



Faculty of Engineering and Applied Science  
Chemical Engineering Seminar Series



**Engineered Organoids for Regulating the Kinetics of B Cell Immunity and Translating Therapeutics Against B Cell Tumors**

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Thursday, March 30, 2017, 2:30pm  
Dupuis Hall, Room 215



**ABSTRACT**

*Ex vivo* immune organs can enable mechanistic understanding of the immune system, provide a deeper understanding of the mechanisms that lead a variety of immune-related malignancies, including B and T cell lymphomas, and more importantly, accelerate the translation of therapies. In this talk, I will discuss complementary, designer biomaterial and microfluidic strategies developed in my lab which recapitulates the anatomical microenvironment of a lymphoid tissue, such as lymph node or spleen. These engineered tissues provide the basis to regulate the kinetics of immune reaction as well as mimic a neoplasm-like heterogeneous microenvironment. These strategies could, in the long term, change the understanding of the initiation and progression of hematological tumors, allow primary bio-specimen analysis, provide prognostic values, and importantly, allow a faster and more rational screening and translation of therapeutic regimens.