

ACADEMIC ACTIVITIES

Publication(s) of the week

1. Sun, X., Hou, T., **Cheung, E.**, Lu, T. N., Tam, V. W., Chu, I. M., Tsang, M. S., Chan, P. K., Lam, C. W., and Wong, C. K. (2019) Anti-Inflammatory Mechanisms of the Novel Cytokine Interleukin-38 in Allergic Asthma. *Cell Mol Immunol* [IF=7.058]
2. Zhu, L., Liu, J., Zhou, G., Ng, H. M., Ang, I. L., Ma, G., Liu, Y., Yang, S., Zhang, F., **Miao, K., Poon, T. C. W., Zhang, X., Yuan, Z., Deng, C. X.**, and **Zhao, Q.** (2019) Targeting Immune Checkpoint B7-H3 Antibody-Chlorin E6 Bioconjugates for Spectroscopic Photoacoustic Imaging and Photodynamic Therapy. *Chem Commun* [IF=5.989]
3. Fang, J., Zhao, X., Li, S., Xing, X., Wang, H., Lazarovici, P., and **Zheng, W.** (2019) Protective Mechanism of Artemisinin on Rat Bone Marrow-Derived Mesenchymal Stem Cells against Apoptosis Induced by Hydrogen Peroxide Via Activation of c-Raf-Erk1/2-p90(rsk)-CREB Pathway. *Stem Cell Res Ther* **10**, 312 [IF=5.363]
4. Dong, M., Lu, L., Zhang, L., Zhang, Q., Ungvari, G. S., Ng, C. H., **Yuan, Z.**, Xiang, Y., Wang, G., and **Xiang, Y. T.** (2019) Prevalence of Suicide Attempts in Bipolar Disorder: A Systematic Review and Meta-Analysis of Observational Studies. *Epidemiol Psychiatr Sci*, 1-9 [IF=4.962]
5. Li, X. B., Wang, L. B., Xiong, Y. B., Bo, Q. J., He, F., Li, F., Hou, W. P., Wen, Y. J., Wang, X. Q., Yang, N. B., Mao, Z., Dong, Q. H., Zhang, F. F., Yang, R., Wang, D., **Xiang, Y. T.**, Zhu, Y. Y., Tang, Y. L., Yang, Z., and Wang, C. Y. (2019) Altered Resting-State Functional Connectivity of the Insula in Individuals with Clinical High-Risk and Patients with First-Episode Schizophrenia. *Psychiatry Res* **282**, 112608 [IF=2.67]

BCAT - Prof. Ruiyu XIE

In the BCAT meeting on 30 October, Prof. Ruiyu XIE reported her research on understanding the molecular mechanisms of epigenetic modifiers and lineage-specific transcription factors control cell fate decisions during the development of insulin-producing β cells and pancreatic diseases. Using high-throughput sequencing, genome-editing technologies and an efficient stem cell differentiation system, Prof. XIE's team studied the role of DNA modification enzymes in pancreas differentiation. They discovered the function of the DNA hydroxylases, ten eleven translocation (TET) enzymes which play critical roles in maintaining proper chromatin accessibility and the enhancer activity to instruct pancreatic β -cell lineage specification. In addition, TET dioxygenases also function in cardiomyocyte differentiation by modulating the TGF-beta signaling pathways.

Moreover, Prof. XIE reported her other ongoing research on using genetic mouse models to study the role of novel regulators in pancreatitis and pancreatic cancer and exploring potential anti-cancer or preventive strategies by targeting key regulatory pathways. Her team has found that PRDM family proteins played unexpected roles in malignant transformation by modifying inflammatory responses in pancreatic acinar cells.

Seminar Series

The Role of Anesthetics in Cancer Growth and Metastasis – Prof. Jun LIN

Prof. Jun LIN, Professor of Anesthesiology and Attending Physician in School of State University of New York, presented “The Role of Anesthetics in Cancer Growth and Metastasis” on 28 October.

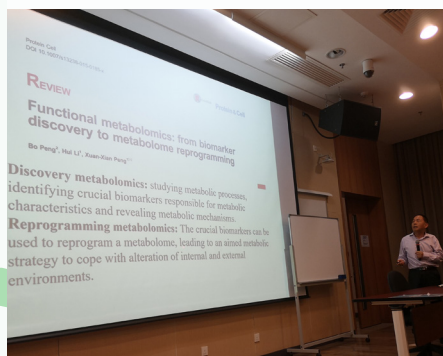
Being an Attending Physician, Prof. LIN claimed that surgery is crucial for treating solid organ tumors and offers hope of cure. However, metastatic recurrence does occur and is the main cause of breast cancer death. Prof. LIN also mentioned that the perioperative period presents many risks to cancer patients. One of the factors is the choice of general anesthetics used during surgery. However, the role of anesthetics in cancer growth and metastasis remains undefined. Therefore, Prof. Lin thinks that the potential mechanisms are largely unknown and he has started his research on anesthetics.

