

Dr. Betty Law Yuen Kwan (Ph.D.) 羅婉君



Current Position: Professor

Faculty: State Key Laboratory of Quality Research in Chinese Medicine,
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Research Areas and achievements 研究領域及成果

Educated and obtained Ph.D. degree in The University of Hong Kong (2009), Dr. Law has worked at the State Key Laboratory of Quality Research in Traditional Chinese Medicine (Macau University of Science and Technology) since 2011. In 2022, Dr. Law was selected as one of the top 2% scientists in the world as reported by Stanford University ranks. Dr. Law has long been committed to the pharmacological research on the novel autophagic activity and neuroprotective mechanisms of traditional Chinese medicines (TCMs), providing innovative drug candidates and targets for the intervention and prevention of aging-related neurodegenerative diseases. New discoveries in recent years: (1) The successful identification of novel autophagy natural ingredients for accelerating the degradation of mutant proteins; (2) The successful application of combining the use of high-performance liquid chromatography (HPLC) and Biolayer Interferometry (BLI) to identify effective ingredients from complex TCM ingredients which targeting mutant disease proteins. Hence, providing a rapid and accurate identification method for pharmacological research on TCMs; (3) In-depth exploration on mechanistic action of TCMs in neuroprotection and various diseases. Dr. Law has published more than 100 SCI papers and obtained 5 US patents and 14

Australian invention patents. As the project principal investigator, she has undertaken a total of 6 projects from the Science and Technology Development Fund of Macau (FDCT) and the Macau fund Foundation, and has completed one National Natural Science Foundation of China (NSFC)-FDCT joint grant; 3 horizontal research grants. From 2011 to now, she has supervised more than 20 doctoral and master students. Besides, she has published various academic papers on SCI journal including *Nature Communications*, *Pharmacology and Therapeutics*, *Pharmacological Research*, *Redox Biology*, *EBioMedicine*, *Signal Transduction and Targeted Therapy*, *Journal of Hepatology*, *Neural Regeneration Research*, *Cell Death & Diseases*, *Molecular Cancer Therapeutics*, *Phytomedicine*, *Ageing Research Reviews*, *Cancer Letters* and *Autophagy*, etc.

Academic Qualifications

2009. 12 Ph.D., The University of Hong Kong, Hong Kong
2004. 05 M.Sc., Hong Kong University of Science and Technology, Hong Kong
2001. 11 B.Sc., Hong Kong University of Science and Technology, Hong Kong

Professional Chronology

2024.7- Now Professor, Macau University of Science and Technology
2017.7- 2024.6 Associate Professor, Macau University of Science and Technology
2011.9 - 2017.6 Assistant Professor, Macau University of Science and Technology
2011.3 - 2011.8 Postdoctoral Fellow, Hong Kong Baptist University
2010.5 - 2011.2 Research Associate, The University of Hong Kong
2010.5 - 2011.2 Honorary Research Associate, The Chinese University of HK
2009.11- 2010.4 Research Assistant I, The University of Hong Kong

Editorial Board membership

- Pharmacological Research (Elsevier), *Consulting editor*
- Heliyon (Elsevier), *Associate Editor*
- Molecules (MDPI), *Guest editor*

Academic Awards

- ◇ Eli Lilly Asia Outstanding Graduate Thesis Award 禮來亞洲傑出論文獎 2010
- ◇ Bank of China (BOC, Macau Branch) Excellent Research Award 中銀(澳門)學

術研究優秀獎 2015

- ◇ Zhongzhu Awards for Life Science Recognizing First Prize in Research 中珠醫療生命科學科研一等獎 2016
- ◇ Zhongzhu Awards for Life Science Recognizing First Prize in Service 中珠醫療生命科學服務一等獎 2017
- ◇ The World Top 2 % scientists (Stanford University ranks) 全球前 2% 頂尖科學家 2022 (美國斯坦福大學排名)

