Dr. Vincent Kam Wai Wong



Position: Associate Professor

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Dr. Vincent Kam Wai Wong received both his B.S. degree (1999) and MPhil degree (2002) from Hong Kong University of Science and Technology. In 2006, he received his Ph.D. Degree from the University of Hong Kong and then worked as post-doctoral research fellow at School of Chinese Medicine in Hong Kong Baptist University for three years. In 2009, he was promoted to research assistant professor (RAP) in the same department and started his own research area. In 2011, he started to be an assistant professor in State Key Laboratory of Macau University of Science and Technology engaging in the research field of anti-inflammation and anti-cancer. In 2015, he achieved the special promotion standard to associate professor.

Dr. Vincent Wong is experienced in cancer molecular biology, chemical biology and structural activity relationship, and IKK- β – NF- κ B signaling. His research focus on relationship between autophagy and multidrug-resistant, apoptosis-resistant anti-tumor

effect via SERCA inhibition and AMPK activation. Recently, Dr. Wong deeply interested in the involvement of p53 and P-glycoprotein in drug-resistant phenotype of rheumatoid arthritis. In addition, with the support of Nobel Laureate Laboratory, he cooperates with an innovative technology brand "eefit" in Hong Kong to research and develop medical and health products, e.g. eefit essential oil for COVID-19. Dr. Wong has published over 120 peer-reviewed SCI journals including *Science, Nature Communication, Autophagy, Oncotarget, Scientific Reports, Clinical Cancer Research, Organic Letters, Journal of Cellular Biochemistry, ChemMedChem, Cell Death and Disease, Cancer Letters, Frontier in Pharmacology, British Journal of Pharmacology, Cellular and Molecular Immunology.* Dr. Wong obtained more than 20 US and Australia patents with the works related to the discovery of novel IKK-beta inhibitor, novel autophagy enhancer for treatment of MDR cancer and neurodegenerative diseases. Since 2013, Dr. Wong achieved the Bank of China Excellent Research Award, First-class High Institute Natural Science Award in China, and Second and First-class Natural Science Award in Macao.

EDUCATION

2002-2006	The University of Hong Kong
1999-2002	The Hong Kong University of Science and Technology
1996-1999	The Hong Kong University of Science and Technology

WORK HISTORY

7/2015-present Macau University of Science and Technology

Associate Professor

(State Key Laboratory of Quality Research in Chinese

Medicine)

Deputy Supervisor

(Center for Omics Technology and Innovative Drug Research)

9/2011-6/2015 Macau University of Science and Technology

Assistant Professor

(State Key Laboratory of Quality Research in Chinese

Medicine)

Deputy Supervisor

(Center for Omics Technology and Innovative Drug

Research)

10/2009-8/2011 Hong Kong Baptist University

Research Assistant Professor (Centre for Cancer and Inflammation research, School of Chinese Medicine)

07/2006-10/2009 Hong Kong Baptist University

Post-doctoral-fellow (School of Chinese Medicine)

Selected Publications (Recent 5 years)

- 1. Yun Zhang†, Xing Wang†, He Zhang, Hongmei Tang, Hang Hu, Songping Wang, Vincent Kam Wai Wong*, Yuying Li* and Jun Deng*. Autophagy modulators from Chinese herb medicines: Mechanisms and therapeutic potentials for asthma. *Front. Pharmacol.* 12:710679. doi: 10.3389/fphar.2021.710679.
- 2. Mohit K. Tiwari,†,a Paolo Coghi,†,b Prakhar Agrawal,†,c Dharmendra K. Yadav,d Li Jun Yang,e Qiu Congling,e Dinkar Sahal,c,* Vincent Kam Wai Wong,e,* Sandeep Chaudharya,*. Novel Halogenated Arylvinyl-1,2,4 Trioxanes as Potent Antiplasmodial as well as Anticancer Agents: Synthesis, Bioevaluation, Structure-Activity Relationship and In-silico Studies. *European Journal of Medicinal Chemistry*. https://doi.org/10.1016/j.ejmech.2021.113685
- 3. 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. *European Journal of Medicinal Chemistry*. Volume 224, 15 November 2021, 113676.