In the seminar, Prof. LIN presented and discussed his data showing the distinct effects and underlying mechanisms of the two most commonly used general anesthetics, volatile anesthetic sevoflurane and intravenous anesthetic propofol, on metastasis in mouse models of breast cancers that incorporate clinically relevant surgery.



Seminar Series

Reprogramming Metabolomics – Prof. Xuanxian PENG



Prof. Xuanxian PENG, Professor of School of Life Sciences, Sun Yat-sen University, presented “Reprogramming Metabolomics” on 29 October.

Prof. PENG reported that metabolomics is emerging as a powerful tool for studying metabolic processes, identifying crucial biomarkers responsible for metabolic characteristics, and revealing metabolic mechanisms, which construct the content of discovery metabolomics. He mentioned that the crucial biomarkers can be used to reprogram a metabolome, leading to an aimed metabolic strategy to cope with alteration of internal and external environments, which is termed reprogramming metabolomics.

Prof. PENG presented his research that antibiotic-resistant metabolome can be reprogrammed to antibiotic-sensitive metabolome in bacteria and infective metabolome to anti-infective metabolome in host. Therefore, the reprogramming metabolome can elevate the sensitivity of antibiotic-resistant bacteria to antibiotics and restore host’s ability against bacterial infection. Prof. PENG finally concluded that the reprogramming metabolomics will provide an alternative way for prevention and treatment of diseases.

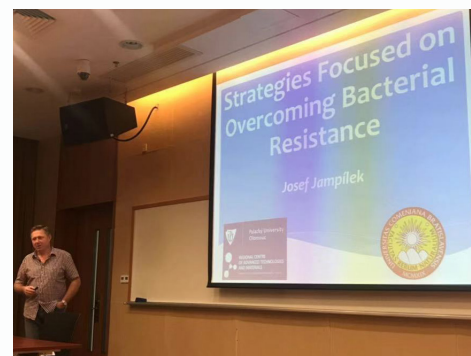
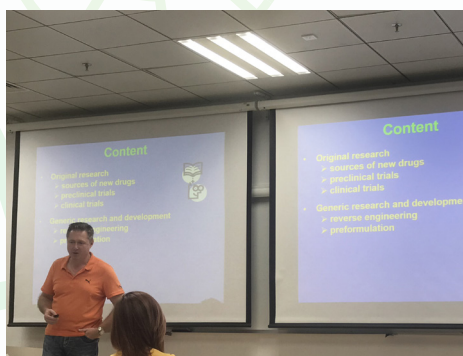
Seminar Series

Strategies Focused on Overcoming Bacterial Resistance, Drug Discovery and Development – Prof. PharmDr. Josef JAMPÍLEK

Prof. Josef JAMPÍLEK, Professor of Department of Analytical Chemistry, Faculty of Natural Sciences, Comenius University in Bratislava, presented “Strategies Focused on Overcoming Bacterial Resistance” and “Drug Discovery and Development” on 29 and 30 October respectively.

In the seminar on 29 October, Prof. JAMPÍLEK claimed that the development of resistance to use anti-infectives (especially antibacterial and antifungal drugs) and the development of cross-resistant or multidrug-resistant strains are global problems. Prof. JAMPÍLEK reviewed the recent report of the new anti-microbial agents with a new/innovative mode of action on the agents affecting new targets, and discussed the anti-microbially effective nanomaterials. Besides, Prof. JAMPÍLEK introduced the agents decreasing bacterial resistance, which do not have sufficient intrinsic bacteriostatic or bactericidal activity, but in combination with clinically used antimicrobial drugs are able to restore the effect of these drugs or demonstrate synergistic antimicrobial properties together with the drugs. Moreover, He also introduced the compounds derived from 8-hydroxyquiniline, cinnamic acid and hydroxynaphthalenes. He claimed that the scaffolds can be considered as privilege structures due to the wide range of their biological activities. The scaffolds can be easily and rapidly functionalized, which provides a possibility of a great number of targeted modifications as well as the optimization of physicochemical properties. In the end, Prof. JAMPÍLEK concluded that the compounds based on the above-mentioned scaffolds are multi-target drugs, which fulfil the concept of polypharmacology and multifactorial diseases.

On 30 October, Prof. JAMPÍLEK also gave a talk to the FHS undergraduate students. He shared the essential knowledge on pharmaceutical chemistry in combination with other pharmaceutical and biological branches of knowledge in terms of drug research and development strategy. He introduced the sources of new drugs, aspects of research of new drugs in ethical pharmaceutical companies, the steps of drug discovery and preclinical and clinical trials. He also shared the generic product development process, reverse engineering and preformulations. Lastly, he discussed the main principles of the bioavailability requirements and nanomaterial problematics, polymorphism of drugs and its influence on strategic corporate behaviour and patent policy.



