

ACADEMIC ACTIVITIES

Publication(s) of the week

1. Xu, H., Ohulchanskyy, T. Y., Yakovliev, A., Zinyuk, R., Song, J., Liu, L., Qu, J., and Yuan, Z. (2019) Nanoliposomes Co-Encapsulating CT Imaging Contrast Agent and Photosensitizer for Enhanced, Imaging Guided Photodynamic Therapy of Cancer. *Theranostics* 9, 1323-1335 [IF=9.009]
2. Ge, L., Li, B., Xu, H., Pu, W., and Kwok, H. F. (2019) Backfilling Rolling Cycle Amplification with Enzyme-DNA Conjugates on Antibody for Portable Electrochemical Immunoassay with Glucometer Readout. *Biosens Bioelectron* 132, 210-216 [IF=7.291]
3. Zheng, W., Cai, D. B., Zhang, Q. E., He, J., Zhong, L. Y., Sim, K., Ungvari, G. S., Ning, Y. P., and Xiang, Y. T. (2019) Adjunctive Ondansetron for Schizophrenia: A Systematic Review and Meta-analysis of Randomized Controlled Trials. *J Psychiatr Res* 113, 27-33 [IF=4.437]
4. Xu, S. W., Dong, M., Zhang, Q., Yang, S. Y., Chen, L. Y., Sim, K., He, Y. L., Chiu, H. F., Sartorius, N., Tan, C. H., Chong, M. Y., Shinfuku, N., Lin, S. K., Ng, C. H., Ungvari, G. S., Najooan, E., Kallivayalil, R. A., Jamaluddin, R., Javed, A., Iida, H., Swe, T., Zhang, B., and Xiang, Y. T. (2019) Clozapine Prescription Pattern in Patients with Schizophrenia in Asia: The REAP Survey (2016). *Psychiatry Res* [IF=2.572]
5. Zhang, J., Meng, Y., Wu, C., Xiang, Y. T., and Yuan, Z. (2019) Non-speech and Speech Pitch Perception among Cantonese-speaking Children with Autism Spectrum Disorder: an ERP Study. *Neurosci Lett* [IF=2.124]

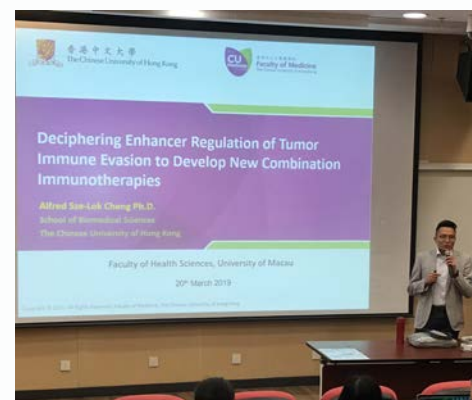
Seminar Series

Deciphering Enhancer Regulation of Tumor Immune Evasion to Develop New Combination Immunotherapies - Prof. Alfred Szelok CHENG

Prof. Alfred Szelok CHENG, Associate Professor of the Chinese University of Hong Kong, presented a talk on "Deciphering Enhancer Regulation of Tumor Immune Evasion to Develop New Combination Immunotherapies" on 20 March.

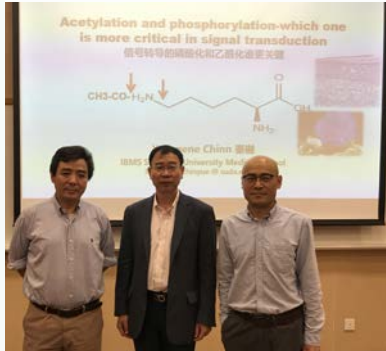
Prof. CHENG claimed that understanding of cancer epigenome provides new opportunities and can rewire transcriptional programmes that drive hallmark tumor traits. Moreover, he explained that transcriptional enhancers are distal regulatory elements that drive lineage-specific gene expressions. Genetic and epigenetic alterations of these non-coding sequences have been emerged as common molecular traits of various human cancers. Prof. CHENG also reported that recent high-dimensional omics studies in hepatocellular carcinoma (HCC) have emphasized on much importance for the strong immunosuppressive tumor microenvironment that counteracts the activation and infiltration of cytotoxic T lymphocytes into the tumor.

In spite of these substantial progress, Prof. CHENG thought that new avenues have stemmed that necessitate addressing in order to fully exploit the epigenetic vulnerabilities for HCC therapy. Therefore, Prof. CHENG decided to develop his research on the investigative scope from HCC cell epigenetics to enhancer regulation of tumor immune evasion. His team has developed mechanism-based combination immunotherapies that were supported by pharmacological proof-of-concept using preclinical models. They were united behind their vision to empower cancer immunotherapy for the elimination of HCC.



Seminar Series

Acetylation and Phosphorylation, Which One is More Critical in Signal Transduction? - Prof. Yueh Eugene CHINN



Prof. Yueh Eugene CHINN, Professor and Dean of Soochow University Medical College, Soochow University, presented a talk on “Acetylation and Phosphorylation, Which One is More Critical in Signal Transduction?” on 20 March.

Prof. CHINN shared his investigation on the correlation between tumor and inflammatory immunity. He has been focusing on the signal transduction pathways mediated by post-translational modifications of signal proteins such as acetylation and methylation, particularly the role of STAT signal transduction pathway in immune cell differentiation, embryonic stem cell maintenance and tumorigenesis.

Prof. CHINN also shared how he started his research from traditional medicine and how he applied the principles of traditional medicine on his research ideas. Moreover, Prof. CHINN shared a case study on the lymph nodes in groin enlarged with adenocarcinoma and showed how crizotinib reduced CA199 level in the blood of the cancer patient.

