Panel 5:
Trends in Exposure and Effects Modeling and Risk Assessment

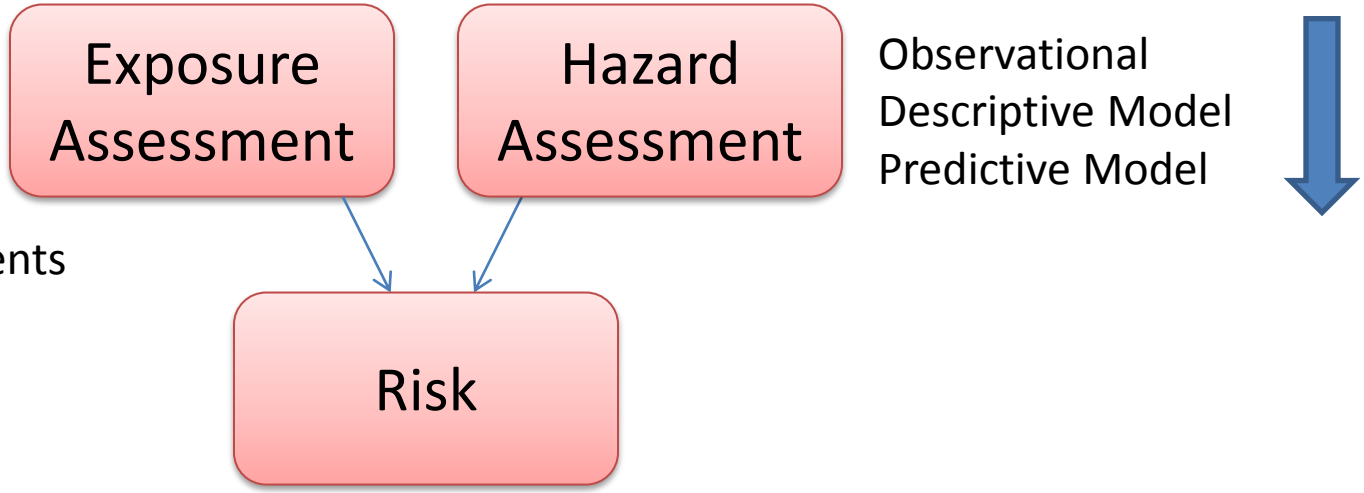
Elizabeth Casman, Ph.D.
Dept. of Engineering & Public Policy, Carnegie Mellon University
Bruce Johnson, Ph.D.
Program Director, Environmental Chemical Sciences Program, NSF

2013 NSF Nanoscale Science and Engineering Grantees Conference:
Trends in Environment and Nanomanufacturing, December, 5, 2013

Risk Assessment for Nanoparticles

Goal: to quantify the severity of some hazard and the probability that it will occur.

Sub-cellular , Cellular, Organism, Population, or Ecosystem



Observational
Descriptive Model
Predictive Model

Relevant:
Environmental forms
Environmental compartments
Timescales

- State of the science of exposure and hazard modeling for nanomaterials
- Key questions we face going forward

Mark Wiesner, Ph.D., P.E., F.ASCE
Professor of Civil & Environmental Engineering
Duke University
Director, Center for the Environmental Implications of NanoTechnology (CEINT)

Andre Nel, M.B.Ch.B., Ph.D.
Professor of Medicine
California NanoSystems Institute, UCLA
Director, UC Center for Environmental Implications of Nanotechnolgy (CEIN)

Rebecca Klaper, Ph.D.
Associate Professor, School of Freshwater Sciences
University of Wisconsin-Milwaukee
Center for Sustainable Nanotechnology
Director, The Great Lakes Genomics Center