BIOTIS
Bioingénierie Tissulaire

29 avril 2026 à 15H00

2 Rue Dr Hoffmann Martinot, 33000 Bordeaux
Amphithéâtre du Bât. BBS, Campus Carreire

3D BIOFABRICATION APPROACHES TO ENHANCE MICROVASCULAR AND MUSCLE REGENERATION

DR. NGAN F. HUANG, PHD

Associate Professor of Cardiothoracic Surgery
STANFORD UNIVERSITY
Research Career Scientist
VETERANS AFFAIRS PALO ALTO HEALTH CARE SYSTEM

ABSTRACT

- The laboratory of Dr. Ngan Huang investigates the role of the extracellular matrix (ECM) microenvironment to treat limb ischemia or muscle injury using biofabrication strategies and therapeutic cells. Dr. Huang will highlight the role of ECM properties, including biochemical, mechanical, and biophysical patterning modulate biological processes that mediate transplant cell survival, angiogenic capacity, and tissue regeneration. 3D biofabrication strategies to confer instructive cues to transplanted cells will be discussed. These strategies are applied to drug screening tissue chip model systems, as well as for preclinical testing for the treatment of peripheral artery disease, traumatic muscle injury, and muscle atrophy. Together, these examples illustrate the importance of cell-ECM interactions for regulating tissue regeneration.

BACKGROUND

- Ngan F. Huang is an Associate Professor in the Department of Cardiothoracic Surgery at Stanford University and Research Career Scientist at the Veterans Affairs Palo Alto Health Care System. Dr. Huang has authored over 100 publications and patents. She has received numerous honors, including the Society for Biomaterials Mid-Career Award, the Alan Hirsch Mid-Career Award in Vascular Medicine from the American Heart Association, and the Elena Aikawa Trailblazer Award from the International Society for Applied Cardiovascular Biology. She has been inducted as a fellow of the American Heart Association as well as the American Institute for Medical and Biological Engineering. She has active or completed projects funded by the NIH, NSF, AHA, Department of Defense, California Institute of Regenerative Medicine, and Department of Veteran Affairs.

Host: Nicolas L'Heureux