Erasmus MC, University Medical Centre, Rotterdam, The Netherlands

- 3:50-4:20 PM S31 **Antioxidant and signal-normalizing properties of phenyl *N*-tert butyl nitron and its derivatives in chemoprevention of hepatocellular carcinoma**  
Dai Nakae<sup>1</sup> and Robert A. Floyd<sup>2</sup>, <sup>1</sup> Tokyo Metropolitan Institute of Public Health, Shinjuku, Tokyo, Japan; <sup>2</sup>Oklahoma Medical Research Foundation, Oklahoma City, OK, USA

**Symposium IV**  
**MEDICAL COUNTERMEASURES AGAINST RADIOLOGICAL AND**  
**NUCLEAR THREATS**

Chairpersons – **Bert W. Maidment, Ph.D., NIAID**, National Institutes of Health, Bethesda, MD, USA and **Thomas J. MacVittie, Ph.D., University of Maryland**, Greenebaum Cancer Center, Baltimore, MD, USA

- 8:30-9:05AM **Radiation/Nuclear Threats**  
Richard Hatchett, NIAID, National Institutes of Health, Bethesda, MD, USA
- 9:05-9:40 AM S32 **NIH/NIAID programs for radiological/nuclear medical countermeasures development**  
David R. Cassatt, Jessica M. Benjamin and Bert W. Maidment. NIAID, National Institutes of Health, Bethesda, MD, USA
- 9:40-10:10 AM S33 **Development of drug medical countermeasures through the “Animal Rule”**  
Tracy MacGill, L. Schragar, M. Mathis, F. Pelsor, A. Shapiro, L. Cress, B. Leissa and R. Roberts. Office of Counter-Terrorism and Emergency Coordination, Center for Drug Evaluation and Research, U. S. Food and Drug Administration, Rockville, MD, USA
- 10:10-10:30 AM COFFEE BREAK
- 10:30-10:50 AM S34 **Radiation countermeasure program at AFRRI**  
Terry C. Pellmar, Armed Forces Radiobiology Research Institute, Uniformed Services University, Bethesda, MD, USA
- 10:50 -11:20 AM S35 **Protection from radiation damage to the gut**  
Christopher Potten, Epistem Ltd, Manchester, UK
- 11:20-11:40 AM S36 **Single injection of novel radioprotector CBLB502 significantly increases survival of lethally irradiated non-human primates**  
Vadim Krivokrysenko<sup>1</sup>, F. Fort<sup>1</sup>, E Strom<sup>1</sup>, A. Osterman<sup>2</sup>, L. Burdelya<sup>1,3</sup>, T. Talant<sup>3</sup>, N. Tararova<sup>1,3</sup>, R. Maitra<sup>1</sup>, J. DiDonato<sup>3</sup>, A.

Gudkov<sup>1,3</sup>, and E. Feinstein<sup>1</sup>. <sup>1</sup>Cleveland BioLabs, Inc., Cleveland, OH, USA; <sup>2</sup>Burnham Institute, LaJolla, CA, USA; <sup>3</sup>Lerner Research Institute, The Cleveland Clinic Foundation, Cleveland, OH, USA

11:40-12:00 PM S37 **Defining the full potential of supportive care and cytokine therapy in the post radiation accident environment**  
Ann M. Farese<sup>1</sup>, W. Jackson III<sup>2</sup>, and T.J. MacVittie<sup>1</sup>. <sup>1</sup>University of Maryland, Greenebaum Cancer Center, Baltimore, MD, USA and <sup>2</sup>Armed Forces Radiobiology Research Institute, Bethesda, MD, USA

12:00-1:00 PM LUNCH ON YOUR OWN

## **Symposium V**

### **DRUG DELIVERY, PROBLEMS AND SOLUTIONS**

Chairperson – **Richard D. Minshall**, Center for Lung and Vascular Biology, Department of Pharmacology, **University of Illinois at Chicago**, Chicago, IL, USA

1:00-1:30 PM S49 **Biologic feedback-based delivery of cancer chemotherapeutics**  
Richard A. Gemeinhart, Department of Biopharmaceutical Sciences, University of Illinois College of Pharmacy, Chicago, IL, USA

1:30-2:00 PM S50 **Regulation of caveolae-mediated transcellular transport**  
Richard D. Minshall, Center for Lung and Vascular Biology, Department of Pharmacology, University of Illinois College of Medicine, Chicago, IL, USA

2:00-2:30 PM S51 **Targeted drug delivery using nanotechnology**  
Hayat Onyuksel, Director of Lipid Based Drug Delivery Laboratory, Department of Biopharmaceutical Sciences, University of Illinois, College of Pharmacy, Chicago, IL, USA

