

## BME-BMS Joint Seminar

# Nano-/Microscale Materials-enabled Drug Delivery Technologies

## Prof. Wei Tao

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**Time:** 11:00 am

**Venue:** Peter Ho Lecture Theatre (LT-10)  
Yeung Kin Man Academic Building

### Abstract

Despite all of the coverage of new drugs, it is not enough to just have an effective drug. To enhance therapeutic efficacy and reduce the side effects, the drugs have to be protected and transported to the right location to get an effect at the right time. Over the past few decades, nano-/microscale materials-enabled drug delivery platforms have made tremendous advancement in preventing and treating human diseases. Especially, the recent great success achieved by the two highly effective mRNA nanoparticle vaccines during the COVID-19 pandemic has further highlighted the great potential of drug delivery technologies. During the evolution of these drug delivery technologies, materials science innovation has played an important role from drug modification to the synthesis of different drug delivery platforms, which fulfills effective medical applications in various diseases including cancers, cardiovascular diseases, diabetes, infectious diseases, and many others. In this talk, I will introduce our current studies on nano-/microscale materials-enabled drug delivery technologies with the promise to improve health care, as well as our effort in accelerating their translation into the drug development pipeline.

### Biography

Prof. Wei Tao is the Farokhzad Family Distinguished Chair for Innovation at Brigham and Women's Hospital, Harvard Medical School. He is the first Distinguished Chair professor as an assistant professor in the history of his institution. His research interests include biomaterials, nanotechnology, and drug delivery, as well as their various applications in translational medicine (Lab Website: <https://www.weitaolab.com>). He has published over 160 high-impact papers in prestigious journals including Nature Medicine, Nature Nanotechnology, etc., making him a Clarivate's Global Highly Cited Researcher (continuously since 2021).

He serves on the scientific committee as either an invited award nominator or an invited grant reviewer for European Research Council, NIH (US), Deutsche Forschungsgemeinschaft (German Research Foundation), Swiss National Science Foundation (Switzerland), Dutch Research Council (Netherlands), Israel Science Foundation (Israel), Canadian Institutes of Health Research (Canada), The Xplorer Prize (科學探索獎, China), JDRF (Type 1 Diabetes Grand Challenge, UK), VinFuture Prize (VinFuture Foundation, Vietnam), MIT Technology Review Innovators Under 35 (TR35), etc. He also serves on numerous editorial boards (e.g., Editor of PNAS; Guest Editor of eLife, etc.; Senior Editorial Board Member of Materials Today, etc.; and Advisory Board Member of Matter (Cell Press).