- 4. 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 inflammatory response and autoimmunity. *Journal of Advanced Research*. Minor Revision
- 5. 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*. 2021 May 29;105697.
- 6. 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. *Pharmacological Research*. 2021 May 28;170:105696.
- 7. Paolo Coghi*, Jerome P. L. Ng, Ali Adnan Nasim, Vincent Kam Wai Wong*. N-[7-Chloro-4-[4-(phenoxymethyl)-1H-1,2,3-triazol-1-yl] quinoline]-acetamide. *Molbank.* 2021(2), M1213
- 8. Giovanni Ribaudo*, Paolo Coghi*, Li Jun Yang, Jerome P. L. Ng, Andrea Mastinu, Maurizio Memo, Vincent Kam Wai Wong and Alessandra Gianoncelli. Computational and Experimental Insights on the Interaction of Artemisinin, Dihydroartemisinin and Chloroquine with SARS-CoV-2 Spike Protein Receptor-Binding Domain (RBD). *Natural Product Research*. 2021 May 12;1-6.
- 9. Guodong Li, Chung-Nga Ko, Dan Li, Chao Yang, Wanhe Wang, Guan-Jun Yang, Carmelo Di Primo, Vincent Kam Wai Wong, Yaozu Xiang, Ligen Lin, Dik-Lung Ma*, and Chung-Hang Leung*. Small molecule HIF-1α stabilizer that accelerates diabetic wound healing. *Nature Communication*. 2021 Jun 7;12(1):3363.
- 10. 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, a novel anti-SARS-CoV-2 agent targets RBD-ACE2 binding to prevent viral infection. *Phytomedicine*. https://doi.org/10.1016/j.phymed.2021.153591.
- 11. Douglas Ochora, Esezah Kakudidi, Jane Namukobe, Matthias Heydenreich, Paolo Coghi, Li Jun Yang, Edwin Mwakio, Ben Andagalu, Amanda Roth, Hoseah M Akala, Vincent K. W. Wong and Yenesew Abiy*. A new benzophenone and the

