

ACADEMIC ACTIVITIES

Publication(s) of the week

1. Kim, T. S., Jin, Y. B., Kim, Y. S., Kim, S., Kim, J. K., Lee, H. M., Suh, H. W., Choe, J. H., Kim, Y. J., Koo, B. S., Kim, H. N., Jung, M., Lee, S. H., Kim, D. K., Chung, C., Son, J. W., Min, J. J., Kim, J. M., Deng, C. X., Kim, H. S., Lee, S. R., and Jo, E. K. (2019) SIRT3 Promotes Antimycobacterial Defenses by Coordinating Mitochondrial and Autophagic Functions. *Autophagy* [IF=11.815]
2. Wang, C., Chen, L., Yang, Y., Zhang, M., and Wong, G. (2019) Identification of Potential Blood Biomarkers for Parkinson's Disease by Gene Expression and DNA Methylation Data Integration Analysis. *Clin Epigenetics* 11, 24 [IF=5.799]
3. Wang, F., Meng, L. R., Zhang, Q. E., Li, L., Lam Nogueira, B. O. C., Ng, C. H., Ungvari, G. S., Liu, L., Zhao, W., Jia, F. J., and Xiang, Y. T. (2019) Sleep disturbance and its relationship with quality of life in older Chinese adults living in nursing homes. *Perspect Psychiatr Care* [IF=1.036]

Seminar Series

Immunoregulatory Mechanisms of Mesenchymal Stem and Stromal Cells in Inflammatory Disease - Prof. Yufang SHI



Prof. Yufang SHI, Director of Institute of Health Sciences of Chinese Academy of Sciences and Soochow University Institutes for Translational Medicine, presented a talk on “Immunoregulatory mechanisms of mesenchymal stem and stromal cells in inflammatory disease” on 20 February.

Prof. SHI discussed the current understanding of the immunomodulatory mechanisms of Mesenchymal stem cells (MSCs; also referred to as mesenchymal stromal cells) and the issues related to their therapeutic application. Prof. SHI is interested in and has drawn a high attention on MSCs' ability to regulate inflammatory processes. Their therapeutic potential was being investigated in various degenerative and inflammatory disorders such as Crohn disease, graft-versus-host disease, diabetic nephropathy and organ fibrosis. Prof. SHI introduced the multifaceted mechanisms of MSCs' therapeutic effects and how MSCs enable damaged tissues to form a balanced inflammatory and regenerative microenvironment in the presence of vigorous inflammation.

Prof. SHI showed the studies over the past few years which have demonstrated that when exposed to an inflammatory environment, MSCs can orchestrate local and systemic innate and adaptive immune responses through the release of various mediators, including immunosuppressive molecules, growth factors, exosomes, chemokines, complement components and various metabolites. Finally, Prof. SHI concluded that even nonviable MSCs could exert beneficial effects, with apoptotic MSCs showing immunosuppressive functions *in vivo*. Since the immunomodulatory capabilities of MSCs were not constitutive but rather licensed by inflammatory cytokines, the net outcomes of MSC activation might vary depending on the levels and the types of inflammation within the residing tissues.

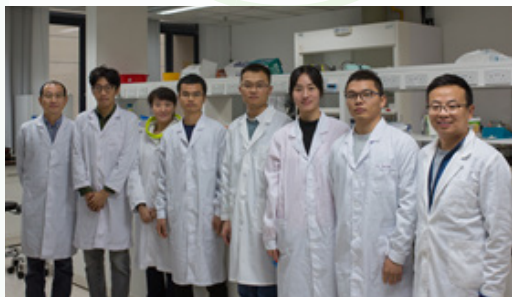
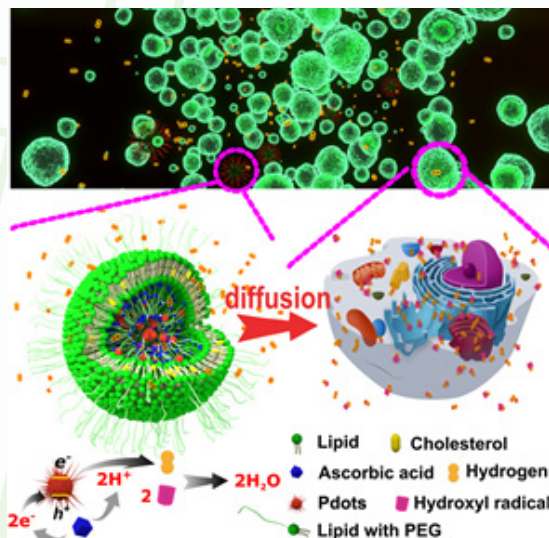


Publication Sharing

Polymer Dots in Liposome for *in situ* Photocatalytic Hydrogen Therapy - Prof. Xuanjun ZHANG

Hydrogen is colourless, odorless and non-toxic, and is the lightest gas. In addition to its important position in energy and industry, its clinical application has also received more and more attention. The new emerging hydrogen therapy has great potentials in the treatment of vascular and cardiac metabolic diseases, arthritis, obesity and diabetes, and so on. In the application of anti-oxidation, hydrogen can selectively scavenge deleterious hydroxyl radical ($\cdot\text{OH}$) instead of other required reactive oxygen species (ROS). However, the poor solubility of hydrogen in water restricted its effective delivery to diseased tissue.

