

Meet the Network and Community Leadership
Network: Translational & Precision Medicine (TPM)
Community: Special Populations (SPO)



Community Chair:
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Erica L. Woodahl, Ph.D. is an Associate Professor at the University of Montana in the Department of Biomedical and Pharmaceutical Sciences. Erica Woodahl received a B.S. in Biochemistry at the University of Notre Dame in 1998 and a Ph.D. from the Department of Pharmaceutics at the University of Washington in 2004. She completed a postdoctoral fellowship in clinical pharmacokinetics at the Fred Hutchinson Cancer Research Center in Seattle, Washington. She joined the faculty at the University of Montana in 2007 as an Assistant Professor and was promoted to Associate Professor in 2012. The research in her lab focuses on pharmacogenomics in drug-metabolizing enzymes and drug transporters to understand interindividual variability in drug response and toxicity. There are two main areas of emphasis in the lab. The first major focus of the lab is to evaluate pharmacogenomics in genes that encode drug transporters. The main drug transporter of interest is P-glycoprotein (ABCB1/MDR1) that is a member of the ATP-binding cassette (ABC) superfamily of transporters. Genetic variability in P-glycoprotein may alter the distribution of drugs into target cells and tissues, the development of multidrug resistance in cancer, and the susceptibility to neurodegenerative diseases such as Parkinson's disease. We are using a combination of computational, lipid-based, cell-based, and in vivo models to study the functional consequence of genetic variation in P-glycoprotein. The second major focus of the lab is to study pharmacogenomics in American Indian populations. The research includes the identification and characterization of genetic variation in genes that predict drug response and toxicity, as well as community-based participatory research to aid in the translation of pharmacogenomic research into the clinic. This research is part of the Northwest-Alaska Pharmacogenomics Research Network (NWA-PGRN), whose goals are to address pharmacogenomics research in American Indian and Alaska Native populations.