

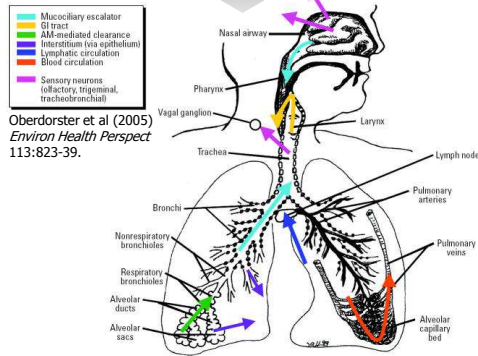
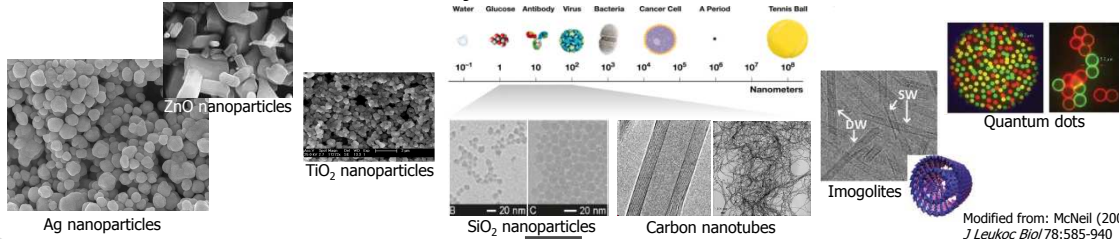
**Physico-chemical properties of nanomaterials
that determine their toxicity**



**Airborne
particles
and nanomaterials**

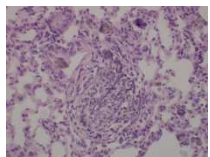


Nanoworld: objects with at least 1 dimension ≤ 100 nm



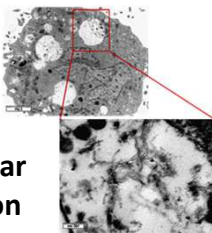
Pulmonary toxicity

**Mechanism-based
NM-adapted procedures**



Bionpersistence

**NM
solubility**



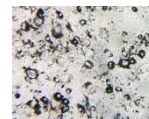
**Intracellular
localization**

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**Mechanism-based
NM-adapted procedures**



Cytotoxicity

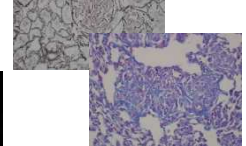


**Fibroblast
stimulation**

**Inflammatory
activities**



**Extracellular
matrix**



Genotoxicity

**INFLAMMATION
FIBROSIS
CANCER**

**Predicting toxicity
Designing safer NM**