

# 5<sup>th</sup> World Congress on **Bioavailability and Bioequivalence** Pharmaceutical R&D Summit

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## **Indoor air quality interventions with American Indian populations: Community capacity building towards public health intervention development for indigenous communities**

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Indoor air quality and biomass smoke within indigenous communities is an emerging topic of significant public health concern. Wood stove use is highly prevalent within many reservation communities and biomass smoke associated with cooking and heating has been associated with chronic health problems. Studies conducted in rural and Native American communities examining indoor levels of fine particulate matter (PM<sub>2.5</sub>) have frequently found levels that exceeded current health-based air quality standards. Native elderly populations are particularly susceptible to reduced lung function or chronic conditions such as asthma, COPD, and bronchitis. Research conducted by our team has demonstrated that improving the efficacy of household level interventions (e.g., air filtration units) can reduce indoor exposures to biomass smoke and therefore lead to improved health outcomes. The findings from these interventions and qualitative input from wood stove experts, suggests that education interventions related to demonstrated best-practices in wood stove operation and fuel efficiency can translate to low-cost and sustainable strategies for reducing indoor biomass combustion exposures. This recently funded project is guided by community-based participatory research principles in order to create more effective and culturally centered intervention methods to improve indoor air quality. The household level intervention is coupled with a community level intervention that was developed and initiated by tribal stakeholders. This presentation will provide information about environmental concerns within indigenous communities and describe the initial work to culturally adapt the approaches and initial intervention planning. The presentation will seek to advance knowledge regarding community-based efforts to increase the translational public health impact of indoor air quality educational materials and interventions.

### **Biography**

Annie Belcourt is an American Indian Assistant Professor in the College of Health Professions and Biomedical Sciences at the University of Montana's Pharmacy Practice and School of Public and Community Health Sciences Departments (enrolled tribal member of the Three Affiliated Tribes: affiliation *Blackfeet, Chippewa, Mandan & Hidatsa*). Raised on the Blackfeet reservation, she is an alumnus of Browning High School and the University of Montana. Her Doctorate is in Clinical Psychology. Research and clinical priorities include mental health disparities, trauma, posttraumatic stress reactions, risk, resiliency, and psychiatric disorder within the cultural context of American Indian communities. She has conducted grant-funded collaborative research projects with Native communities at UM and during work at the University of Colorado Denver's Centers for American Indian and Alaska Native Health. Her publications have appeared in the *American Journal of Public Health*, *Psychological Bulletin*, *American Psychologist*, *Educational and Psychological Measurement*, and *Transcultural Psychiatry*.

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