- Antiplasmodial activities of the constituents of Securidaca longipedunculata. *Natural Product Research.* Accepted
- 12. 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. *Pharmacological Research*. Accepted
- 13. Klionsky DJ,......Betty Yuen Kwan Law,.....Vincent Kam Wai Wong,...et al. Guidelines for the use and interpretation of assays for monitoring autophagy (4th edition). *Autophagy*. 2021 Feb 8;1-382.
- 14. Rui Hong Chen1*, Li Jun Yang1*, Sami Hamdoun1 , 4, Sookja Kim Chung2, Christopher Wai-kei Lam2, Kai Xi Zhang1, Xiaoling Guo3, Chenglai Xia3, Betty Yuen Kwan Law1# and Vincent Kam Wai Wong1#. 1,2,3,4,6-Pentagalloyl glucose, a RBD-ACE2 binding inhibitor to prevent SARS-CoV-2 infection. *Front. Pharmacol* 12:634176. doi: 10.3389/fphar.2021.634176.
- 15. Vincent Kam-Wai Wong#. Editorial overview: New technologies in 2020: Drug Resistance. *Current Opinion in Pharmacology*. 2020, 54: iii–vi.
- 16. An-Guo Wu*, Rong Pan*, Betty Yuen-Kwan Law*, Yong Tang, Jian-Ming Wu, Chang-Long He, Vincent Kam-Wai Wong, Lu Yu, Wen-Qiao Qiu, Jin-Feng Teng, Chong-Lin Yu#, Xiao-Gang, Zhou#, Da-Lian Qin#. Targeting autophagy as a therapeutic strategy for identification of liganans from Peristrophe japonica in Parkinson's disease. *Signal Transduction and Targeted Therapy*. Accepted on 26 Nov, 2020.
- 17. Carolyne Chepkirui, Purity J. Ochieng, Biswajyoti Sarkar, Aabid Hussain, Chiranjib Pal, Li Jun Yang, Paolo Coghi, Hoseah M. Akala, Solomon Derese, Albert Ndakala, Matthias Heydenreich, Vincent K. W. Wong, Mate Erdelyi *, Abiy Yenesew *. Antiplasmodial and Antileishmanial Flavonoids from Mundulea sericea. *Fitoterapia* 2020 Nov 30;149:104796.
- 18. Moses Andima, Albert Ndakala, Solomon Derese, Sarkar Biswajyoti, Aabid Hussain, Li Jun Yang, Otieno Elsie Akoth, Paolo Coghi, Chiranjib Pal, Matthias Heydenreich, Vincent Kam-Wai Wong & Abiy Yenesew *. Antileishmanial and Cytotoxic Activity of Secondary Metabolites from Taberneamontana ventricosa and Two Aloe Species. *Natural Product Research*. 2021 Jan 18;1-5.
- 19. 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 Chen. 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
- 20. 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. *Org Chem Front.* 2020,7, 4089-4107
- 21. Kai Xi Zhang*, Chi Kio Ip*, Sookja Kim Chung, Kei Kei Lei, Yao Qian Zhang, Liang Liu# and Vincent Kam Wai Wong#. Drug-resistance in rheumatoid arthritis: The role of p53 gene mutations, ABC family transporters and personal factors *Current Opinion in Pharmacology.* 2020, 54:59–71.
- 22. 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 Nov 15;17(4):986-1001.
- 23. Qi Huang, Hui Zhang, Li Ping Bai, Betty Yuen Kwan Law, Haoming Xiong, Xiaobo Zhou, Riping Xiao, Yuan Qing Qu, Simon Wing Fai Mok, Liang Liu* and Vincent Kam Wai Wong*. Novel ginsenoside derivative 20(S)-Rh2E2 suppresses tumor growth and metastasis *in vivo* and *in vitro via* intervention of cancer cell energy metabolism. *Cell Death & Disease*. 2020 Aug 14;11(8):621.
- 24. Mohit K. Tiwari,†, Paolo Coghi,†, Prakhar Agrawal,†, Bharti Rajesh K. Shyamlal, Li Jun Yang, Lalit Yadav, Yuzhong Peng, Richa Sharma, Dharmendra K. Yadav, Dinkar Sahal*, Vincent Kam Wai Wong*, Sandeep Chaudhary*. Design, Synthesis, Structure-Activity Relationship and Docking Studies of Novel Functionalized Arylvinyl-1,2,4-Trioxanes as Potent Antiplasmodial as well as Anticancer Agents. *ChemMedChem.* 2020 May 11. doi: 10.1002/cmdc.202000045.
- 25. Na-Na Tao; Zhen-Zhen Zhang; Ji-Hua Ren; Juan Zhang; Yu-Jiao Zhou; Vincent Kam Wai Wong; Betty Yuen Kwan Law; Sheng-Tao Cheng; Hong-Zhong Zhou; Wei-Xian Chen; Hong-Mei Xu; Juan Chen. Overexpression of ubiquitin-conjugating enzyme E2 L3 in hepatocellular carcinoma potentiates apoptosis evasion by inhibiting the GSK3/p65 pathway. *Cancer Letters*. DOI: 10.1016/j.canlet.2020.03.028
- 26. Yu Zhong Peng, Li Jun Yang, Hang Hong Lo, Betty Yuen Kwan Law, Vincent Kam Wai Wong*. Tumor Therapeutic Modes (Chapter 7), ebook "New Nanomaterials and Techniques for Tumor-targeted Systems". Editors: Huang, Rongqin, Wang, Yi (Eds.). Publisher: Springer Singapore; ISBN: 978-981-15-5158-1.
- 27. Zheng Li, Huixia Zhang, Yan Li, Hongwei Chen, Caiyun Wang, Vincent Kam Wai Wong, Zhihong Jiang and Wei Zhang. Phytotherapy using blueberry leaf

