

## Publication

1. Xu, M., Xue, B., Wang, Y., Wang, D., Gao, D., Yang, S., Zhao, Q., Zhou, C., Ruan, S., and **Yuan, Z.** (2021) Temperature-Feedback Nanoplatfom for NIR-II Penta-Modal Imaging-Guided Synergistic Photothermal Therapy and CAR-NK Immunotherapy of Lung Cancer. *Small*, e2101397 [2019 IF = 11.459]
2. Zhao, S., Long, Y., Su, Y., Wang, S., Zhang, Z., and **Zhang, X.** (2021) Cobalt-Enhanced Mass Transfer and Catalytic Production of Sulfate Radicals in Mof-Derived CeO<sub>2</sub> \* Co<sub>3</sub> O<sub>4</sub> Nanoflowers for Efficient Degradation of Antibiotics. *Small*, e2101393 [2019 IF = 11.459]
3. Huang, X., Wang, C., Chen, L., Zhang, T., Leung, K. L., and **Wong, G.** (2021) Human Amyloid Beta and Alpha-Synuclein Co-Expression in Neurons Impair Behavior and Recapitulate Features for Lewy Body Dementia in Caenorhabditis Elegans. *Biochim Biophys Acta Mol Basis Dis*, 166203 [5yr IF = 5.386]

## 1 BCAT Meeting

Prof. Wenhua ZHENG shared his research “The Neuroprotective Effect of Artemisinin/Artemether and Their Implication in the Treatment of Cerebral Ischemic Stroke” in the BCAT meeting on 23 June. Prof. Zheng introduced that ischemic stroke is one of the leading causes of death and disability among adults and the available treatment options are still very limited. He further said that with the exception of anti-thrombolytics and hypothermia, the current therapies fail to reduce neuronal injury, neurological deficits and mortality rates, which suggesting that the development of novel and more effective therapies against ischemic stroke is urgent.

In Prof. Zheng’s previous studies, he found that artemether and artemisinin (Arts) which have been used in the clinic as an anti-malarial drug were able to improve the neurological deficits, attenuated the infarction volume and the brain water content in a

middle cerebral artery occlusion (MCAO) animal model. Furthermore, he found that Arts treatment significantly suppressed cell apoptosis, stimulated cell proliferation and promoted the phosphorylation of extracellular signal-regulated kinase 1/2 (ERK1/2), P90rsk and cAMP responsive element-binding protein (CREB). Artemether protective effect was also attenuated by PD98059, an ERK1/2 inhibitor, administration. He also found that artemether pre-treatment induced the suppression of the intracellular ROS, the down-regulation of LDH activity, the reduction of caspase 3 activity and of the apoptosis cell rate and reversed the decrease of mitochondrial membrane potential in an *in vitro* oxygen-glucose deprivation/reperfusion (OGD/RP) model. With MCAO animal model, Arts promoted the activation of ERK1/2-P90rsk-CREB signaling pathway. These effects were blocked by the inhibition or knock-down of ERK1/2. Prof. Zheng said that his study provided evidences of the neuroprotective effect of Arts unravelling its potential as new therapeutic candidates for the prevention and treatment of stroke.

## 2 Seminar Series

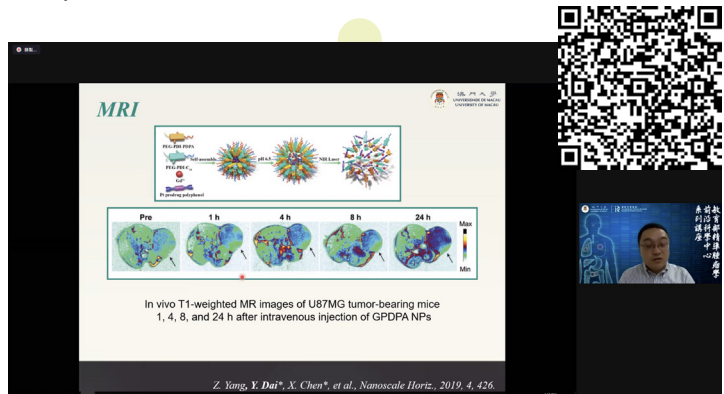
### Metal-Phenolic Networks (MPNs)- Multifunctional Biomedical Nanoplat- form – Prof. Yunlu DAI

Prof. Yunlu DAI presented “Metal-Phenolic Networks (MPNs)-Multifunctional Biomedical Nanoplat-form” in the Ministry of Education (MoE) Frontiers Science Center for Precision Oncology (FSCPO) Seminar Series on 22 June.