Dr. Boyu Zhang, post-doctoral fellow of Prof. Xuanjun Zhang, and co-workers developed an efficient self-assembly method to load semiconducting polymer nanoparticles (Pdots) into liposomes, which act as nanoreactors for *in situ* photocatalytic hydrogen production. The generated hydrogen molecules can diffuse across the lipid bilayer of liposome to counteract ROS overexpressed in diseased tissues. This promising technique has great potential for reducing oxidative damage in injured tissue.



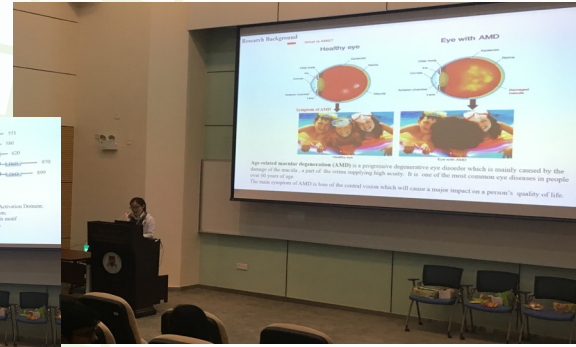
This work was published recently in *Angew. Chem. Int. Ed.* as **Very Important Paper** (for more information, please visit <https://doi.org/10.1002/anie.201813066>) and was also highlighted by *ChemViews*. (https://www.chemistryviews.org/details/ezone/11136151/Polymer_Dots_for_Hydrogen_Therapy.html)

STUDENT ACTIVITIES

FHS Postdoc Student Seminar - Presented by Prof. Wenhua ZHENG's group and Prof. Qi ZHAO's group

On 21 February, Ms. Xia ZHAO of Prof. Wenhua ZHENG's group presented "Protective Effect of Metformin Against H_2O_2 -induced Oxidative Damage in Human Retinal Pigment Epithelial (RPE) Cells through Activation of AMPK/mTOR/Autophagy Pathway" and Ms. Limei DENG of Prof. Vivien WANG's group presented "BCL3 Enhances the Generation of the Low-affinity $NF\kappa B/p52$ Homodimer".

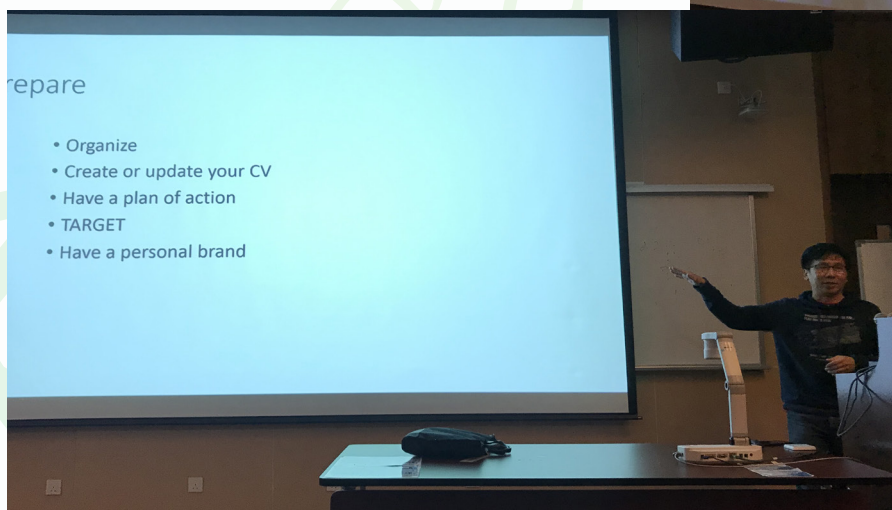
The next seminar will be held on 7 March, presented by the group members of Prof. Tzu-Ming LIU and Prof. Ruiyu XIE.



Career Sharing - Prof. Guokai CHEN and Prof. Kin TAM

On 20 February, Prof. Guokai CHEN and Prof. Kin TAM with our administrative staff, Samantha LAM, shared their experiences on looking for a job after the graduation to our bachelor students.