- polyphenols to alleviate non-alcoholic fatty liver disease through improving mitochondrial function and oxidative defense. *Phytomedicine*. 2020 Mar 18;69:153209. doi: 10.1016/j.phymed.2020.153209.
- 28. Bin Tang, Hang Hong Lo, W.L.Wendy Hsiao, Cheng Lei, Ka In U, Lu Yu, Vincent Kam Wai Wong* and Betty Yuen Kwan Law*. Adjuvant Herbal Therapy for Targeting Susceptibility Genes to Kawasaki Disease: An Overview of Epidemiology, Pathogenesis, Diagnosis and Pharmacological Treatment of Kawasaki Disease *Phytomedicine*. https://doi.org/10.1016/j.phymed.2020.153208.
- 29. Ivan A. Yaremenko‡, Paolo Coghi‡, Parichat Prommana, Congling Qiu, Peter S. Radulov, Yuanqing Qu, Yulia Yu Belyakova, Enrico Zanforlin, Vladimir A. Kokorekin, Yuki Yu Jun Wu, Fabrice Fleury, Chairat Uthaipibull*, Vincent Kam Wai Wong*, and Alexander O. Terent'ev*. Synthetic peroxides promote apoptosis of cancer cells inhibiting of P-glycoprotein ABCB5. *ChemMedChem.*: 10.1002/cmdc.202000042, Front Cover
- 30. Yun Zhang*, Linlin Guo*, Betty Yuen Kwan Law, Xiaobo Liang, Ning Ma, Guofeng Xu, Xiaoyun Wang, Xiefang Yuan, Hongmei Tang, Qi Chen, Vincent Kam Wai Wong# and Xing Wang#. Resveratrol decreases cell apoptosis through inhibiting DNA damage in bronchial epithelial cells. *International Journal of Molecular Medicine* DOI: 10.3892/ijmm.2020.4539
- 31. Ni Zhang¹, Hui Zhang¹, Betty Yuen Kwan Law¹, Ivo Ricardo De Seabra Rodrigues Dias¹, Cong Ling Qiu¹, Wu Zeng¹, Hu Dan Pan¹, Jin Yun Chen², Yan Fu Bai³, Jing Lv⁴, Li Qun Qu¹, Xi Chen¹, Qi Huang¹, Wei Zhang¹, Li Jun Yang¹, Lu Yu¹, Yu Han¹, Guo Xin Huang¹, Hui Miao Wang¹, Xiao Lei Sun¹, Yun Zhang¹, Hu Qiang He¹, Wei Dan Luo¹, Yao Xiao¹, Jian Zhou⁵, Ting Xu², Qing Chun Huang⁶, Min Wu², Zhi Sheng Huang³, Wei Liu⁴, Vincent Kam Wai Wong¹*, Liang Liu¹*. Sirtuin 5 Deficiency Increases the Severity in Rat with Adjuvant-Induced Arthritis. *Cellular & Molecular Immunology*. (2020). https://doi.org/10.1038/s41423-020-0380-4
- 32. Su-Wei Xu^{1,7}, Betty Yuen Kwan Law¹, Steven Li Qun Qu¹, Sami Hamdoun^{1,2}, Juan Chen³, Wei Zhang¹, Jian-Ru Guo¹, An-Guo Wu⁴, Simon Wing Fai Mok¹, David Wei Zhang¹, Chenglai Xia⁵, Yoshikazu Sugimoto⁶, Thomas Efferth^{2*}, Liang Liu^{1*} and Vincent Kam Wai Wong^{1*}. SERCA and P-glycoprotein inhibition and ATP depletion are necessary for celastrol-induced autophagic cell death and collateral sensitivity in multidrug-resistant tumor cells. *Pharmacological Research*. 153 (2020) 104660.
- 33. Jin-Feng Teng, Qi-Bing Mei, Xiao-Gang Zhou, Yong Tang, Wen-Qiao Qiu,Rui Xiong, Rong Pan, Betty Yuen-Kwan Law, Vincent Kam Wai Wong, Chong-Lin Yu. Feng Zhang, Jian-Ming Wu *, Da-Lian Qin *, An-Guo Wu *. Polyphyllin VI