Prof. Dai introduced that metal polyphenols networks (MPNs), which make use of the coordination between metal ions and phenolic molecules, have emerged as promising materials for nanomedicine. Moreover, he said that compared with other materials, MPNs have several potential advantages, including pH responsiveness, negligible cytotoxicity, and rapid preparation. Additionally, the phenolic groups in the materials can be functionalized to meet specific applications. Prof. Dai reported a series of polyphenol-based nanomaterials for cancer theranostics he constructed. These MPNs were stable under normal physiological envi-

ronment and released therapeutic agents in the tumor site, which can reduce side effect of therapeutic agents to normal organs and enhance treatment efficacy. He also pointed out that the MPNs can inhibit the tumor growth and prolong the mice survival time with a low dose of drugs. Prof. Dai concluded that the MPNs-based multifunctional biomedical nanoplat-forms establish a novel promising strategy for cancer diagnosis and treatment.

Video content reliving for the seminar series is available on <https://fhs.um.edu.mo/en/researchs/research-units/umfscpo/seminar-series/>.



## 3 Community Story

### FHS Graduates Attend the UM Congregation

FHS bachelor graduates participated in the UM Congregation on 19 June. In the 2020/2021 academic year, 18 undergraduate students graduated from FHS. Congratulations and wish them a bright future!

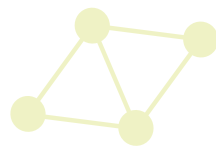
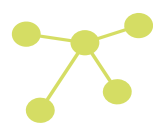
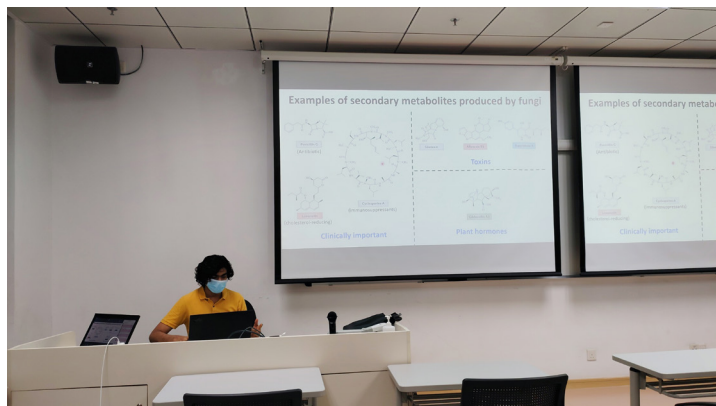


## 4 FHS Postdoc Student Seminar

Presented by Prof. Chris WONG's Group and Prof. Jun ZHENG's Group

On 24 June, Mr. Lakhansing PARDESHI of Prof. Chris WONG's group and Dr. Le TANG of Prof. Jun ZHENG's group presented "Over-Expression of Transcription Factors to Understand the Regulation of Fungal Secondary Metabolite Biosynthesis" and "An Rhs Effector Toxin: A Widespread Group of Pro-Effectors for Type VI Secretion System" respectively.

The next seminar will be held on 8 July, and presented by the group members of Prof. Xiaoling XU and Prof. Qi ZHAO.





# UPCOMING EVENTS

June / July		
Mon	28	5
Tue	29	6
Wed	30	7
		<p><b>BCAT Meeting</b>            Speaker: Prof. Jun ZHENG            Time: 17:00-18:00            Venue: E12-G004</p>
Thu	<b>JUL 1</b>	8
	<p><b>High School Vist</b>            Visitor: Sacred Heart Canossian College (English Section)            Time: 10:55 - 11:30</p>	<p><b>FHS Postdoc/ Student Seminar</b>            Session: Cancer Research, Drug Development            Host: Prof. Xiaoling XU and Prof. Qi ZHAO            Time: 17:00-18:00            Venue: N22-G002 and Zoom</p> <p><b>Oral Defence</b>            Speaker: Ming ZHAO            Supervisor: Prof. Chuxia DENG            Time: 10:00            Venue: E12-1015</p>
Fri	2	9
	<p><b>Oral Defence</b>            Speaker: Sen GUO            Supervisor: Prof. Chuxia DENG            Time: 10:00            Venue: E12-1015</p> <p><b>High School Vist</b>            Visitor: Colégio Diocesano de São José 5 (Chinese Section)            Time: 11:00 - 11:40</p>	