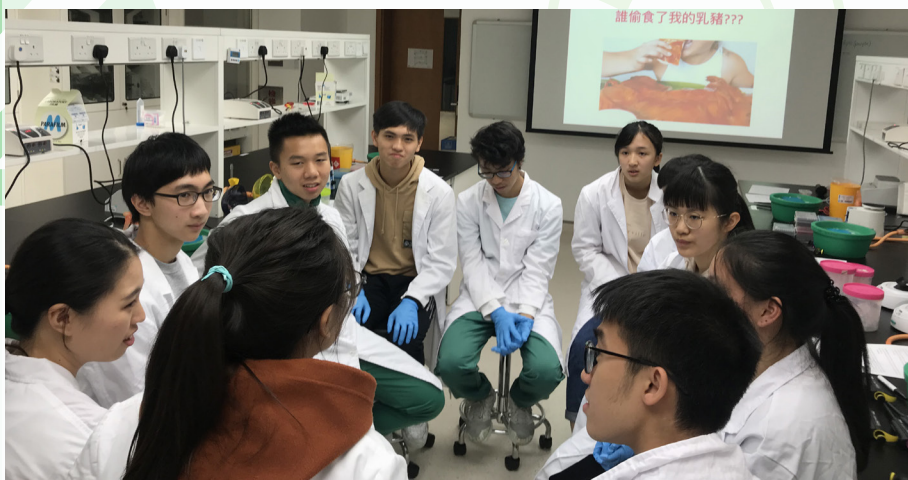
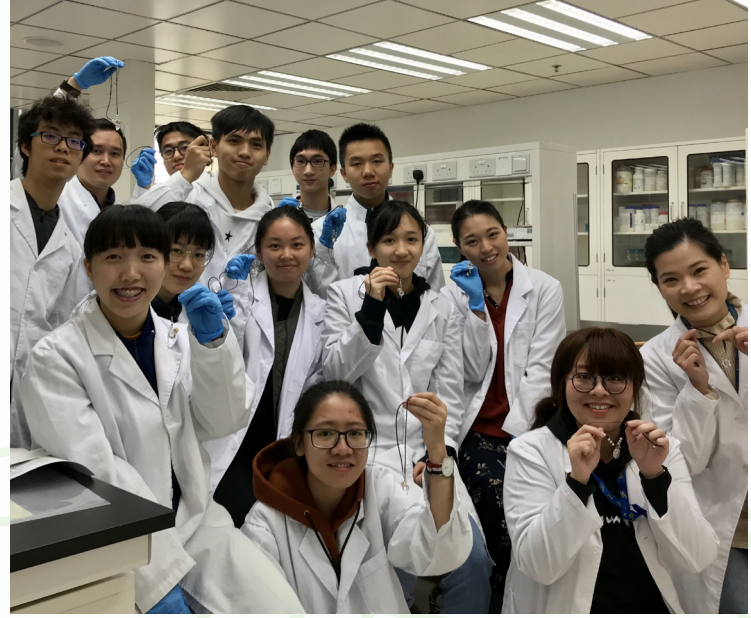
They shared several direction of finding a job and the potential opportunities to the students. Moreover, they taught the students how to prepare themselves in the interview and how to put a right attitude on looking for the jobs.



STUDENT ACTIVITIES

“Exploring Faculty of Health Sciences in 2 Days & 1 Night” for Principals’ Recommended Admission (PRA) camp

On 23 and 24 February, 8 students from several local high schools came to FHS and joined the Principals’ recommended Admission (PRA) camp. Prof. Henry KWOK and Prof. Chris WONG with the members of FHS Student Association (FHSSA) led them to perform several experiments and workshops in this camp.



FEBRUARY / MARCH

Mon	Tues	Wed	Thurs	Fri
25	26	27	28	1
		<p><u>B-CAT Meeting #4</u> Speaker: Prof. Douglas ZHANG Time: 17:00 Venue: E12-G004</p>	<p><u>Oral Defense</u> Mr. Changjie WU Supervisor : Prof. Joong Sup SHIM Time: 10:00 Venue: N6-2022</p>	<p><u>Seminar Series</u> Chemical Biology and Translational Study Speaker: Prof. Yongjun DANG Host: Prof. Joong Sup SHIM Time: 11:00-12:00 Venue: E12-G004</p> <p><u>Seminar Series</u> Humanoid Analytic Reasoning and Assisted Diagnosis and Treatment toward Healthcare Big Data Speaker: Prof. Wensheng ZHANG Host: Prof. Douglas Xiaohua ZHANG Time: 15:00-16:00 Venue: N22-G002</p>
4	5	6	7	8
		<p><u>3rd Symposium on Biomedical Sciences for Students, PDs, and RAs</u> Time: 09:00 Venue: N21-G013</p>	<p><u>FHS Postdoc/ Student Seminar</u> Host: Prof. Tzu-Ming LIU and Prof. Ruiyu XIE Time: 17:00-18:00 Venue: N22-G002</p>	
11	12	13	14	15
		<p><u>B-CAT Meeting #5</u> Speaker: Prof. Edwin CHEUNG Time: 17:00 Venue: E12-G004</p>		