Recent Representative Publications

1. Hui-Miao Wang#, Hong Juan Lai, An Guo Wu, Yong Tang, Lin Lin Song, Hang Hong Lo, Io Nam Wong, Vincent Kam Wai Wong, **Betty Yuen-Kwan Law***. Therapeutic Effects of 5-demethylnobiletin on Mouse Model of Vitiligo Induced by Hydroquinone. *Journal of Functional Foods*. Volume 112, January 2024, 105962.
2. Yong Tang#, Jing Wei#, Xiao-Fang Wang#, Tao Long, Xiaohong Xiang, Liqun Qu, Xingxia Wang, Chonglin Yu, Xingli Xiao, Xueyuan Hu, Jing Zen, Qin Xu, Anguo Wu, Jianming Wu, Dalian Qin* Xiaogang Zhou* and **Betty Yuen-Kwan Law***. Activation of autophagy by *Citri Reticulatae Semen* ameliorates β -amyloid-induced cell death and cognition deficits in Alzheimer's disease model. *Neural Regeneration Research*. 19(11):p 2467-2479, November 2024.
3. Meng Han Liu, Yong Tang, Li Qun Qu, Lin Lin Song, Hang Hong Lo, Rui Long Zhang, Xiao Yun Yun, Hui Miao Wang, Joyce Tsz Wai Chan, Jian Hui Wu, Cai Ren Wang, Vincent Kam Wai Wong, An Guo Wu, **Betty Yuen-Kwan Law#**. Raddeanin A isolated from *Anemone raddeana Regel* improves pathological and cognitive deficits of Alzheimer's disease by targeting β -amyloidosis. *Phytomedicine*. Vol. 122, January 2024, 155121.
4. Xingxia Wang#, Wei Hu#, Liqun Qu#, Jian Wang, Anguo Wu, Hang Hong Lo, Jerome P. L. Ng, Yong Tang, Xiaoyun Yun, Jianhui Wu, Vincent Kam Wai Wong, Sookja Kim Chung, Linna Wang, Weidan Luo, Xiang Ji, **Betty Yuen Kwan Law***. Tricin promoted ATG-7 dependent autophagic degradation of α -synuclein and dopamine release for improving cognitive and motor deficits in Parkinson's disease. *Pharmacological Research*. <https://doi.org/10.1016/j.phrs.2023.106874>, 28 July 2023.
5. Wei-Dan Luo#, Yu-Ping Wang, Jun Lv, Yong Liu, Yuan-Qing Qu, Xiong-Fei Xu, Li-Jun Yang, Zi-Cong Lin, Lin-Na Wang, Rui-Hong Chen, Jiu-Jie Yang, Ya-Ling Zeng, Rui-Long Zhang, Bai-Xiong Huang, Xiao-Yun Yun, Xuan-Ying Wang, Lin-Lin Song, Jian-Hui Wu, Xing-Xia Wang, Xi Chen, Wei Zhang, Hui-Miao Wang, Li-Qun Qu, Meng-Han Liu, ... **Betty Yuen Kwan Law*** and Vincent Kam Wai Wong*.

Age-related self-DNA accumulation may accelerate arthritis in rats and in human rheumatoid arthritis. *Nature Communications*. Volume 14, Article number: 4394 (2023).

6. LinLin Song#, YongPei Tang#, **Betty Yuen Kwan Law***. Targeting Calcium Signaling in Alzheimer's Disease: Challenges and Promising Therapeutic Avenues. *Neural regeneration research*. Issue 3, July 20, 2023. | DOI: 10.4103/1673-5374.380898.
7. Feng-Dan Zhu, Xue Chen, Lu Yu, Meng-Ling Hu, Yi-Ru Pan, Da-Lian Qin, Jian-Ming Wu, Ling Li, **Betty Yuen-Kwan Law**, Vincent Kam-Wai Wong, Xiao-Gang Zhou, An-Guo Wu, Dong-Sheng Fan. Targeting autophagy to discover the Piper wallichii petroleum ether fraction exhibiting antiaging and anti-Alzheimer's disease effects in *Caenorhabditis elegans*. *Phytomedicine*. Volume 117, August 2023, 154916.
8. Lin Lin Song#, Yuan Qing Qua, Yong Pei Tang, Xi Chen, Hang Hong Lo, Li Qun Qu, Yun Xiao Yun, Vincent Kam Wai Wong, Rui Long Zhang, Hui Miao Wang, Meng Han Liu, Wei Zhang, Hui Xia Zhang, Joyce Tsz Wai Chan, Cai Ren Wang, Jian Hui Wu, **Betty Yuen Kwan Law***. Hyperoside alleviates toxicity of β -amyloid via endoplasmic reticulum-mitochondrial calcium signal transduction cascade in APP/PS1 double transgenic Alzheimer's disease mice. *Redox Biology*. Volume 61, May 2023, 102637.
9. Yi Liu, Han Li, Zhihong Luo, You Yu, Jingzhao Yang, Min Zhang, **Betty Yuen Kwan Law**, Zan Huang, Wenhua Li. Artesunate, a new antimalarial clinical drug, exhibits potent anti-AML activity by targeting the ROS/Bim and TFRC/Fe²⁺ pathways. *British Journal of Pharmacology*. 11 Nov 2022. <https://doi.org/10.1111/bph.15986>.
10. Ting Liu, Kangdi Li, Zhenxing Zhang, Jinghui Peng, Jingzhao Yang, **Betty Yuen Kwan Law**, Xin Liu, Wenhua Li. Tetrandrine Inhibits Cancer Stem Cell Characteristics and Epithelial to Mesenchymal Transition in Triple-Negative Breast Cancer via SOD1/ROS Signaling Pathway. *Am J Chin Med* 2023 Jan 20;1-20. doi: 10.1142/S0192415X23500222.
11. Han Li, You Yu, Yi Liu, Zhihong Luo, **Betty Yuen Kwan Law**, Yi Zheng, Xing Huang, Wen hua Li. Ursolic acid enhances the antitumor effects of sorafenib associated with Mcl-1 - related apoptosis and SLC7A11 - dependent ferroptosis in human cancer. *Pharmacological Research*. Volume 182, August 2022, 106306.
12. Ren Fang, Tan Ming, Jerome P L Ng, Wu An Guo, Yuan Si Yu, Zhang Hui, Ren Ji

