## **Present Status of Carcinogenic Risk Evaluation of Nanomaterials and Its Public Acceptance**

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Engineered nanoparticles (NP), defined as particles less than 100nm in diameter, have recently been developed as innovative materials because of their unique chemical and physical properties. Since some NP have been produced and introduced into the market before a suitable framework for their risk management was established, it is urgently important to conduct NP risk assessment, and this assessment should not be subordinate to their commercial production. An overview of risk evaluation results, including larger size particles, clearly indicates that titanium dioxide  $(TiO_2)$  and carbon black (CB), both NP and larger size particles, are carcinogenic to the lung of female rats (IARC: Group 2B, Possibly carcinogenic to humans). The data for fullerenes and carbon nanotubes (CNT) are currently insufficient to evaluate their risk. Available subchronic toxicity data indicate that NP were found to form aggregates and agglomerates in the tissue. causing foreign body reaction with macrophages which produced DNA-damaging oxygen radical species (ROS). These findings indicate that careful long-term tests are indispensable because of the similarity of their biological effects to asbestos, a potent carcinogen rats (IARC: Group 1, Carcinogenic to humans). The safety of our environment can be secured by the balanced function of three constituting elements, risk assessment, risk management and risk communication. Without scientifically reliable risk assessment, other two factors does not function properly. In this regard, it is of primary importance to conduct risk assessment before public acceptance of NP hazard risk can be considered.