

# “Regenerative Immunology: The Role of Technology Translation in Guiding Discovery”

**Wednesday  
January 29, 2020  
3:00 pm  
Wu and Chen Auditorium  
Levine Hall**

**RECEPTION TO FOLLOW**



**Jennifer Elisseeff**  
Professor and Director  
Translational Tissue Engineering Center  
Chemical and Biological Engineering  
Johns Hopkins University

## **Abstract**

Biomaterial implants have a long history in the clinic, but regenerative biomaterials and regenerative medicine therapies, in general, have been slow to reach patients. Clinical translation provides a unique and critical opportunity to investigate the key therapeutic drivers of technology efficacy in people. Careful evaluation of clinical outcomes and reevaluation of design parameters is central to improving research and technology development. A key outcome of our clinical translation experiences in orthopedics and plastic surgery was the unexpected discovery of adaptive immune cells around synthetic implants. We are now working to understand the role of the immune system and cellular senescence in the biomaterial response and repair across different tissues. This new therapeutic target serves as the basis for the design of regenerative immunotherapies.

## **Bio**

Dr. Elisseeff is the Morton Goldberg Professor and Director of the Translational Tissue Engineering Center at Johns Hopkins Department of Biomedical Engineering and the Wilmer Eye Institute with appointments in Chemical and Biological Engineering, Materials Science and Orthopedic Surgery. She received a bachelor's degree in chemistry from Carnegie Mellon University and a Ph.D. in Medical Engineering from the Harvard-MIT Division of Health Sciences and Technology. She was a Fellow at the National Institute of General Medical Sciences, Pharmacology Research Associate Program, where she worked in the National Institute of Dental and Craniofacial Research. Dr. Elisseeff is committed to the translation of regenerative biomaterials and has founded several companies and participates in several industry advisory boards, including the State of Maryland's Technology Development Corporation (TEDCO). She was elected a Fellow of the American Institute of Medical and Biological Engineering, the National Academy of Inventors, a Young Global Leader by World Economic Forum. In 2018, she was elected to the National Academy of Engineering and National Academy of Medicine.

**2020 Britton Chance Distinguished Lecture in Chemical Engineering**