- Hua, Cheng Sheng Tao, Zhang Juan, Lo Hang Hong, Vincent Kam Wai Wong*, **Betty Yuen Kwan Law***, Chen Juan*. Ciliatoside A, isolated from *Peristrophe japonica*, inhibits HBsAg expression and cccDNA transcription by inducing autophagy. *Antiviral Research*. 2023 Jan;209:105482. doi: 10.1016.
13. Liqun Qu, Jianhui Wu, Yong Tang, Xiaoyun Yun, Hang Hong Lo, Lu Yu, Wenhua Li, Anguo Wu* and **Betty Yuen Kwan Law***. Licochalcone B, a Natural Autophagic Agent for Alleviating Oxidative Stress-Induced Cell Death in Neuronal Cells and *Caenorhabditis elegans* Models. *Pharmaceuticals* 2022, 15, 1052. <https://doi.org/10.3390/ph15091052> .
 14. Giovanni Ribaudo•, Xiao Yun Yun•, Alberto Ongaro, Erika Oselladore, Jerome P. L. Ng, Richard K. Haynes, **Betty Yuen Kwan Law**, Maurizio Memo, Vincent Kam Wai Wong*, Paolo Coghi* and Alessandra Gianoncelli*. Combining Computational and Experimental Evidence on the Activity of Antimalarial Drugs on Papain-Like Protease of SARS-Cov-2: A Repurposing Study. *Chem Biol Drug Des*. 2022 Nov 30. doi: 10.1111/cbdd.14187.
 15. Lin Yin, Guoxin Huang, Imran Khan, Lu Su, Wenrui Xia, **Betty Yuen Kwan Law**, Vincent Kam Wai Wong, Qiang Wu, Jingyi Wang, Wai Kit Leong and W. L. Wendy Hsiao. *Poria cocos* polysaccharides exert prebiotic function to attenuate the adverse effects and improve the therapeutic outcome of 5-FU in ApcMin/+ mice. *Chinese Medicine* (2022) 17:116.
 16. Chang-Long He, Yong Tang, Xue Chen, Tao Long, Yan-Ni He, Jing Wei, Jian-Ming Wu, Cai Lan, Lu Yu, Fei-Hong Huang, Cong-Wei Gu, Jian Liu, Chong-Lin Yu, Vincent Kam-Wai Wong, **Betty Yuen-Kwan Law**, Da-Lian Qin, An-Guo Wu, Xiao-Gang Zhou. Folium Hibisci Mutabilis extract, a potent autophagy enhancer, exhibits neuroprotective properties in multiple models of neurodegenerative diseases. *Phytomedicine*. <https://doi.org/10.1016/j.phymed.2022.154548>
 17. Jiujie Yang#, Zhi Li#, Linna Wang, Xiaoyun Yun, Yaling Zeng, Jerome P.L. Ng, Hanghong Lo, Yan Wang, Kaixi Zhang, **Betty Yuen Kwan Law** and Vincent Kam Wai Wong*. The role of non-coding RNAs (miRNA and lncRNA) in the clinical management of rheumatoid arthritis. *Pharmacological Research*. 2022 Dec;186:106549.
 18. Paolo Coghi ‡, Ivan A. Yaremenko ‡, Parichat Prommana, Jia Ning Wu, Rui Long Zhang, Jerome P. L. Ng, Yulia Yu Belyakova, **Betty Yuen Kwan Law**, Peter S. Radulov, Chairat Uthaiyibull*, Vincent Kam Wai Wong*, and Alexander O. Terent'ev*. Antimalarial and Anticancer Activity Evaluation of Bridged Ozonides,

Aminoperoxides, and Tetraoxanes. *ChemMedChem*, 2022 Oct 19;17(20):e202200328.