2:30-2:50 PM COFFEE BREAK

2:50-3:20 PM S52 **Nanoconjugate based on polymalic acid for tumor treatment**  
M. Fujita<sup>1</sup>, E. Holler<sup>2,3</sup>, N. Khazenzon<sup>1</sup>, K. Black<sup>1,3</sup>, and Julia Ljubimova<sup>1,3</sup>. <sup>1</sup>Cedar-Cinai Medical Center, Los Angeles, USA; <sup>2</sup>Universitat Regensburg, Regensburg, Germany; <sup>3</sup>Arrogene, Inc., Tarzana, CA

3:20-3:50 PM S53 **Targeted drug delivery to vascular endothelium**  
Vladimir R. Muzykantov, Targeted Therapeutics Program of Institute of Translational Medicine and Therapeutics, Department of Pharmacology, University of Pennsylvania Medical School, Philadelphia, PA, USA

3:50-4:20 PM Symposium general discussion

4:20-4:30 PM COFFEE BREAK

**Symposium VIII**  
**GENETIC AND ENVIRONMENTAL RISK OF BRAIN TUMORS**

Co-Chairs: **Faith Davis**, Ph.D., Epidemiology and Biostatistics, **University of Illinois at Chicago**, IL, USA; **Nicholas Vick**, M.D., Ph.D., Department of Neurology, **Evanston Northwestern Healthcare**, IL, USA

1:00-1:30 PM **Introduction: Measurement of genetic pathways and biomarkers of exposure in Gene-Environment Interaction Studies**  
Faith Davis, University of Illinois at Chicago, IL, USA

1:30-2:00 PM **Potential GST and Cyp Gene pathways relevant to known animal neurocarcinogen exposures**  
Francis Ali-Osman, Duke University, USA

2:00-2:30 PM **Potential DNA repair gene pathways relevant to known animal neurocarcinogen exposures**  
Bridget McCarthy, University of Illinois at Chicago, IL, USA

2:30-2:50 PM COFFEE BREAK

2:50-3:50 PM **Potential for Assessing Human Exposures to known animal neurocarcinogens**  
Serap Erdal, University of Illinois at Chicago, IL, USA

3:50-4:20 PM **Symposium general discussion/Closing remarks** by Dr. Nicholas Vick

4:20-4:30 PM COFFEE BREAK

4:30-6:00 PM **PANEL DISCUSSION SESSION II. NEW POLICES AND APPROACHES FOR DRUG DEVELOPMENT AND SAFETY ASSESSMENT: FDA PERSPECTIVE**

Moderator: **David Jacobson-Kram**, Ph.D., D.A.B.T., Associate Director for Pharmacology and Toxicology, Office of New Drugs, Center for Drug Evaluation and Research, **U.S. FDA**

**WEDNESDAY, AUGUST 30**

**Symposium VI**  
**PROSTATE CANCER**

Chairpersons – **Gail S. Prins, Ph.D. and Alex Lyubimov, M.D., Ph.D., University of Illinois at Chicago, Chicago, IL, USA**

- 8:30-9:05 AM                      **Screening for prostate cancer – update from recent developments on randomized studies**  
Fritz H. Schröder, Department of Urology, Erasmus MC, University Medical Center, Rotterdam, The Netherlands
- 9:05-9:40 AM                      S54    **Novel animal models to study the role of growth hormone signaling in prostate carcinogenesis**  
Steven M. Swanson, Z. Wang, V.H. Ray, T. Shirai, J.E. Green, J.J. Kopchick, T.G. Unterman and G.S. Prins. University of Illinois at Chicago, Chicago, IL, USA
- 9:40-10:10 AM                      S55    **Adoptive transfer of tumor reactive TGF-beta insensitive Cd8+ T cells for cancer therapy**  
Chung Lee, Department of Urology, Northwestern University Medical School, Chicago, IL, USA
- 10:10-10:30 AM                      COFFEE BREAK
- 10:30-11:00 AM                      LB6    **The role and regulation of JNKK1/MKK4, a prostate cancer metastasis suppressor gene**  
Carrie Rinker-Schaeffer, Ph.D., University of Chicago, IL, USA
- 11:00-11:30 AM                      S56    **Selenium-containing proteins as the mediator of chemopreventive effects of selenium against prostate cancer**  
Allan M. Diamond, Department of Human Nutrition, University of Illinois at Chicago, Chicago, IL, USA
- 11:30-12:00 PM                      Symposium general discussion
- 12:00-1:00 PM                      LUNCH ON YOUR OWN

**Symposium VII**  
**FRONTIERS OF DRUG DISCOVERY AND DEVELOPMENT**

Chairperson - **J.A. Radosevich, Ph.D.**, Center for Molecular Biology of Oral Diseases, College of Dentistry, **University of Illinois at Chicago, Chicago, IL, USA**

- 8:30-9:05 AM                      S44    **Cytoskeletal disrupters as adjuvants in cancer chemotherapy**