- Induces Caspase 1-Mediated Pyroptosis via the Induction, *Cancers* **2020**, **12**, **193**; **doi: 10.3390/cancers12010193**.
- **34.** Simon Wing-Fai Mok[#], Vincent Kam-Wai Wong[#], Hang-Hong Lo, Ivo Ricardo de Seabra Rodrigues Dias, Elaine Lai-Han Leung, Betty Yuen-Kwan Law* and Liang Liu*. Natural products-based polypharmacological modulation of the peripheral immune system for the treatment of neuropsychiatric disorders. *Pharmacology & Therapeutics*. https://doi.org/10.1016/j.pharmthera.2020.107480.
- 35. Betty Yuen Kwan Law^a, Francesco Michelangeli^{b,c}, Yuan Qing Qu^a, Su-Wei Xu^d, Yu Han^a, Simon Wing Fai Mok^a, Ivo Ricardo de Seabra Rodrigues Dias^a, Masoodul-Hassan Javed^e, Wai-Kit Chan^a, Wei-Wei Xue^f, Xiao-Jun Yao^{a,f}, Wu Zeng^a, Hui Zhang^a, Jing-Rong Wang^a, Liang Liu^{a*} and Vincent Kam Wai Wong^{a*}. Neferine induces autophagy-dependent cell death in apoptosis-resistant cancers via ryanodine receptor and Ca²⁺ dependent mechanism. *Scientific Reports*. (2019) 9:20034
- 36. Imran Khan, Sabrina Pathan, Xiao Ang Li, Wai Kit Leong, Wei Lin Liao, Vincent Kam Wai Wong and W.L. Wendy Hsiao. Far infrared radiation induces changes in gut microbiota and activates host's GPCRs in mice. *Journal of Advanced Research* (2019), doi: https://doi.org/10.1016/j.jare.2019.12.003
- 37. Fang Ren; Zhong-Wen Hu; Xiao Yang; Vincent K Wong; Hong-Yan Xu; Ji-Hua Ren; Shan Zhong; Xiao-Jiong Jia; Hui Jiang; Jie-Li Hu; Xue-Fei Cai; Wen-Lu Zhang; Fang-Long Yao; Hai-Bo Yu; Sheng-Tao Cheng; Hong-Zhong Zhou; Ai-Long Huang; Betty Y Law. Niacin analogue, 6-Aminonicotinamide, a novel inhibitor of hepatitis B virus and HBsAg secretion. *EBioMedicine*. 49 (2019), 232-246
- 38. Sara Abdelfatah, Edmond Fleischer, Anette Klinger, Vincent Kam Wai Wong, Thomas Efferth. Identification of inhibitors of the polo-box domain of polo-like kinase 1 from natural and semisynthetic compounds. *Investigational New Drugs* 2019 Mar 15. doi: 10.1007/s10637-019-00752-0.
- 39. Moses Andima*, Paolo Coghi, Li Jun Yang, Vincent Wong, Chrispus M Ngule, Matthias Heydenreich, Albert J Ndakala, Abiy Yenesew, Solomon Derese. Antiproliferative Activity of Secondary Metabolites from Zanthoxylum zanthoxyloides Lam: In vitro and in silico Studies. *Pharmacogn. Commn.* 2019; 10(1):44-51.
- 40. Huqiang He, Betty Yuen Kwan Law, Ni Zhang, Congling Qiu, Yuanqing Qu, Anguo Wu, YU HAN, Qi Song, Wenlu Zheng, Yong Liu, Yanzheng He* and Vincent Kam Wai Wong*. Bavachin protects human aortic smooth muscle cells against β-glycerophosphate-mediated vascular calcification and apoptosis via activation of mTOR-dependent autophagy and suppression of Wnt signaling. *Front. Pharmacol.*, 19 December 2019, https://doi.org/10.3389/fphar.2019.01427

