



David W. Hein, Ph.D.

Professor and Chair
Department of Pharmacology and
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Scholarly Activities:

Dr. Hein serves as Associate University Provost for Strategic Planning and Chair of the Department of Pharmacology and Toxicology. His research program includes studies of the molecular epidemiology of cancer susceptibility, pharmacogenetics, genomics, personalized medicine, and functional genomics. His research in molecular epidemiology identifies individuals genetically susceptible to the development of cancer from environmental and occupational chemicals in order to focus treatment and prevention public health strategies on those at greatest risk. His research in pharmacogenetics/genomics and personalized medicine improves our understanding of the genetic causes for drug failure and/or drug toxicity in order to optimize clinical drug therapy for each individual patient. His research in functional genomics improves understanding of the mechanistic and clinical consequences of genetic variation in the biotransformation of carcinogens and drugs. He serves as director of funded training programs in environmental health sciences and cancer for pre-doctoral, post-doctoral, undergraduate and professional students.



Grants:

Role in Project: Principal Investigator

Title: UofL Environmental Health Sciences Training Program

Funding Agency: NIH/NIEHS (T32- ES011564)

Project Period: July 1, 2009 to June 30, 2015

Project Award: \$2,084,094 (total)

Role in Project: Principal Investigator

Title: University of Louisville Cancer Education Program

Funding Agency: NIH/NCI (R25- CA134283)

Project Period: September 14, 2011 to August 31, 2016

Project Award: \$1,543,610 (total)

Principal Investigators: Drs. Prabhu, Prough, and Srivastava (University of Louisville)

Role: Faculty Mentor

Title: Summer Environmental Health Sciences Training Program

Funding Agency: NIEHS (T35- ES014559)

Project Period: April 1, 2011 to March 31, 2016

Project Award: \$175,814 (total)

Publications (2013-2014):

Gibson, T.M., Smedby, K.E., Skibola, C.F., **Hein**, D.W., Slager, S.L., De Sanjose, S., Vajdic, C.M., Zhang, Y., Chiu, B.C., Wang, S.S., Hjalgrim H., Nieters, A., Bracci, P.M., Krickler, A., Zheng, T., Kolar, C., Cerhan, J.R., Darabi, H., Becker, N., Conde, L., Holford, T.R., Weisenberger, D.D., De Roos, A.J., Butterbach, K., Riby, J., Cozen, W., Benavente, Y., Palmers, C., Holly, E.A., Sampson, J.N., Rothman, N., Armstrong, B.K., and Morton, L.M.: Smoking, variation in *N*-acetyltransferase 1 (*NAT1*) and 2 (*NAT2*), and risk of non-Hodgkin lymphoma: a pooled analysis within the InterLymph consortium. *Cancer Causes and Control* 24: 125-134, 2013. (Epub November 18, 2012) (PubMed) [PMCID: PMC3529854]

Fu, Z., Shrubsole, M.J., Li, G., Smalley, W.E., **Hein**, D.W., Cai, Q., Ness, R.M., and Zheng, W.: Interaction of cigarette smoking and carcinogen-metabolizing polymorphisms in the risk of colorectal polyps. *Carcinogenesis* 34: 779-786, 2013. (Epub January 8). (PubMed) [PMCID: PMC3616674]

McDonagh, E.M., Boukouvala, S., Akillu, E., **Hein**, D.W., Altman, R.B., and Klein, T.E.: PharmGKB Very important pharmacogene (VIP) for *N*-acetyltransferase 2. *Pharmacogenetics and Genomics* 24: 409-425, 2014. (Epub June 2). (PubMed) [PMCID: PMC4109976]