19. Si-yu Yuan, Hai-Bo Yu, Zhen Yang, Yi-Ping Qin, Ji-Hua Ren, Sheng-Tao Cheng, Fang Ren, **Betty Yuen Kwan Law**, Vincent Kam Wai Wong, Jerome Pak Lam Ng, Yu-Jiao Zhou, Xin He, Ming Tan, Zhen-Zhen Zhang and Juan Chen. Pimobendan inhibits HBV transcription and replication by suppressing HBV promoters activity. *Front Pharmacol*. 2022 Jun 3;13:837115.
20. Paolo Coghia, Xiao Yun Yunb, Jerome P. L. Ngb, **Betty Yuan Kwan Law**, Maurizio Memoc, Alessandra Gianoncellic Vincent Kam Wai Wong* and Giovanni Ribaudo*. Exploring SARS-CoV-2 Delta Variant Spike Protein Receptor-Binding Domain (RBD) as a Target for Tanshinones and Antimalarials. *Natural Product Research*. 2022 Mar 25;1-6.
21. Jerome P. L. Ng, Mohit K. Tiwari, Ali Adnan Nasim, Rui Long Zhang, Yuanqing Qu, Richa Sharma, **Betty Yuen Kwan Law**, Dharmendra Kumar Yadav*, Sandeep Chaudhary*, Paolo Coghi*, Vincent Kam Wai Wong*. Biological Evaluation in Resistant Cancer Cells and Study of Mechanism of Action of Arylvinyl-1,2,4-Trioxanes. *Pharmaceuticals* 2022 Mar 16;15(3):360.
22. Xiaoyun Yun, Yuhan Xie, Jerome P. L. Ng, **Betty Yuen Kwan Law**, Vincent Kam Wai Wong*, and Paolo Coghi*. 2-Bromo-3-((1-(7-chloroquinolin-4-yl)-1H-1,2,3-triazol-4-yl)-methoxy)-benzaldehyde. *Molbank*. Mar 2022(1), M1351; <https://doi.org/10.3390/M1351>
23. Li Zhang, Yuan-Yuan Yong, Lan Deng, Jing Wang, **Betty Yuen-Kwan Law**, Meng-Ling Hu, Jian-Ming Wu, Lu Yu, Vincent Kam-Wai Wong, Chong-Lin Yu, Da-Lian Qin, Xiao-Gang Zhou, An-Guo Wu. Therapeutic potential of Polygala saponins in neurological diseases. *Phytomedicine*. 2022 Sep 29; 108:154483.
24. Yuan-Yuan Yong#, Li Zhang#, Yu-Jiao Hu#, Jian-Ming Wu, Lu Yan, Yi-Ru Pan, Yong Tang, Lu Yu, **Betty Yuen-Kwan Law**, Chong-Lin Yu, Jie Zhou, Mao Li, Da-Lian Qin*, Xiao-Gang Zhou*, An-Guo Wu*. Targeting autophagy regulation in NLRP3 inflammasome-mediated lung inflammation in COVID-19. *Clinical Immunology* 2022 Aug 6;109093.
25. Xiao-Gang Zhou, Wen-Qiao Qiu, Lu Yu, Rong Pan, Jin-Feng Teng, Zhi-Pei Sang, **Betty Yuen-Kwan Law**, Ya Zhao, Li Zhang, Lu Yan, Yong Tang, Xiao-Lei Sun, Vincent Kam Wai Wong, Chong-Lin Yu, Jian-Ming Wu, Da-Lian Qin, An-Guo Wu. Targeting microglial autophagic degradation of the NLRP3 inflammasome for identification of thoningianin A in Alzheimer's disease. *Inflammation and*

Regeneration 2022, 42(1):25.

