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NIEHS and NCL/NCI Announce Partnership to Study Nanotechnology Safety

Engineered nanomaterials (ENMs) – man made products between one and approximately 100 nanometers in size – are increasingly appearing in a host of consumer products ranging from electronics to cosmetics. As ENMs are engineered into more and more products with widespread use, government labs are being called upon to proactively investigate ENM interactions with biological systems and the environment.

The National Cancer Institute (NCI)'s Nanotechnology Characterization Laboratory (NCL), part of NCI's Alliance for Nanotechnology in Cancer, is an accomplished source for testing nanomaterials for biomedical applications and is now partnering with the National Institute of Environmental Health Sciences (NIEHS) to characterize ENMs used in risk/hazard studies. Through a formal collaboration with the NIEHS, NCL will thoroughly characterize the physicochemical properties of nanomaterials as part of a new \$13MM NIEHS program focused on developing an understanding of how ENM physicochemical characteristics influence their molecular interactions with biological matrices and elicit biological responses.

“NCL and NIEHS share common goals related to nanotechnology safety,” said Dr. Scott McNeil, the NCL's Director. “NIEHS and NCL are both interested in understanding how nanomaterial properties influence their biological behavior. This collaboration allows NIEHS and NCI to benefit from each other's expertise.”

The NCI Alliance for Nanotechnology in Cancer is a major NCI program aimed at accelerating the translation of nanotechnology-derived cancer treatments into clinical applications. The Alliance supports the research of hundreds of investigators who are using nanotechnology as the basis of new products for imaging, early detection, and cancer therapy. The NCL conducts preclinical assessment of nanomaterials, and is a collaboration among NCI, NIST and the FDA. The NCL is operated by SAIC-Frederick through the NCI's Federally Funded Research & Development Center (FFRDC) and performs nanomaterial safety and toxicity testing *in vitro* (in the laboratory) and in animal models. To date, the NCL has evaluated more than 200 different nanoparticles and serves as a national resource and knowledge base for the nanotech research community.