THE UNIVERSITY OF HONG KONG

DEPARTMENT OF MECHANICAL ENGINEERING AND MEDICAL ENGINEERING PROGRAMME

SEMINAR

Online

Title: Osteochondral tissue engineering for osteoarthritis

Speaker: Mr. Leung Ho Kwan Jeffrey (PhD candidate)
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Hong Kong

Date: 3 May, 2021 (Monday)

Time: 9:00 a.m. (Hong Kong Time)

Zoom Link: 1) Link to join the meeting:

https://hku.zoom.us/j/98007776550?pwd=eXl3czR4RmkwREVLdS95bTl4dkVFQT09

2) Meeting ID: 980 0777 6550

3) Password: 048995

Abstract:
Osteoarthritis (OA) as one of the most prevalent joint disease, affects 25 million individuals globally with an estimated 10% of men and 18% of women over the age of 60. Existing therapeutic methods remain to be inadequate and revolves around weight management, symptom-relieving and pain management. Surgical intervention such as total knee replacement also presents undesirable outcomes such as failed prosthesis and the possibility of a second revision. The ever-changing field of tissue engineering may provide solutions towards new disease-modifying therapies that could repair damaged cartilage. Our laboratory has developed several platform technologies including extracellular matrix microencapsulation for osteochondral tissue engineering applications. In this talk, I will display my recent results and discuss with you the possibility of utilising Infrapatellar fat-pad (IFP) derived mesenchymal stem cells (MSCs) as a better alternative autologous cell source for chondrogenic and osteogenic differentiation, the capability of using IFP-derived MSCs to engineer osteochondral constructs to recapitulate the native joint tissue. I will also explain my plan to investigate the efficacy of such construct in a post-traumatic OA rabbit model via anterior cruciate ligament transection (ACLT).

ALL INTERESTED ARE WELCOME
For further information, please contact Prof. B. Chan at 3917 2632.

Research area: Biomedical Engineering