26. Tao Long#, Yong Tang#, Yan-Ni He#, Chang-Long He, Xue Chen, Min-Song Guo, Jian-Ming Wu, Lu Yu, Chong-Lin Yu, **Betty Yuen-Kwan Law**, Da-Lian Qin*, An-Guo Wu*, Xiao-Gang Zhou*. Citri Reticulatae Semen extract promotes healthy aging and neuroprotection via autophagy induction in *Caenorhabditis elegans*. *Journals of Gerontology Series A-Biological Sciences and Medical Sciences*. 2022, July, 20: 154150
27. An-Guo Wu*#, Yuan-Yuan Yong#, Yi-Ru Pan#, Li Zhang, Jian-Ming Wu, Yue Zhang, Yong Tang, Jing Wei, Lu Yu, **Betty Yuen-Kwan Law**, Chong-Lin Yu, Jian Liu, Cai Lan, Ru-Xiang Xu*, Xiao-Gang Zhou*, Da-Lian Qi*. Targeting Nrf2-Mediated Oxidative Stress Response in Traumatic Brain Injury: Therapeutic Perspectives of Phytochemicals. *Oxidative Medicine and Cellular Longevity*. 2022, April: 1015791.
28. Tao Long#, Qian Wu#, Jing Wei#, Yong Tang, Yan-Ni He, Chang-Long He, Xue Chen, Lu Yu, Chong-Lin Yu, **Betty Yuen-Kwan Law**, Jian-Ming Wu, Da-Lian Qin*, An-Guo Wu*, and Xiao-Gang Zhou*. Ferulic Acid Exerts Neuroprotective Effects via Autophagy Induction in *C. elegans* and Cellular Models of Parkinson's Disease. *Oxidative Medicine and Cellular Longevity*. 2022, Feb: 3723567.
29. Lu Yan#, Min-Song Guo#, Yue Zhang#, Lu Yu, Jian-Ming Wu, Yong Tang, Wei Ai, Feng-Dan Zhu, **Betty Yuen-Kwan Law**, Qi Chen, Chong-Lin Yu, Vincent Kam-Wai Wong, Hua Li, Mao Li, Xiao-Gang Zhou*, Da-Lian Qin*, and An-Guo Wu*. Dietary Plant Polyphenols as the Potential Drugs in Neurodegenerative Diseases: Current Evidence, Advances, and Opportunities. *Oxidative Medicine and Cellular Longevity*. 2022, 2022: 5288698.
30. Wen-Qiao Qiu#, Wei Ai#, Feng-Dan Zhu#, Yue Zhang, Min-Song Guo, **Betty Yuen-Kwan Law**, Jian-Ming Wu, Vincent Kam-Wai Wong, Yong Tang, Lu Yu, Qi Chen, Chong-Lin Yu, Jian Liu, Da-Lian Qin*, Xiao-Gang Zhou*, An-Guo Wu*. Polygala saponins inhibit NLRP3 inflammasome-mediated neuroinflammation via SHP2-Mediated mitophagy. *Free Radical Biology and Medicine*. 2022 Feb 1;179:76-94.
31. Lai J#, Tang Y#, Yang F, Chen J, Huang FH, Yang J, Wang L, Qin D, **Betty Yuen-Kwan Law** *, Wu AG*, Wu JM*. Targeting autophagy in ethnomedicine against human diseases. *J Ethnopharmacol*. 2022 Jan 10; 282: 114516.
32. Minsong Guo#, Fengdan Zhu#, Wenqiao Qiu#, GanQiao, **Betty Yuen-Kwan Law**, LuYu, JianmingWu, YongTang, ChonglinYu, Dalian Qin*, Xiaogang Zhou*,

