

Carcinogen Identification Committee Meeting

February 27, 2024

Selected References on Enzyme Polymorphisms

Charkoftaki, G., D. C. Thompson, J. P. Golla, R. Garcia-Milian, T. T. Lam, J. Engel and V. Vasiliou (2019). "Integrated multi-omics approach reveals a role of ALDH1A1 in lipid metabolism in human colon cancer cells." *Chem Biol Interact* 304: 88-96.

Chen, Y., G. Li, S. Yin, J. Xu, Z. Ji, X. Xiu, L. Liu and D. Ma (2007). "Genetic polymorphisms involved in toxicant-metabolizing enzymes and the risk of chronic benzene poisoning in Chinese occupationally exposed populations." *Xenobiotica* 37(1): 103-112.

Ginsberg, G., K. Angle, K. Guyton and B. Sonawane (2011). "Polymorphism in the DNA repair enzyme XRCC1: utility of current database and implications for human health risk assessment." *Mutat Res* 727(1-2): 1-15.

Ginsberg, G., K. Guyton, D. Johns, J. Schimek, K. Angle and B. Sonawane (2010). "Genetic polymorphism in metabolism and host defense enzymes: implications for human health risk assessment." *Crit Rev Toxicol* 40(7): 575-619.

Guengerich, F. P. (1998). "The Environmental Genome Project: functional analysis of polymorphisms." *Environ Health Perspect* 106(7): 365-368.

Guengerich, F. P. (2008). "Cytochrome p450 and chemical toxicology." *Chem Res Toxicol* 21(1): 70-83.

Habil, M. R., R. A. Salazar-Gonzalez, M. A. Doll and D. W. Hein (2023). "Effect of N-acetyltransferase 2 genetic polymorphism on 4,4'-methylenebis(2-chloroaniline)-induced genotoxicity and oxidative stress." *Arch Toxicol* 97(6): 1773-1781.

Koppaka, V., D. C. Thompson, Y. Chen, M. Ellermann, K. C. Nicolaou, R. O. Juvonen, D. Petersen, R. A. Deitrich, T. D. Hurley and V. Vasiliou (2012). "Aldehyde dehydrogenase inhibitors: a comprehensive review of the pharmacology, mechanism of action, substrate specificity, and clinical application." *Pharmacol Rev* 64(3): 520-539.

Marchitti, S. A., C. Brocker, D. Stagos and V. Vasiliou (2008). "Non-P450 aldehyde oxidizing enzymes: the aldehyde dehydrogenase superfamily." *Expert Opin Drug Metab Toxicol* 4(6): 697-720.

Matsumoto, A., V. Vasiliou, T. Kawamoto, K. Tanaka and M. Ichiba (2014). "Ethanol reduces lifespan, body weight, and serum alanine aminotransferase level of aldehyde dehydrogenase 2 knockout mouse." *Alcohol Clin Exp Res* 38(7): 1883-1893.

Rendic, S. and F. P. Guengerich (2012). "Contributions of human enzymes in carcinogen metabolism." *Chem Res Toxicol* 25(7): 1316-1383.

Rendic, S. and F. P. Guengerich (2015). "Survey of human oxidoreductases and cytochrome P450 enzymes involved in the metabolism of xenobiotic and natural chemicals." *Chem Res Toxicol* 28(1): 38-42.

Walker, K., G. Ginsberg, D. Hattis, D. O. Johns, K. Z. Guyton and B. Sonawane (2009). "Genetic polymorphism in N-Acetyltransferase (NAT): Population distribution of NAT1 and NAT2 activity." *J Toxicol Environ Health B Crit Rev* 12(5-6): 440-472.

Wang, Y., Z. Popovic, G. Charkoftaki, R. Garcia-Milian, T. T. Lam, D. C. Thompson, Y. Chen and V. Vasiliou (2023). "Multi-omics profiling reveals cellular pathways and functions regulated by ALDH1B1 in colon cancer cells." *Chem Biol Interact* 384: 110714.

Yang, S. M., N. J. Martinez, A. Yasgar, C. Danchik, C. Johansson, Y. Wang, B. Baljinnyam, A. Q. Wang, X. Xu, P. Shah, D. Cheff, X. S. Wang, J. Roth, M. Lal-Nag, J. E. Dunford, U. Oppermann, V. Vasiliou, A. Simeonov, A. Jadhav and D. J. Maloney (2018). "Discovery of orally bioavailable, quinoline-based aldehyde dehydrogenase 1A1 (ALDH1A1) inhibitors with potent cellular activity." *J Med Chem* 61(11): 4883-4903.