Seminar Series

The Hippo Pathway in Cell Growth, Organ Size, and Cancer - Prof. Kunliang GUAN

Prof. Kunliang GUAN, Distinguished Professor of Department of Pharmacology and Moores Cancer Center, University of California, presented a talk on “The Hippo Pathway in Cell Growth, Organ Size, and Cancer” on 21 March.

Prof. GUAN claimed that the Hippo pathway is crucial in organ size control and its dysregulation contributes to tumorigenesis. Therefore, he has been working on the study of Hippo pathway. Prof. GUAN’s research showed that core components of the Hippo pathway include the protein kinases of MST1/2, MAP4Ks, LATS1/2, the transcription co-activators YAP/TAZ and their DNA binding partners TEADs. LATS phosphorylates YAP/TAZ to promote cytoplasmic localization and degradation, thereby inhibiting YAP/TAZ and cell growth. The TEAD transcription factors also shuttle between nuclear and cytoplasm in a Hippo independent manner.

Prof. GUAN finally concluded that the Hippo pathway is regulated by a wide range of signals, including cell density, GPCR, cellular energy levels, and mechanical cues. The emerging role of the Hippo pathway in tumorigenesis suggests potential therapeutic value of targeting this pathway for cancer treatment.



Seminar Series

Precision Medicine for Cell Therapy in ARDS - Prof. Haibo ZHANG

Prof. Haibo ZHANG, Professor of University of Toronto, presented a talk on “Precision Medicine for Cell Therapy in ARDS” on 22 March.

There are controversial reports on applications of mesenchymal stromal cells (MSCs) in patients with acute respiratory distress syndrome (ARDS). Therefore, Prof. ZHANG hypothesized that lung microenvironment was the main determinant of beneficial versus detrimental effects of MSCs during ARDS and started his research on ARDS.

Prof. ZHANG achieved the distinct proteomic profiles in three lung injury models, and the result showed that the administration of MSCs protected lung from ventilator-induced injury, while it worsened acidprimed lung injuries associated with fibrotic development in lung environment that had high levels of IL-6 and fibronectin along with low antioxidant capacity. Prof. ZHANG then corrected the microenvironment with glutathione peroxidase-1 (GPx-1); or treatment with MSCs carrying human gene of interleukin-10 (MSCIL-10) or hepatocyte growth factor GPx-1 after acid-primed injury, and he finally reversed the detrimental effects of native MSCs. Prof. ZHANG finally concluded that the identification of potential beneficiaries appears to be crucial to guide MSC therapy in ARDS.



STUDENT ACTIVITIES

FHS Postdoc Student Seminar - Presented by Prof. Greta MOK's group and Prof. Zhen YUAN's group

On 21 March, Mr. Ilker OZSAHIN of Prof. Greta Seng Peng MOK's group presented “Awake Animal Functional Imaging to Investigate the Effects of General Anesthesia on Brain” and Mr. Zhishan HU of Prof. Zhen YUAN's group presented “Optical Mapping of Activation and Connectivity in Multiple Brain Regions During Different Cognitive Processes”.

The next seminar will be held on 4 April, presented by the group members of Prof. Terence POON and Prof. Xiaoling XU.



State	SUV
Rat#1 Awake	1.54
Rat#3 Awake	2.02
Rat#2 Isoflurane	1.39
Rat#3 Isoflurane	0.85
Rat#1 Ketamine	1.97
Rat#3 Ketamine	1.62

State	Averaged SUV
Awake	1.78
Isoflurane	1.12
Ketamine	1.80

MARCH / APRIL				
Mon	Tues	Wed	Thurs	Fri
25	26	27	28	29
	<p><u>Seminar Series</u> Human Embryonic Stem Cells-Derived Neuroblastoma Model Reveals Novel MYCN-amplified Signature Genes Cluster of TWIST1-dependent with Distinct Function in MYCN-amplified Neuroblastomas Speaker: Dr. Zhihui WENG Host: Prof. Chuxia DENG Time: 11:00-12:00 Venue: N22-G002</p>	<p><u>Seminar Series</u> Immunological Approaches Targeting Cancer Stem Cells Speaker: Prof. Qiao LI Host: Prof. Chuxia DENG Time: 11:00-12:00 Venue: E12-G004</p> <p><u>B-CAT Meeting #06</u> Speaker: Prof. Guokai CHEN Time: 17:00 Venue: E12-G004</p>	<p><u>Seminar Series</u> Can We Create a Variety of Coordination Compounds from a Single Kind of Amino Acid? Speaker: Prof. Takumi KONNO Host: Prof. Xuanjun ZHANG Time: 15:00-16:00 Venue: E12-G004</p>	
1	2	3	4	5
	<p><u>Oral Defense</u> Ms. Xia JI Supervisor : Prof. Jun ZHENG Time: 10:00 Venue: N6-G010</p>		<p><u>FHS Postdoc/ Student Seminar</u> Host: Prof. Terence POON and Prof. Xiaoling XU Time: 17:00-18:00 Venue: N22-G002</p>	
8	9	10	11	12
	<p><u>Oral Defense</u> Mr. Pengwei ZHANG Supervisor : Prof. Terence POON Time: 16:00 Venue: N6-2022</p>	<p><u>B-CAT Meeting #07</u> Speaker: Prof. Gang LI Time: 17:00 Venue: E12-G004</p>	<p><u>HKU-FHS Joint Symposium</u> Time: 14:00-18:00 Venue: N21-G013</p>	