Admission Talk to Chan Sui Ki Perpetual Help College

Prof. Terence POON and Ms. Sherry Lai Leng WAN of Registry of UM visited Chan Sui Ki Perpetual Help College on 31 October and gave the students of Secondary 6 an admission talk.

Prof. POON shared the updated faculty development and gave the students insights on programmes, the special features of the curricula and the different learning opportunities offered by the Faculty. Ms. Wan shared the UM's history, campus development, signature disciplines and research achievements of UM with the students.

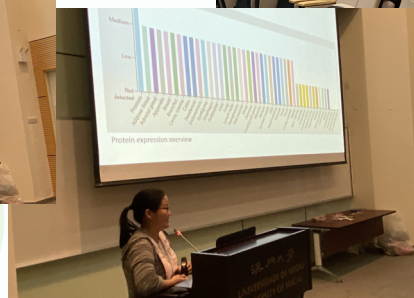


STUDENT ACTIVITY

FHS Postdoc Student Seminar - Presented by Prof. Xiaoling XU's group and Prof. Qi ZHAO's group

On 31 October, Mr. Jianjie LI of Prof. Xiaoling XU's group presented "BRCA1-S100A9-CXCL12 Axis Mediates Breast Cancer Initiation and Immune Suppression in Mammary Tissue" and Ms. Jie LIU of Prof. Qi ZHAO's group presented "Targeting Immune Checkpoint B7H3 with CAR T Cells for Therapy of Non-small Cell Lung Cancer and Colorectal Cancer".

The next seminar will be held on 14 November, and presented by the group members of Prof. Zhen YUAN and Prof. Greta MOK.



November				
Mon	Tues	Wed	Thurs	Fri
4 The first working day after All Soul's Day	5 Seminar Series Transdifferentiation, a Novel Mechanism in Vascular Regeneration Speaker: Prof. Shu MENG Host: Prof. Chuxia DENG Time: 10:30 - 11:30 Venue: E12-G004	6 Seminar Series Evolution of Translational Regulation and its Implication in Cancer Etiology Speaker: Prof. Jian LU Host: Prof. Sanming WANG Time: 10:00 - 11:00 Venue: N22-G002 Seminar Series Deep Characterisation of Immune Microenvironment Speaker: Boon-Eng THE and Qianjun ZHANG Host: Prof. Edwin CHEUNG Time: 11:00 - 12:30 Venue: N22-G002 Oral Defense Weilong HOU Supervisor : Prof. Chuxia DENG Time: 15:00 Venue:N6-G010 Seminar Series Why Lysine Has So Many PTMs? Speaker: Prof. Y. Eugene Chin Host: Prof. Chuxia DENG Time: 17:15 - 18:15 Venue: N22-G002	7 Seminar Series Acceleration of Translational & Regenerative medicines by Flow Cytometry Speaker: Ms. Susanna LI Host: Professional Health Trading Company Ltd. and Beckman Coulter Hong Kong Ltd. Time: 14:30 - 15:30 Venue: N22-4028	8 Seminar Series 1. Endosome-associated Actin Dynamics during Endocytic Recycling 2. From TRP to TMC, the Molecular Mechanisms Underlying Mechanosensation in <i>C. elegans</i> 3. The Generation and Function of risiRNA in <i>C. elegans</i> Speaker: Prof. Angbing SHI, Prof. Lijun KANG and Prof. Shouhong GUANG Host: Prof. Hongjie ZHANG Time: 14:30 - 17:30 Venue: N22-G002
11	12	13 Seminar Series ELISA Principles and Troubleshooting Speaker: Mr. Michael WONG Host: Professional Health Trading Company Ltd. and Abcam (Hong Kong) Limited Time: 15:30 - 16:30 Venue: N22-G002 Oral Defense Zuxianglan ZHAO Supervisor : Prof. Edwin Chong Wing CHEUNG Time: 16:30 Venue: N6-2022 B-CAT Meeting #20 Speaker: Prof. Wenhua ZHENG Time: 17:00 Venue: E12-G004	14 FHS Postdoc/ Student Seminar Field: Bioimaging Host: Prof. Zhen YUAN and Prof. Greta MOK Time: 17:00-18:00 Venue: N22-G002	15 Seminar Series Gene Editing Approaches for Correcting Genetic Airway Diseases Speaker: Prof. Jim HU Host: Prof. Wenhua ZHENG Time: 10:00 - 11:00 Venue: E12-G004
18 Oral Defense Jie LIU Supervisor : Prof. Qi ZHAO Time: 10:00 Venue: N6-G010	19	20	21	22