- 41. Xiaolei Sun^{#1,2,3}, Anguo Wu^{#1,4}, Betty Yuen Kwan Law¹, Chaolin Liu², Wu Zeng¹, Alena Cong Ling Qiu¹, Yu Han¹, Yanzheng He^{2,3*} & Vincent Kam Wai Wong^{1*}. The active components derived from Penthorum chinense Pursh protect against oxidative-stress induced vascular injury via autophagy induction. *Free Radical Biology and Medicine*. 2019 Nov 2. pii: S0891-5849(19)31002-0.
- 42. Wu An-Guo*, Teng Jin-Feng*, Wong Vincent Kam-Wai*, Zhou Xiao-Gang, Qiu Wen-Qiao, Tang Yong, Wu Jian-Ming, Xiong Rui, Pan Rong, Wang Ying-Ling, Tang Bin, Ding Tian-Yi, Yu Lu, Zeng Wu, Qin Da-Lian# and Law Betty Yuen Kwan#. Novel Steroidal Saponin Isolated from Trillium tschonoskii Maxim. Exhibits Anti-Oxidative Effect via Autophagy Induction in cellular and Caenorhabditis elegans models. *Phytomedicine*. 2019 Sep 16;65:153088.
- 43. Teng Jinfeng, Qin Dalian, Mei Qibing, Qiu Wenqiao, Pan Rong, Xiong Rui, Zhao Ya, Betty Law, Vincent Kam Wai Wong, Tang Yong, Yu Chonglin, Jianming Wu, Feng Zhang and Wu An Gao. Polyphyllin VI, a saponin from Trillium tschonoskii Maxim. induces apoptotic and autophagic cell death via the ROS triggered mTOR signaling pathway in non-small cell lung cancer. *Pharmacology Research*. 2019 Sep;147:104396.
- 44. Zhiyuan Zhu, Pingde Zhang, Ning Li, Karrie Mei-Yee Kiang, Yin Cheng, Vincent Wong and Gilberto Ka Kit Leung. Lovastatin Enhances Cytotoxicity of Temozolomide via Impairing Autophagic Flux in Glioblastoma Cells. *BioMed Research International.* 2019 Sep 23;2019:2710693.
- 45. Yu Han¹, Yuan Qing Qu¹, Simon Wing Fai Mok¹, Juan Chen², Chenglai Xia³, Hu Qiang He¹, Zheng Li¹, Wei Zhang¹, Cong Ling Qiu¹, Liang Liu^{1*}, Betty Yuen Kwan Law^{1*} and Vincent Kam Wai Wong^{1*}. A Novel Drug Resistance Mechanism: Genetic loss of xeroderma pigmentosum complementation group C (XPC) enhances glycolysis-mediated drug resistance in DLD-1 colon cancer cells. *Frontiers in Pharmacology*. 2019 Sep 10;10:912.
- 46. Daniel Buyinzaa, Li Jun Yang, Solomon Derese, Albert Ndakala, Paolo Coghi, Matthias Heydenreich, Vincent Kam Wai Wong, Heiko M. Möller, Abiy Yenesewa*. Cytotoxicity of Isoflavones from Millettia dura. Natural Product Research. Accepted
- 47. Vincent Kam Wai Wong#, Congling Qiu#, Su-Wei Xu#, Betty Yuen Kwan Law, Wu Zeng, Hui Wang, