Dr. Herbert and Nicole Wertheim Leadership in Healthcare and Medicine Lectureship

Translating Laboratory Findings Towards Assessment of Tobacco-related Cancer Risk in Populations and Individuals

David W. Hein

Professor at the University of Louisville
Department of Pharmacology & Toxicology

Date: 01-20-2016
Time: 1:00pm-2:00pm
Venue: AHC2 170

Biography

David W. Hein serves as Vice Provost for Academic Strategy, Peter K. Knoefel Endowed Chair of Pharmacology, Professor and Chairman of the Department of Pharmacology & Toxicology, and Distinguished University Scholar at the University of Louisville. He also directs the National Institutes of Health-funded training program in Environmental Health Sciences and the National Cancer Institute-funded Cancer Education Program. Dr. Hein previously served as the founding director of the Minority Biomedical Research Support Program at Morehouse School of Medicine and chaired Departments of Pharmacology & Toxicology at Morehouse School of Medicine and the University of North Dakota School of Medicine and Health Sciences prior to his appointment at the University of Louisville in 1997. Numerous students have completed thesis and dissertation research training in his laboratory and he contributes towards instruction of undergraduate, graduate and health professional students.

Abstract

Traditional epidemiology studies of exposure and disease become much more powerful through the application of laboratory research data. Molecular epidemiology investigations assess individual risk using biomarkers for exposure, susceptibility and response. Genetically-determined acetylation polymorphisms have been associated with increased cancer risk in smokers, but the reports are inconsistent. Functional characterizations of the single nucleotide polymorphisms (SNPs), haplotypes and genotypes are necessary to understand functional relationships between genotype and phenotype

The power of these types of laboratory research studies in the interpretation of individual risk will be illustrated by describing the genetic susceptibility of the acetylation polymorphism (catalyzed by N-acetyltransferase 2) in urinary bladder and breast cancer risk in tobacco smokers.

Co-sponsor information.

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