Cook, P.M., Comparative Elongated Mineral Particle Toxicology & Erionite's Apparent High Potency for Inducing Mesothelioma**,** State of the Science Forum to Discuss Human Health Impacts of Exposures to Erionite, National Institute of Environmental Health Sciences, RTP, NC, Oct 15, 2011.

Abstract:

Recent NHEERL research under EPA's Libby Action Plan has determined that elongated particle relative potency for rat pleural mesothelioma is best predicted on the basis of total external surface area (TSA) of slightly acid leached test samples which simulate particle bio-durability and size/shape changes that occur shortly after intrapleural or intratracheal installation. Elongated erionite particles from both Karain, Turkey and Rome, Oregon, however are orders of magnitude more potent than the general TSA model predicts. Among zeolites, this extreme potency is presently only established with erionite. The potential for predicting broader zeolite inhalation risks depends in part on research to determine if erionite's exceptional potency is attributable to high effective surface area provided by its internal crystal structure and consequent production of free radicals *in vivo*.