講者	**李亦宸**
服務單位	**逢甲大學 化學工程學系**
講題	**Engineering in vitro neural platforms: From 2D to 3D Models**
摘要	Fabricating biomimetic *in vitro* tissue/organ-based systems for drug testing is an important topic in tissue engineering field. However, the interactions among cells, materials, and signals are complex so that there are many challenges existing in the fabrication of biomimetic models. In this topic, we will introduce the strategies to develop various *in vitro* neural cell-based models by use serum components. Through the serum fraction less than 100 kDa (100KD medium), we could obtain a neuron-differentiation medium to create an *in vitro* neuron-rich model. In addition, we developed a NSPC proliferation medium containing epithelial grow factor and fibronectin (Medium B), which can be used to obtain a NSPC-rich model. Moreover, we will further use the single- and multi-materials bioprinting techniques for making biomimetic 3D constructs. Through these techniques, it could solve the current issue that 2D materials are difficult to provide a complex 3D environment for culturing cells. In the furture, staring from neural tissue engineering, we hope to provide the results to fabricate various neural cell-based models for fabricating biomimetic neural tissue/organ platforms for drug testing.
學經歷	**Education** 2006.09-2013.01 Ph. D., Institute of Biomedical Engineering, National Taiwan University 2002.09-2006.06 B. S., Department of Chemical and Materials Engineering, TamKang University **Professional Career** 2022.02-Present Associate Professor, Feng Chia University, Taiwan 2018.08-2022.01 Assistant Professor, Feng Chia University, Taiwan 2017.10-2018.07 Associate Professor, School of Light Industry and Science Engineer South China University of Technology 2015.07-2017.07 Postdoctoral Fellow, Harvard Medical School