- AnguoWu*. High-throughput screening for amyloid- β binding natural small-molecules based on the combinational use of biolayer interferometry and UHPLC–DAD-Q/TOF-MS/MS. *Acta Pharmaceutica Sinica B*. 2022, 12(4):1723-1739 <https://doi.org/10.1016/j.apsb.2021.08.030>.
33. Hui-Miao Wang, Li Qun Qu, Jerome P. L. Ng, Wu Zeng, Lu Yu, Lin Lin Song, Vincent Kam Wai Wong, Cheng Lai Xia*, **Betty Yuen-Kwan Law** *. Natural Citrus flavanone 5-demethylnobiletin stimulates melanogenesis through the activation of cAMP/CREB pathway in B16F10 cells. *Phytomedicine*. Jan 2022
 34. Lai J#, Tang Y#, Yang F, Chen J, Huang FH, Yang J, Wang L, Qin D, **Betty Yuen-Kwan Law** *, Wu AG*, Wu JM*. Targeting autophagy in ethnomedicine against human diseases. *J Ethnopharmacology*. 2022 Jan 10; 282: 114516.
 35. Bin Tang, Wu Zeng, Lin Lin Song, Hui Miao Wang, Li Qun Qu, Hang Hong Lo, Lu Yu, An Guo Wu, Vincent Kam Wai Wong* and **Betty Yuen Kwan Law***. Extracellular Vesicle Delivery of Neferine for the Attenuation of Neurodegenerative Disease Proteins and Motor Deficit in an Alzheimer’s Disease Mouse Model. *Pharmaceuticals* 2022, 15, 83. <https://doi.org/10.3390/ph15010083>. Volume 176, February 2022, 106082
 36. Wai kit Leong, Guo xin Huang, Wei lin Liao, Wen Rui Xia, Xiao ang Li, Zi ren Su Liang Liu, Qiang Wu, Vincent Kam Wai Wong, **Betty Yuen Kwan Law**, Cheng lai Xia, Xiao ling Guo, Imran Khan W.L and Wendy Hsiao. Traditional Patchouli essential oil modulates the host’s immune responses and gut microbiota and exhibits potent anti-cancer effects in ApcMin ^{+/+} mice. *Pharmacological Research*. Volume 176, February 2022, 106082.
 37. Wen-Qiao Qiu; Wei Ai; Feng-Dan Zhu; Yue Zhang; Min-Song Guo; **Betty Yuen-Kwan Law**; Jian-Ming Wu; Vincent Kam-Wai Wong; Yong Tang; Lu Yu; Qi Chen; Chong-Lin Yu; Xiao-Gang Zhou; Da-Lian Qin, Anguo Wu. Polygala saponins inhibit NLRP3 inflammasome-mediated neuroinflammation via SHP2-Mediated mitophagy. *Free Redical Biology & Medicine*. 2021 Dec 20;179:76-94.
 38. Paolo Coghi, Jerome P. L. Ng, Onat Kadioglu, **Betty Yuen Kwan Law**, Alena Congling Qiu, Mohamed E.M. Saeed, Xi Chen, Chi Kio Ip, Thomas Efferth*, Liang Liu* and Vincent Kam Wai Wong*. Synthesis, computational docking and biological evaluation of celastrol derivatives as dual inhibitors of SERCA and P-glycoprotein in cancer therapy. *Eur J Med Chem*. 2021 Nov 15;224:113676.
 39. Hai-Bo Yu; Sheng-Tao Cheng; Fang Ren; Yong Chen; Xiao-Feng Shi; Vincent Kam Wai Wong; **Betty Yuen Kwan Law**; Ji-Hua Ren; Shan Zhong; Wei-Xian Chen; Hong-Mei Xu; Zhen-Zhen Zhang; Jie-Li Hu; Xue-Fei Cai; Yuan Hu; Wen-Lu Zhang; Quan-Xin Long; Lin He; Zhong-Wen Hu; Hui Jiang; Hong-Zhong Zhou; Ai-Long

