

Pharmaceutical Nanotechnology and Nanomedicine

September 16, 2022 | Webinar

Pushing Biomaterial Boundaries: Nanomedicine, Global Warming, Tissue Engineering, Fighting COVID-19 and More

Thomas J. Webster

Interstellar Therapeutics, Boston,
USA

Biomaterials are composed of some of the same materials as those used in non-medical applications (such as automobile, aerospace, consumer goods, etc.). While these other fields have moved away from using materials that are not environmentally friendly (such as those which contribute to greenhouse gases, are not environmentally degradable, have a large carbon footprint, etc.), the medical device community continues to use **non-environmentally** friendly plastics, metals, and other materials throughout medicine. This is despite the fact that numerous agencies have found that medical devices contribute to a large component of waste causing greenhouse gases. This is also despite the fact that plastics have been predicted to contribute 2.8 gigatons of CO₂ emissions by 2050, up from 850 million metric tons of greenhouse gases in 2019 with only 16% of plastics currently being recycled. This presentation will highlight the current failures of the medical device industry in promoting the environmentally safe production as well as the use of products that can decrease greenhouse emissions. It will also highlight recent research on the use of natural as well as **biodegradable materials** for a wide range of medical applications. Most importantly, it will highlight that we need a paradigm shift in all fields, not just non-medical fields but most importantly in medical fields, to reduce greenhouse emissions to reduce global warming.

Biography

Thomas J. Webster's (H index: 111; Google Scholar) degrees are in chemical engineering from the **University of Pittsburgh** (B.S., 1995; USA) and in biomedical engineering from RPI (Ph.D., 2000; USA). He has served as a professor at Purdue (2000-2005), Brown (2005-2012), and Northeastern (2012-2021; serving as Chemical Engineering Department Chair from 2012 - 2019) Universities and has formed over a dozen companies who have numerous FDA approved medical products currently improving **human health**. Dr. Webster has numerous awards including: 2020, World Top 2% Scientist by Citations (PLOS); 2020, SCOPUS Highly Cited Research (Top 1% Materials Science and Mixed Fields); 2021, Clarivate Top 0.1% Most Influential Researchers (Pharmacology and Toxicology); and is a fellow of over 8 societies.

websterthomas02@gmail.com

Received: September 02, 2022; **Accepted:** September 05, 2022; **Published:** September 16, 2022