

Publication(s)

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- Ng, P. C. I., Chan, J. Y. W., Leung, R. K. K., Li, J., Ren, Z., Chan, A. W. H., Xu, Y., Lee, S. S., Wang, R., Ji, X., Zheng, J., Chan, D. P. C., Yew, W. W., and Lee, S. M. Y. (2020) Role of Oxidative Stress in Clofazimine-Induced Cardiac Dysfunction in a Zebrafish Model. *Biomed Pharmacother* 132, 110749 [2019 IF = 4.545]
- Ju, Y., Chakravarty, H., and Tam, K. Y. (2020) An Isoquinolinium Dual Inhibitor of Cholinesterases and Amyloid Beta Aggregation Mitigates Neuropathological Changes in a Triple-Transgenic Mouse Model of Alzheimer's Disease. ACS Chem Neurosci [2019 IF = 4.486]

NEWS

FHS PhD Students Receive Prizes at Macao Science and Technology Award 2020



The Macao SAR government presented the 2020 Macao Science and Technology Awards on 7 October, and 30 students received the Technological R&D Award for Postgraduates. Shuai LI and Jingjing LI, PhD students of FHS, are two of the awardees.

The Macao Science and Technology Development Fund (FDCT) formed the evaluation committee of three experts in the area of science and technology, who decided the awardee list of 25 PhD students and five master students from the higher education institutes in

Macao subsequent to careful review and voting. During the defence meeting, Shuai LI and Jingjing LI introduced their research work on the preventive and therapeutic effect of artemisinin and its derivates on Alzheimer's disease and non-classical estrogen signaling in ovarian cancer and its improvement of the chemo-sensitivity and patients outcome.





Under the supervision of Prof. Wenhua ZHENG, Shuai LI participated in the research project "The Neuroprotective Effect of Artemisinin and its Derivatives and its Application in Treatment of Alzheimer's Disease". The research team discovered that artemisinin and its derivative artemether have neuroprotective effects on Alzheimer's disease and are related to the activation of AMPK and ERK signaling pathways, which brings new hope for the prevention and treatment of Alzheimer's disease. The study has been published in the internationally renowned journal Oxidative Medicine and Cellular Longevity. Moreover, the research team also found that artemether has a neuroprotective effect on a cerebral ischemia mouse model, revealing its potential in the prevention and treatment of stroke. The related paper has been reviewed by Redox Biology and now pends minor revisions. Jingjing LI took part of Prof. Lijun DI's research project, and the research team found a novel role of ERa in mediating the molecular connection between hormone and homologous recombination repair (HRR) in epithelial ovarian carcinoma (ECO). ERa shows the predominant non-classical



regulatory mechanism in EOC and inhibits HRR gene expression collaborated with the co-repressor CtBP. Consequently, estrogen signaling enhances the sensitivity of ovarian cancer cells to chemotherapy agents *in vitro* and *in vivo*. These findings encourage hormone replacement therapy for EOC patients. The study has been published in the internationally renowned journal *Theranostics*.

Both Shuai LI and Jingjing LI stated that they could not have made great progress in their research without the guidance and assistance from their supervisors, Prof. Wenhua ZHENG and Prof. Lijun DI. The strong support from the cores of FHS has smoothened their research work. Shuai LI would like to share this honor with her supervisor and her teammates who have assisted her in learning, achieving a greater value of herself and pouring her enthusiasm in such a harmonious environment. Jingjing LI is grateful to her supervisor for giving her formal and rigorous research training, and guiding her to pursue her research according to her interest, rather than bounding her firmly in a certain point or direction. Jingjing LI said that the devotion and enthusiasm of the researchers of FHS always inspire her, "Every time I meet the dean, Prof. Chuxia DENG, on his way to the cafeteria, he always trots to save time. How can we PhD students excuse ourselves when such a prestigious scholar is working so hard?"

The presentation of the Macao S&T Award is conducted every two years according to the *Regulations on Science and Technology Awards*. The established awards are 1) Science & Technology Award, 2) Scientific and Technological R&D Award and 3) Special Award. The Scientific and Technological R&D Award for Postgraduates is a recognition for the postgraduates who have taken an active part and played an important role in the scientific and technological research and development of their institutions of higher learning, and it is also an encouragement for them to participate in scientific and technological research and development.









Prof. San Ming WANG Presents BRCA Research in the Beijing Youth Forum on Molecular Pathology

Prof. San Ming WANG shared his study on BRCA variation in the Asian Population, with the title "Summary of BRCA Research in China and the Differences Abroad", in the Beijing Youth Forum on Molecular Pathology 2020 on 24 September. Prof. Wang introduced his establishment on the first open-access Chinese population BRCA mutation database dbBRCA-Chinese, which contains 1,600 BRCA mutations from Chinese cancer population. More details of Prof. Wang's talk, please visit: https://mp.weixin.qg.com/s/rZJztf8WjTSaNkCw264nxw.



Article Sharing Prof. Douglas ZHANG's Epidemiology Research Team Reveals the Prevalence Pattern of Allergen Sensitization in China

The epidemiology research team of Prof. Douglas Xiaohua ZHANG has recently published an article about the prevalence pattern of allergen sensitization in China. The prevalence of allergic diseases has greatly increased worldwide in the recent decades. The research reveals the prevalence pattern of the allergen sensitization in China, which benefits the health management of the patients with allergic symptoms. The study has been published in the top international journal *Allergy*.

