ACADEMIC ACTIVITIES

Publication(s)

1. Xiang, Y. T., Li, W., Zhang, Q., Jin, Y., Rao, W. W., Zeng, L. N., Lok, G. K. I., Chow, I. H. I., Cheung, T., and Hall, B. J. (2020) Timely Research Papers About Covid-19 in China. *Lancet* **395**, 684-685 [5yr IF=54.664]

2. Liu, S., Yang, L., Zhang, C., Xiang, Y. T., Liu, Z., Hu, S., and Zhang, B. (2020) Online Mental Health Services in China During the Covid-19 Outbreak. *Lancet Psychiat* [5yr IF=17.638]

3. Yang, Y., Li, W., Zhang, Q., Zhang, L., Cheung, T., and Xiang, Y. T. (2020) Mental Health Services for Older Adults in China During the Covid-19 Outbreak. *Lancet Psychiat* [5yr IF=17.638]

4. Xiang, Y. T., Yang, Y., Li, W., Zhang, L., Zhang, Q., Cheung, T., and Ng, C. H. (2020) Timely Mental Health Care for the 2019 Novel Coronavirus Outbreak Is Urgently Needed. *Lancet Psychiat* **7**, 228-229 [5yr IF=17.638]

5. Sun, X., Zhou, Y., Zhang, R., Wang, Z., Xu, M., Zhang, D., Huang, J., Luo, F., Li, F., Ni, Z., Zhou, S., Chen, H., Chen, S., Chen, L., Du, X., Chen, B., Huang, H., Liu, P., Yin, L., Qiu, J., Chen, D., Deng, C., Xie, Y., Luo, L., and Chen, L. (2020) Dstyk Mutation Leads to Congenital Scoliosis-Like Vertebral Malformations in Zebrafish Via Dysregulated Mtorc1/Tfeb Pathway. *Nat Commun* **11**, 479 [5yr IF=13.811]

6. Wang, G., Song, L., Hou, X., Kala, S., Wong, K. F., Tang, L., Dai, Y., and Sun, L. (2020) Surface-Modified Gvs as Nanosized Contrast Agents for Molecular Ultrasound Imaging of Tumor. *Biomaterials* **236**, 119803 [5yr IF=9.55]

7. Li, Y., He, Y., Miao, K., Zheng, Y., Deng, C., and Liu, T. M. (2020) Imaging of Macrophage Mitochondria Dynamics in Vivo Reveals Cellular Activation Phenotype for Diagnosis. *Theranostics* **10**, 2897-2917 [5yr IF=8.651]

8. Chen, L., Wang, C., Sun, H., Wang, J., Liang, Y., Wang, Y., and Wong, G. (2020) The Bioinformatics Toolbox for Circrna Discovery and Analysis. *Brief Bioinform* [5yr IF=8.265]

9. Wu, K., Song, W., Zhang, Z., and Ge, W. (2020) Disruption of Dmrt1 Rescues the All-Male Phenotype of the Cyp19a1a Mutant in Zebrafish - a Novel Insight into the Roles of Aromatase/Estrogens in Gonadal Differentiation and Early Folliculogenesis. *Development* **147** [5yr IF=6.258]

10. Shalaby, L., Thounaojam, M., Tawfik, A., Li, J., Hussein, K., Jahng, W. J., Al-Shabrawey, M., Kwok, H. F., Bartoli, M., and Gutsaeva, D. (2020) Role of Endothelial ADAM17 in Early Vascular Changes Associated with Diabetic Retinopathy. *J Clin Med* **9** [2018 IF=5.688]

11. Kang, K., Quan, K. T., Byun, H. S., Lee, S. R., Piao, X., Ju, E., Park, K. A., Sohn, K. C., Shen, H. M., Na, M., and Hur, G. M. (2020) 3-O-Acetylrubianol C (3ar-C) Induces Ripk1-Dependent Programmed Cell Death by Selective Inhibition of Ikkbeta. *Faseb J* [5yr IF=5.421]

12. Lei, I., Tian, S., Chen, V., Zhao, Y., and Wang, Z. (2019) Swi/Snf Component Baf250a Coordinates Oct4 and Wnt Signaling Pathway to Control Cardiac Lineage Differentiation. *Front Cell Dev Biol* **7**, 358 [2018 IF=5.206]

13. Xiang, Y. T., Wang, H., Bao, D., Zhang, Q., Ungvari, G. S., Sartorius, N., and Kupfer, D. J. (2020) The Journal Current Opinion in Psychiatry and Its Impact on Mental Health in China. *Curr Opin Psychiatry* [5yr IF=4.525]

14. Rao, W. W., Zong, Q. Q., Zhang, J. W., An, F. R., Jackson, T., Ungvari, G. S., Xiang, Y., Su, Y. Y., D'Arcy, C., and Xiang, Y. T. (2020) Obesity Increases the Risk of Depression in Children and Adolescents: Results from a Systematic Review and Meta-Analysis. *J Affect Disord* **267**, 78-85 [5yr IF=4.16]

15. Zheng, W., Li, W., Qi, H., Xiao, L., Sim, K., Ungvari, G. S., Lu, X. B., Huang, X., Ning, Y. P., and Xiang, Y. T. (2020) Adjunctive Folate for Major Mental Disorders: A Systematic Review. *J Affect Disord* **267**, 123-130 **[5yr IF=4.16]**

16. Zheng, W., Cai, D. B., Xiang, Y. Q., Zheng, W., Jiang, W. L., Sim, K., Ungvari, G. S., Huang, X., Huang, X. X., Ning, Y. P., and Xiang, Y. T. (2020) Adjunctive Intranasal Esketamine for Major Depressive Disorder: A Systematic Review of Randomized Double-Blind Controlled-Placebo Studies. *J Affect Disord* **265**, 63-70 **[5yr IF=4.16]**