- Huang; Juan Chen. SIRT7 restricts HBV transcription and replication through catalyzing desuccinylation of histone H3 associated with cccDNA minichromosome. *Clinical Science* 2021, 135 (12): 1505–1522.
40. Xi Chen, Hui Zhang, Wu Zeng, Nick Wang, Hang Hong Lo, Chi Kio Ip, Li Jun Yang, W.L. Wendy Hsiao, Wai Man Sin, Chenglai Xia, **Betty Yuen Kwan Law*** and Vincent Kam Wai Wong*. Far infrared irradiation suppresses experimental arthritis in rats by down-regulation of genes involved in inflammatory response and autoimmunity. *Journal of Advanced Research*. 2021 Sept 1; [https:// doi.org/ 10.1016/j.jare.2021.08.015](https://doi.org/10.1016/j.jare.2021.08.015).
 41. Ivo Ricardo de Seabra Rodrigues Dias, Hang Hong Lo, Kaixi Zhang, **Betty Yuen Kwan Law**, Ali Adnan Nasim, Sookja Kim Chung#, Vincent Kam Wai Wong#, Liang Liu#. Potential therapeutic compounds from traditional Chinese medicine targeting endoplasmic reticulum stress to alleviate rheumatoid arthritis. *Pharmacol Res*. 2021 Aug;170:105696.
 42. Rui Hong Chen*, Li Jun Yang*, Sami Hamdoun, Sookja Kim Chung, Christopher Wai-kei Lam, Kai Xi Zhang, Xiaoling Guo, Chenglai Xia, **Betty Yuen Kwan Law#** and Vincent Kam Wai Wong#. 1,2,3,4,6-Pentagalloyl glucose, a RBD-ACE2 binding inhibitor to prevent SARS-CoV-2 infection. *Frontier in Pharmacology*. 04 March 2021.
 43. Wu Zeng, An Guo Wu, Xiao-Gang Zhou, Imran Khan, Rui Long Zhang, Hang Hong Lo, Li Qun Qu, Lin Lin Song, Xiao Yun Yun, Hui Miao Wang, Juan Chen, Jerome P.L. Ng, Fang Ren, Si Yu Yuan, Lu Yu, Yong Tang, Guo Xin Huang, Vincent Kam Wai Wong, Sookja Kim Chung, Simon Wing Fai Mok, Da Lian Qin, Hua Lin Sun, Liang Liu*, W.L. Wendy Hsiao*, **Betty Yuen Kwan Law***. Saponins isolated from Radix polygalae extent lifespan by modulating complement C3 and gut microbiota. *Pharmacological Research*. 170 (Aug 2021) 105697.
 44. Hualin Sun, Junjie Sun, Ming Li, Lei Qian, Lilei Zhang, Ziwei Huang, Yuntian Shen, **Betty Yuen-Kwan Law**, Liang Liu* and Xiaosong Gu*. Transcriptome Analysis of Immune Receptor Activation and Energy Metabolism Reduction as the Underlying Mechanisms in Interleukin-6-Induced Skeletal Muscle Atrophy. *Frontiers In Immunology*. 06 September 2021 | <https://doi.org/10.3389/fimmu.2021.730070>
 45. Li Jun Yang*, Rui Hong Chen*, Sami Hamdoun, Paolo Coghi, Jerome Pak Lam Ng, David Wei Zhang, Xiaoling Guo, Chenglai Xia, **Betty Yuen Kwan Law#** and Vincent Kam Wai Wong#. Corilagin prevents SARS-CoV-2 infection by targeting RBD-ACE2 binding. *Phytomedicine*. 2021 Jul;87:153591.
 46. Ivo Ricardo de Seabra Rodrigues Dias, Hang Hong Lo, Kaixi Zhang, **Betty Yuen Kwan Law**, Ali Adnan Nasim, Sookja Kim Chung#, Vincent Kam Wai Wong#, Liang Liu#. Potential therapeutic compounds from traditional Chinese medicine

