



## Environmental Carcinogenesis: Potential Pathway to Cancer Prevention

June 22-24, 2019 | Charlotte, NC

**AACR**  
American Association  
for Cancer Research\*

### Poster Session Sunday, June 23, 2019 5:45-7:45 p.m.

**A01 Environmentally prevalent polycyclic aromatic hydrocarbons elicit co-carcinogenic properties in human and mouse lung cells.** Alison K. Bauer. University of Colorado Anschutz Medical Campus, Aurora, CO.

**A02 A case for re-examination of the contribution of nitro-PAHs to combustion-product carcinogenesis.** Gary Blackburn. PetroLabs Inc., Warminster, PA.

**A03 Pre-conception paternal DDT exposure and programming of metabolic dysfunction and breast cancer in offspring.** Sonia de Assis. Georgetown University Medical Center, Lombardi Comprehensive Cancer Center, Washington, DC.

**A04 Geographic and socioeconomic disparities in exposure to carcinogenic air toxics in St. Louis, Missouri.** Christine Ekenga. Washington University in St. Louis, St. Louis, MO.

**A05 Cumulative risk, key characteristics of carcinogens, and hallmarks of cancer analysis for carcinogenic drinking water contaminants.** Sydney S Evans. Environmental Working Group, Washington, DC.

**A06 Impact of cigarette smoke exposure on acute myeloid leukemia progression.** Mary Figueroa. University of Texas MD Anderson Cancer Center, Houston, TX.

**A07 North Carolina environmental quality is associated with distant/metastatic breast cancer: evidence for rural-urban disparities.** Larisa M Gearhart-Serna. Duke University, Durham, NC.

**A08 Cadmium elicits a differential cytotoxic response in triple negative breast cancer cells.** Sherette Godfrey. North Carolina A&T State University, Greensboro, NC.

**A09 Characterization of both topoisomerase II-dependent and –independent induction of DNA double-strand breaks, damage signaling pathways, and chromosomal translocations by sub-groups of bioflavonoids.** Donna A Goodenow. University of North Carolina at Charlotte, Charlotte, NC.

**A10 Gallbladder cancer disparities in New Mexico: Examining the role of environmental heavy metal exposures as a driver of gallbladder epithelial signaling dysfunction.** Rama R Gullapalli. University of New Mexico Health Sciences Center, Albuquerque, NM.

**A11 Neighborhood clustering of bladder cancer incidence in Utah: Analyzing census data linked to cancer records.** Heidi A Hanson. University of Utah, Salt Lake City, Utah.

**A12 Promotion of pancreatic cancer by perfluorooctanoic acid (PFOA).** Barbara A Hocevar. Indiana University, Bloomington, IN.



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**A13 Papillary thyroid cancer clusters in North Carolina 1997-2017.** Kate Hoffman. Duke University, Durham, NC.

**A14 Infancy and childhood infections and pubertal timing in the LEGACY Girls' Study.** Yun Huang. Columbia University Medical Center, New York, NY.

**A15 Prenatal exposure to polycyclic aromatic hydrocarbons and breast tissue composition in adolescent girls.** Rebecca D Kehm. Columbia University, New York, NY.

**A16 Environmental exposure to persistent organic pollutants (POPs) and primary colorectal cancer risk: A case-cohort study in a community-based perspective cohort.** Jinsun Kim. National Cancer Center, Goyang-si, Republic of Korea.

**A17 In utero DDT exposure and breast density in early menopause by maternal history of breast cancer.** Jasmine A McDonald. Mailman School of Public Health and Herbert Irving Comprehensive Cancer Center, Columbia University Irving Medical Center, New York, NY.

**A19 Interactions between tobacco smoke chemicals in rodent tumor models.** Lisa A. Peterson. University of Minnesota, Minneapolis, MN.

**A20 Dietary ingestion of aristolochic acid: Mechanisms of exposure.** Thomas Rosenquist. Department of Pharmacological Sciences, School of Medicine, Stony Brook University, Stony Brook, NY.

**A21 Environmental exposure to asbestos and mesothelioma in Colombia: A scoping review.** Otto H Sanchez. University of Ontario Institute of Technology, Oshawa, Ontario, Canada.

**A22 Unconventional natural gas operations and childhood cancer development in a Pennsylvania birth cohort.** Shaina L. Stacy. University of Pittsburgh, Pittsburgh, PA.

**A23 The ratio between arsenic and cadmium concentrations in urine is associated with breast cancer in a pilot study of women living in rural communities.** L. Joseph Su. University of Arkansas for Medical Sciences, Little Rock, AR.

**A24 Exploration of esophageal cancer etiology using comprehensive DNA adduct analysis (DNA adductome analysis).** Yukari Totsuka. National Cancer Center Research Institute, Tokyo, Japan.

**A25 Arsenic and benzo(a)pyrene co-exposure synergizes in inducing cancer stem cell-like property and lung tumorigenesis.** Zhishan Wang. University of Kentucky, Lexington, KY.

**A26 Mechanism of hexavalent chromium carcinogenesis--The role of epigenetic deregulation-caused oncogene activation.** Chengfeng Yang. University of Kentucky, Lexington, KY.

**A27 Bisphenol S induces proestrogenic effect *in vitro* and modifies mammary development dynamics after in utero exposure.** Xiaohe Yang. Biomedical/Biotechnology Research Institute, North Carolina Central University, Kannapolis, NC.



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**A28 Genomic UV-hypersensitive sites as sentinels for personal UV exposure.** Douglas E. Brash. Yale School of Medicine, New Haven, CT.

