



**THE CHINESE UNIVERSITY OF HONG KONG
FACULTY OF MEDICINE
SCHOOL OF BIOMEDICAL SCIENCES**

SBS PI Seminar Series 2022-2023

Prof. WAN Chao

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The Chinese University of Hong Kong

will present a seminar entitled

***“Targeting the oxygen sensing pathway
to promote articular cartilage regeneration”***

With population aging, osteoarthritis (OA) has become a common public health issue affecting the weight-bearing synovial joints of patients. OA is characterized by progressive degeneration, thinning or even wearing-out of the articular cartilage, resulting in the exposure of subchondral bone which causes severe joint pain, limited joint movement or dysfunction. As a highly organized avascular connective tissue, articular cartilage has very limited capacity of self-repair following injury or degeneration. Cartilage tissue engineering has emerged as a promising approach for repair of articular cartilage lesions. Chondrocytes or their progenitors are located in a hypoxic microenvironment during cartilage development or regeneration. Oxygen tension has significant impact on the anabolic and catabolic metabolism of chondrocytes. Hypoxia inducible factor-1 α (HIF-1 α) is considered as a key mediator for cellular adaptation to hypoxia, and involves in the regulation of cellular proliferation, differentiation and metabolism. Taking advantage of genetic and pharmacological approaches, we identify that HIF-1 α and its downstream targets are important players during cartilage development, metabolism and regeneration. Targeting the oxygen sensing pathway may serves as a potential approach to facilitate engineered cartilage tissue formation and its functional engraftment following transplantation in the articular cartilage repair models.

29 December 2022, Thursday, 4:00 – 5:00 pm

Room G02, Lo Kwee-Seong Integrated Biomedical Sciences Building,
Area 39, The Chinese University of Hong Kong

Registration link

<https://webapp.sbs.cuhk.edu.hk/eform/view.php?id=97326>

Deadline: 12:00 noon, 28 December 2022 (Wed)