17. Scheib, H., Nekaris, K. A., Rode-Margono, J., Ragnarsson, L., Baumann, K., Dobson, J. S., Wirdateti, W., Nouwens, A., Nijman, V., Martelli, P., Ma, R., Lewis, R. J., Kwok, H. F., and Fry, B. G. (2020) The Toxicological Intersection between Allergen and Toxin: A Structural Comparison of the Cat Dander Allergenic Protein Fel D1 and the Slow Loris Brachial Gland Secretion Protein. *Toxins (Basel)* **12** **[5yr IF=4.009]**

18. Park, S. C., Jang, E. Y., Xiang, Y. T., Kanba, S., Kato, T. A., Chong, M. Y., Lin, S. K., Yang, S. Y., Avasthi, A., Grover, S., Kallivayalil, R. A., Udomratn, P., Chee, K. Y., Tanra, A. J., Tan, C. H., Sim, K., Sartorius, N., Park, Y. C., and Shinfuku, N. (2020) Network Analysis of the Depressive Symptom Profiles in Asian Patients with Depressive Disorders: Findings from the Research on Asian Psychotropic Prescription Patterns for Antidepressants (REAP-AD). *Psychiatry Clin Neurosci* **[5yr IF=3.283]**

19. Lu, L., Dong, M., Lok, G. K. I., Feng, Y., Wang, G., Ng, C. H., Ungvari, G. S., and Xiang, Y. T. (2020) Worldwide Prevalence of Sexual Harassment Towards Nurses: A Comprehensive Meta-Analysis of Observational Studies. *J Adv Nurs* **[5yr IF=3.01]**

B-CAT Meeting - Prof. Xiaoling XU

In the BCAT meeting on 22 January, Prof. Xiaoling XU reported her research about “BRCA1 Deficiency Impairs Immune Surveillance”. Prof. XU introduced that germline mutations of breast cancer associated gene 1 (BRCA1) have been found in about 30% of familial breast cancer cases and the majority of combined familial breast and ovary cancers. To study functions of BRCA1, Prof. XU and her team have previously generated a mutant mouse strain, which carries MMTV-Cre mediated deletion of Brca1 ($Brca1^{Co/Co}$;MMTV-Cre). Their data indicated that about 25% of the mutant mice develop mammary tumors after a long latency. In their continuous efforts to identify oncogenic signaling that may involve in BRCA1 associated tumorigenesis, they conducted large scale screen with SWATH (Sequential Window Acquisition of all Theoretical Mass Spectra) on the samples isolated from the BRCA1 mutant mice, including mammary glands at pre-malignant stages, tumors and their adjacent tissues. Comparative analysis revealed that BRCA1 deficiency triggers over expression of many proteins, most significantly proteins that play important function in regulating immunosuppression and tumor microenvironment. They found that BRCA1 deficiency results in the accumulation of myeloid derived suppression cell (MDSC) in mammary tissue, which creates immune repressive niche with markedly reduced cytotoxic T cells and its function, thus benefiting the tumor growth. They also found that blocking the key factors responsible for enriched tumor microenvironment could efficiently inhibit mammary tumor growth, providing a potential therapeutic option for this deadly disease.

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SEMINAR SERIES

Mechano-redox Control of Integrin De-adhesion - Dr. Joyce CHIU

Dr. Joyce CHIU, Research Fellow and Principal Investigator of Centenary Institute, NHMRC Clinical Trial Centre, University of Sydney, presented “Mechano-redox Control of Integrin De-adhesion” on 20 January.

Dr. CHIU presented that Integrins were adhesion molecules that mediate contact between cells and their extracellular matrix. Through their binding to specific ligands, integrins signal environmental cues to the cytoskeleton that determines cell fate such as growth, death, differentiation and migration. Much is known about integrin-mediated cell adhesion, but ligand dis-engages from integrin remains elusive. Dr. CHIU reported that Integrin αIIbβ3 which is expressed on platelet surface plays a central role in clot formation by crosslinking platelets. Dr. CHIU has shown that ligand affinity of αIIbβ3 is controlled by the interplay of force and disulphide bond chemistry. This mechano-redox coupling induced long-range allosteric effects that altered ligand affinity of integrin leading to platelet de-adhesion.

PhD ORAL DEFENSE

PhD Oral Defense by Zhe HU of Prof. Wei GE’s group

Mr. Zhe HU supervised by Prof. Wei GE completed his PhD oral defense on 21 January. His thesis title was “Impacts of somatic growth on reproduction in zebrafish: a genetic approach”.

Mr. HU claimed that trade-off between growth and reproduction was crucial in vertebrates, especially during pubertal development. However, their relationship was still in controversy as enormous signaling pathways were involved. He used CRISPR/Cas9 approach to comprehensively evaluate the importance of somatotropic axis in regulating reproduction in zebrafish. It demonstrated that both critical body size and weight are prerequisites for puberty initiation which was more prominent in female’s folliculogenesis than in male’s spermatogenesis upon *gh1* deficiency. Mr. HU reported that IGF1 signaling was involving in neither GH-dependent nor independent regulation of reproduction, and leptin signaling was totally dispensable for puberty onset and sexual maturation under both conditions of normal and excessive nutrient. He concluded that his study expanded the understanding of somatic regulation of reproduction in vertebrates in a comparative way.

UPCOMING

March 2020				
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For more information or submission of articles to be featured, please contact Ms. Mathilde CHEANG at mathildec@um.edu.mo or 8822 4909.