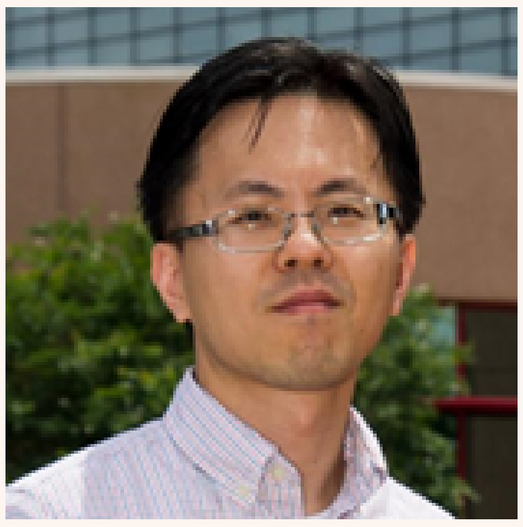
KAPAL
Korean-American Professional Association in Life Sciences
한미생명과학인협회

Korean American Society in Biotech and Pharmaceuticals
재미한인제약인협회

재미한인과학기술자협회
KSEA
Korean-American Scientists and Engineers Association

NIH-KWiSE
Korean-American Women in Science & Engineering

SEMINAR CO-HOSTED BY KAPAL, KASBP DC, KSEA DC & NIH-KWISE

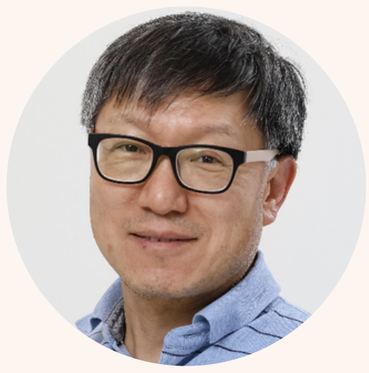


Min-Joon Han, Ph.D.

Ngene Biotech Inc.
COO/Head of Preclinical Research

When: Thursday, June 20th, 2024, 5:30 pm EST
Where: United States Pharmacopeia (USP)
12601 Twinbrook Pkwy
Rockville, MD 20852

Click here to RSVP by 06/18/2024



Moderator: Hangsik Moon, Ph.D., USP

Mass Production and Quality Control of iPSCs using 3D Culture Method for Stem Cell Therapy

Pluripotent stem cells are the basis of many future therapies because they can be expanded indefinitely and can be differentiated into any cell type including blood cells. Especially patient derived induced pluripotent stem cells (iPSCs) are one of the great resources for personalized cell therapy and has a great potential in regenerative medicine. However, achieving efficient expansion and differentiation is still highly challenging due to barriers of mass production. For the clinical application, it requires ~1 billion cells in one dose of treatment, which demands a lot of consideration to be evaluated for production and commercializing. In here, I will present what is the most important Quality Control (QC) matrix for mass production which allows clinical therapeutic application. In second, I will present how we can utilize iPSCs and gene editing technology as a therapeutic tool by using patient's somatic cell, who has been suffered one rare/genetic disease, diamond blackfan anemia (DBA). Lastly, iPSCs works require most experienced skillset to maintain good quality of iPSCs to show reproducible production. It totally depends on personal experimental experience and it takes for a while to train someone to get optimal working experience. To overcome the challenge, we developed a fully automated robotic system, which allows GMP grade iPSC generation and differentiation.