- targeting endoplasmic reticulum stress to alleviate rheumatoid arthritis. *Pharmacol Res.* 2021 Aug;170:105696.
47. Xiaoang Li, Imran Khan, Wenrui Xia, Guoxin Huang, Liang Liu, **Betty Yuen Kwan Law**, Lin Yin, Weilin Liao, Waikit Long, Ruixuan Han, Vincent Kam Wai Wong, Chenglai Xia, Xiaoling Guo, Wendy Hsiao. Icariin enhances youth-like features by attenuating the declined gut microbiota in the aged mice. *Pharmacol Res.* 2021 Jun;168:105587.
 48. Wu Zeng*, **Betty Y.K. Law***, Vincent K.W. Wong, Denise S.B. Chan, Simon W.F. Mok, Joyce J.Y. Gao, Rebecca K.Y. Ho, Xu Liang, Jia H. Li, Ming T. Lee, Weng L. Yoon, Michael P. Smolinski, Johnson Y.N. Lau, Christopher W.K. Lam[#], and Manson Fok[#]. HM30181A, a potent P-glycoprotein inhibitor, potentiates absorption and *in vivo* anti-tumor efficacy of paclitaxel in an orthotopic brain tumor model. *Cancer Biology & Medicine* 2020. DOI: 10.20892/j.issn.2095-3941.2020.0128.
 49. Hai-Bo Yu, Sheng-Tao Cheng, Fang Ren, Yong Chen, Xiao-Feng Shi, Vincent Kam Wai Wong, **Betty Yuen Kwan Law**, Ji-Hua Ren, Shan Zhong, Wei-Xian Chen, Hong-Mei Xu, Zhen-Zhen Zhang, Jie-Li Hu, Xue-Fei Cai, Yuan Hu, Wen-Lu Zhang, Quan-Xin Long, Lin He, Zhong-Wen Hu, Hui Jiang, Hong-Zhong Zhou, Ai-Long Huang, Juan Chen. SIRT7 restricts HBV transcription and replication through catalyzing desuccinylation of histone H3 associated with cccDNA minichromosome. *Clinical Science.* 2021 Jun 25;135(12):1505-1522.
 50. Jerome P. L. Ng, Paolo Coghi, **Betty Yuen Kwan Law**, Liang Liu* and Vincent Kam Wai Wong*. The present and future synthetic strategies of structural modifications of sinomenine. *Organic Chemistry Frontiers.* Issue 24, 2020.
 51. Sheng-Tao Cheng, Jie-Li Hu, Ji-Hua Ren, Hai-Bo Yu, Shan Zhong, Vincent Kam Wai Wong, **Betty Yuen Kwan Law**, Wei-Xian Chen, Hong-Mei Xu, Zhen-Zhen Zhang, Xue-Fei Cai, Yuan Hu, Wen-Lu Zhang, Quan-Xin Long, Fang Ren, Hong-Zhong Zhou, Ai-Long Huang *, Juan Chen1*. Dicoumarol, an NQO1 inhibitor, blocks cccDNA transcription by promoting degradation of Hbx. *Journal of Hepatology* 2020 Sep 25;S0168-8278(20)33661-8. doi: 10.1016/j.jhep.2020.09.019.
 52. Rui Xiong, Xiao-Gang Zhou, Yong Tang, Jian-Ming Wu, Yue-Shan Sun, Jin-Feng Teng, Rong Pan, **Betty Yuen-Kwan Law**, Ya Zhao, Wen-Qiao Qiu, Xiu-Ling Wang Sha Liu, Yi-Ling Wang, Lu Yu, Chong-Lin Yu, Qi-Bing Mei, Da-Lian Qin, An-Guo Wu. Lychee Seed Polyphenol Protects the Blood-Brain Barrier through Inhibiting A β (25-35)-Induced NLRP3 Inflammasome Activation via the AMPK/mTOR/ULK1-Mediated Autophagy in bEnd.3 Cells and APP/PS1 Mice. *Phytotherapy Research* 2020; 1–20. DOI: 10.1002/ptr.6849.

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Book Chapter

1. **Betty Yuen Kwan Law**#, Vincent Wong Kam Wai. **Book title:** Autophagy in Current Trends in Cellular Physiology and Pathology; **Chapter title:** Autophagy In Multidrug-Resistant Cancers (MDR) *Chapter 20 Page 435-454*; ISBN 978-953-51-2726-0; *InTech Publishing*, Croatia. June 2016.
2. Simon Wing Fai Mok, **Betty Yuen Kwan Law**, Vincent Kam Wai Wong and Liang Liu* (2018). Immunotherapeutic approaches of rheumatoid arthritis and the

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3. Yu Zhong Peng, Li Jun Yang, Hang Hong Lo, **Betty Yuen Kwan Law** and Vincent Kam Wai Wong. **Chapter 6:** Tumor Therapeutic Modes; ebook “New Nanomaterials and Techniques for Tumor-targeted Systems”. Springer Singapore; ISBN: 978-981-15-5158-1, 2020.

Teaching Modules

Under-graduate courses (UG)

- Biochemistry
- Biochemistry(Laboratory)
- Biochemistry & Molecular Biology
- Biochemistry & Molecular Biology (Laboratory)
- Pharmacological lab (Laboratory) (*Course coordinator*)

Post-graduate courses (PG)

- Modern Biotechnology
- Clinical Pharmacology
- Pharmaceutical English (*Course coordinator*)
- Clinical English on Chinese medicine (*Course coordinator*)

Professional Qualifications and positions

- ✧ Member of the Macau Laboratory Technologist Association (MLTA, Macao)
- ✧ Postgraduate students management committee, MUST (Deputy officer)
- ✧ Executive Council Member of the Board of Specialty Committee of Immunology of Traditional Chinese Medicine of the World Federation of Chinese Medicine Societies. 世界中醫藥學會聯合會中醫藥免疫專業委員會
- ✧ Executive Council Member of Council of the International Consortium for Rheumatology Research
- ✧ 中國研究型醫院學會神經再生與修復專業委員會委員(認知與運動障礙研究學組)
- ✧ 中國海洋學會海洋中藥專業委員會委員
- ✧ 中國營養學會食藥同源產業分會委員
- ✧ 國家食藥同源產業科技創新聯盟理事會理事
- ✧ 香港全球華人企業家總商會專業會員