Primal de Lanerolle, Department of Physiology and Biophysics, University of Illinois at Chicago, Chicago, IL, USA

- 9:05-9:40 AM S45 **Overview of computer-aided drug design and development (CADD): *in silico*-chemico-biological approach**  
Izet M. Kapetanovic, Division of Cancer Prevention, NCI, Bethesda, MD, USA
- 9:40-10:10 AM S46 **The role of LIMK1 in endothelial barrier function**  
Matvey Gorovoy and Tatyana Voyno-Yasenetskaya, Department of Pharmacology, College of Medicine, University of Illinois at Chicago, Chicago, IL, USA
- 10:10-10:30 AM COFFEE BREAK
- 10:30-11:00 AM S47 **Oxidized phospholipids reduce vascular leak and inflammation in the animal models of endotoxin-induced lung injury**  
<sup>1</sup>Konstantin G. Birukov, <sup>2</sup>S. Nonas, <sup>1</sup>S. Chatchavalvanich, <sup>2</sup>I. Miller, <sup>3</sup>A.V. Bocharov, and <sup>1</sup>J.G.N. Garcia, <sup>1</sup>Department of Medicine, University of Chicago, Chicago, IL, USA <sup>2</sup>Division of Pulmonary and Critical Care Medicine, Johns Hopkins University School of Medicine, Baltimore, MD, USA, <sup>3</sup>Department of Laboratory Medicine, Clinical Center, National Institutes of Health, Bethesda, MD, USA
- 11:00-11:30 AM S48 **From the gene discovery of labyrinthin to the translational application of an adenocarcinoma vaccine**  
James A. Radosevich<sup>1,2</sup> and M. Babich.<sup>2,3</sup> <sup>1</sup>Center for Molecular Biology of Oral Diseases, College of Dentistry, University of Illinois at Chicago, Chicago, IL, USA; <sup>2</sup>ImmvaRx, Inc., Sacramento, CA, USA; and <sup>3</sup>Cancer Center, University of California, Davis, CA, USA
- 11:30-12:00 PM Symposium general discussion
- 12:00-1:00 PM LUNCH ON YOUR OWN

## **Platform Session II.**

### **GENOMICS AND PROTEOMICS**

Chairperson – **Eric A.G. Blomme**, Ph.D., Department of Cellular, Molecular and Exploratory Toxicology, **Abbott Laboratories**, Abbott Park, IL, USA

- 1:00-1:30 PM S38 **siRNA mediated gene silencing: a global genome view**  
Dimitri Semizarov, Cancer Research, Global Pharmaceutical Research and Development, Abbott Laboratories, Abbott Park, IL, USA
- 1:30-2:00 PM S39 ***In vitro* target validation using RNA interference**

K.T. Landschulz, Metabolic Disease Research Pharmacology, Abbott Laboratories, Abbott Park, IL, USA

- 2:00-2:30 PM S40 **Opportunities and challenges of siRNA-based therapies**  
William E. Kohlbrenner, Cancer Research, Global Pharmaceutical Research and Development, Abbott Laboratories, Abbott Park, IL, USA
- 2:30-2:50 PM COFFEE BREAK
- 2:50-3:20 PM S41 **Use of toxicogenomics in drug discovery**  
Eric A.G. Blomme, Y. Yang, and J.F. Waring, Department of Cellular, Molecular and Exploratory Toxicology, **Abbott Laboratories**, Abbott Park, IL, USA
- 3:20-3:50 PM S42 **Development of novel biomarkers for the detection of colorectal cancer**  
A.-K. Fentz,<sup>1</sup> M. Spörl,<sup>1</sup> J. Spangenberg,<sup>1</sup> H.J. List,<sup>1</sup> C. Zornig,<sup>2</sup> A. Dörner,<sup>4</sup> P. Layer,<sup>3</sup> H. Juhl,<sup>1</sup> and Kerstin A. David<sup>1</sup>. <sup>1</sup>Indivumed GmbH, Center for Cancer Research at the Israelitisches Krankenhaus, Hamburg, Germany <sup>2</sup>Department of Surgery and <sup>3</sup>Internal Medicine of the Israelitisches Krankenhaus, Hamburg, Germany <sup>4</sup>Diakonie-Clinic Alten Eichen, Department of Surgery, Hamburg, Germany
- 3:50-4:20 PM S43 **Pharmacogenics of the ABC drug transporters**  
Caroline G. Lee, Department of Biochemistry, Yong Loo Lin School of Medicine, National University of Singapore and Division of Medical Sciences, National Cancer Centre, Singapore
- 4:20-4:40 PM Platform II general discussion
- 4:40-5:00 PM STUDENT BEST POSTER AWARD  
CLOSING OF THE CONFERENCE.