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NANOMEDICINE FOCUSED ON SINGLE CELL LEVEL AND NANOSENSORS
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**SEVERAL NANOTECHNOLOGY TRENDS, INCLUDING IN NANOMEDICINE
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Abstract

The affirmation of nanotechnology in the economy has been envisioned into three main development stages: *Nano 1* (~ 2000-2010) focused on uncovering phenomena at the nanoscale and semi-empirical synthesis of nanocomponents; *Nano 2* (~2010-2020) on science-based nanosystem integration for fundamentally new products; and *Nano 3* (~2020-2030) on new nanosystem architectures and converging technologies platforms. This presentation will focus on several current research and development trends in the United States using convergence principles to facilitate the emergence of nanotechnology and nano-inspired converging technologies. Nanotechnology contribution to the NSF 10 Big Ideas will be outlined, including various aspects of nanomedicine. The progress since the previous NSF and NNI reports on nanotechnology research (www.wtec.org/nano2/; www.nano.gov) and convergence (www.wtec.org/NBIC2-report; www.nsf.gov/nano) will be discussed.