**A29 Silicone-based wristband passive samplers in the detection of firefighter occupational carcinogenic exposures.** Alberto J Caban-Martinez. University of Miami, Miller School of Medicine, Miami, FL.

**A30 Single-cell RNA-sequencing analysis of estrogen- and the endocrine-disrupting chemical-induced mouse mammary gland reorganization after surgical menopause.** Shiuan Chen. Beckman Research Institute of City of Hope, Duarte, CA.

**A31 Latent class analysis of multi-pollutant exposure.** Terry Hyslop. Duke University, Durham, NC.

**A32 Non-invasive epidermal sampling as a means of genomic UV dosimetry.** Kenneth Y Tsai. Moffitt Cancer Center, Tampa, FL.

**A33 Untapped biospecimens and novel mass spectrometry scanning techniques for DNA adductomics.** Robert J. Turesky. University of Minnesota, Minneapolis, MN.

**A34 Cancer prevention in practice at FDA.** Rosalie K Elespuru. US Food and Drug Administration, Silver Spring, MD.

**A35 Fine particulate matter and mortality among pediatric, adolescent, and young adults with cancer.** Judy Y Ou. Huntsman Cancer Institute, University of Utah School of Medicine, Salt Lake City, UT.

**A36 Assessment of knowledge, attitude, and practice and associated factors towards palliative care among health care providers to the pediatric oncology patients in southern Philippines.** Jayson Cagadas Pasaol. National Cancer Center Graduate School of Cancer Science and Policy, Goyang City, Gyeonggi-do, South Korea.

**A37 An integrative mouse model of gastric premalignancy that combines early genomic alterations with disease-relevant carcinogenic exposure.** Nilay Sethi. Dana-Farber-Cancer Institute, Boston, MA.

**A38 A breast cancer primary prevention plan for the state of California.** Nancy Buermeyer. Breast Cancer Prevention Partners, San Francisco, CA.

**A39 6-gingerol, a chemo-preventive phytochemical as speed breaker in inflammatory and stress signaling cascade triggered by benzo a pyrene and dextran sulphate sodium- mediated colorectal cancer in mice.** Ebenezer O Farombi. University of Ibadan, Ibadan, Nigeria.

**A40 Induction of oxidative/nitrosative stress, pro-inflammatory cytokines and dysregulation of wnt/beta-catenin signaling by benzo (a) pyrene in colons of balb/c mice.** Ebenezer O Farombi. University of Ibadan, Ibadan, Nigeria.



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**A41 assessing the effect of glucobrassicin-rich brussels sprouts on the metabolism of deuterated phenanthrene: developing food-based chemoprevention of tobacco-related lung cancer.** Naomi Fujioka. University of Minnesota, Minneapolis, MN.

**A42 The search for new targets for mitigation of metal toxicity based on molecular pathways of action: A case study using cadmium and iron.** Anuradha Mudipalli. USEPA, RTP, NC.

**A43 Dietary advanced glycation end products (AGEs) and breast cancer in the prostate, lung, colorectal and ovarian cancer screening trial (PLCO).** Omonefe O Omofuma. University of South Carolina, Columbia, SC, USA.

**A44 Exposure-based assessment and economic valuation of adverse birth outcomes and cancer risk due to nitrate in United States drinking water.** Alexis Temkin. Environmental Working Group, Washington, DC.

**A45 Diet-induced obesity and caloric restriction weight loss in Diversity Outbred (DO) mice: An experimental preclinical translational model for the investigation of pathways for prevention of obesity and cancer.** Melissa VerHague. UNC NRI, Kannapolis, NC.

**A46 Dietary weight loss and sulindac treatment each reverse obesity-associated inflammation and tumorigenesis in a mouse model of carcinogen-induced colon cancer.** Stephen D Hursting. University of North Carolina, Chapel Hill, NC.

**A47 PFOA and zeranol exposure during puberty affect the transcriptomic profile of the rat mammary gland.** Nhi M Dang. Fox Chase Cancer Center-Temple Health, Philadelphia, PA.

**A48 Perinatal DDT exposure shortens latency of mouse mammary tumorigenesis.** Michele La Merrill. University of California, Davis, CA.

**A49 Induction of the lymphomagenic enzyme activation induced cytidine deaminase (AID) upon in vitro exposure to phenylurea herbicides.** Rebecca J Leeman-Neill. Columbia University Medical Center, New York, NY.

**A50 Glyphosate as a potential carcinogen for multiple myeloma.** Yong Li. Cleveland Clinic, Cleveland, OH.

**A51 Mechanistic pathways for breast carcinogens can highlight early effects as predictive endpoints for chemical safety testing: Case studies for ionizing radiation and for in utero exposure to estrogens such as DES.** Ruthann A Rudel. Silent Spring Institute, Newton, MA.

**A52 Targeted expression profiling identifies mechanisms of potential breast carcinogens.** Ruthann A Rudel. Silent Spring Institute, Newton, MA.

**A53 Demonstration of the carcinogenicity of a flexible tangled multi-walled carbon nanotube in the rat lung.** Hiroyuki Tsuda. Nanotoxicology Project, Nagoya City University, Nagoya, Japan.



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**A54 Case-based causality: An application of artificial intelligence to environmental carcinogenesis.** Douglas L Weed. DLW Consulting Services LLC, Salt Lake City, UT.

**A55 Identification of the novel regulatory role of Hsp70 co-chaperone Ydj1/Hdj2 on oncoprotein Ribonucleotide reductase complex.** Nitika. University of North Carolina Charlotte, Charlotte, NC.