Titled "Prevalence Patterns of Allergen Sensitization by Region, Gender, Age and Season among Patients with Allergic Symptoms in China: A Four-year Multicenter Study", the study was a collaboration between a team led by Prof. Douglas ZHANG, Prof. Baoqing ZHANG of Guangzhou Medical University and the collaborators from Department of Immunology, Guangzhou Kingmed Diagnostics Group Co., Ltd. In recent decades, the proportion of the population with allergic diseases has increased rapidly. It not only has a negative impact on the life quality, but also leads to a great economic burden on the district and national health system. The distribution of allergen sensitization varies in China because of its rapid economic development, vast territory, multiplied climates and diversified lifestyle. This large epidemiological study compared the prevalence pattern of sensitization to allergen among patients with allergic symptoms in 52 cities (from 26 provinces, 7 geographical regions) of China from July 2015 to June 2018. Allergens tested included the four most common food allergens (egg white, milk, crab and shrimp) and five aeroallergens (house dust mites, German cockroach, tree pollen mixture, mold mixture and dog dander).

The main conclusions of the large population-based study of the allergic patients in China are: 1) The most common allergen among patients with allergic symptoms from China were house dust mites with a prevalence of 33.74%; 2) German cockroaches were the second allergen affecting allergic patients in China and its prevalence was 24.5%. The prevalence in the coastal areas of Southwest and South China was higher than the prevalence in East and North China; 3) Among the four food allergens, their prevalence fell into the range of 10%-20%. The prevalence of cow's milk and egg whites was higher in Central China, East China and South China than that in other regions. The prevalence of shrimp and crab was the highest in Southwest and South China: 4) The prevalence of dog dander and mold mixture was very stable across months; however, the prevalence of house dust mites, German cockroaches, shrimps and crabs is the highest in summer



(June to August) and 5) The prevalence of house dust mites, German cockroaches, tree pollen, dog dander, crabs and shrimps increased first and then gradually decreased with age; however, the prevalence of egg white and milk decreased with age. The study found that the prevalence of allergens displayed obvious and distinctive patterns among regions, age groups and seasons. The reasons for the above results may include lifestyle factors, socioeconomic factors, genetic predispositions, climate, sexual hormones, cross-reactivity and so on. The article may help the clinicians find the effective individualized treatments for unique patient groups. Researchers may also obtain some instructions for deeper studies on the epidemiology of allergic diseases.

The study was led by Prof. Zhang, and the main participants include his PhD student Dandan WANG, Teng ZHANG and Dongliang LENG. The study was jointly supported by UM (Reg. no. FHS-CR-DA-029-002-2017, EF005/FHS-ZXH/2018/GSTIC, MYRG2018-00071-FHS), and the Macau Science and Technology Development Fund (FDCT) (Reg. no. 0004/2019/AFJ, 0011/2019/AKP). The full version of the related paper can be viewed at:







Heatmap for the prevalence of allergens for d1:House dust mite (a), i6:German cockroach (b), tx4:Tree pollen mix (c), e5:Dog dander (d), f1:Egg white (e), f2:Cow's milk (f), f23:Crab (g), f24:Shrimp (h) in different regions.



BCAT Meeting

Prof. Yunlu DAI introduced his research about the use of metal-polyphenol coordination nanomaterials for the combinational cancer therapy in the BCAT meeting on 7 October. Prof. Dai introduced that the check point blockade immunotherapy has been developed to enhance the combinational cancer therapy based on nanomedicine. Two polyphenols based nanoplatfroms were fabricated for cancer combinational therapy. The polyphenols based nanoplatfroms could accumulate in the tumor site and the tumor microenvironment could be exploited for the design of polyphenols-based nanoplatfrom. Prof. Dai concluded that the nanoplatform-based therapeutic efficiency of the combination strategy could be higher than the monotherapy, and less side effects can be induced.

FHS Postdoc Student Seminar

Presented by Prof. Edwin CHEUNG's group and Prof. Chuxia DENG's group

On 8 October, Ms. Guimei CUI of Prof. Edwin CHEUNG's group presented "The Role of TRIM37 as a Novel Coregulatory Factor of AP-2g in Breast Cancer" and Mr. Ming ZHAO of Prof. Chuxia DENG's group presented "Cul3 Deficiency Shapes Tumor Microenvironment and Promotes Cholangiocarcinoma in Liver-Specific Smad4/Pten Mutant Mice".

The next seminar will be held on 22 October, and presented by the group members of Prof. Chris WONG and Prof. Jun ZHENG, via Zoom again.





UPCOMING

Oct				
Mon	Tue	Wed	Thu	Fri
12	13	14	15	16
19	20	21	22	23
	Oral Defence Xinwei WU Supervisor: Prof. Ruiyu XIE Time: 9:30 Venue: N6-2022	BCAT Meeting Speaker: Prof. Kathy LUO Time: 17:00-18:00 Venue: E12-G004	Oral Defence Xingshun WANG Supervisor: Prof. Wei GE Time: 10:00 Venue: N6-2022 Oral Defence Linlin LIU Supervisor: Prof. Wenhua ZHENG Time: 15:00 Venue: N6-2022 FHS Postdoc/ Student Seminar Session: Drug development Host: Prof. Chris WONG and Prof. Jun ZHENG Time: 17:00-18:00 Venue: N22-G002 and Zoom	Oral Defence Jiankang FANG Supervisor: Prof. Wenhua ZHENG Time: 10:00 Venue: N6-2022
26 Holiday- Compensatory rest day of Chong Yeung Festival	27	28	29	30

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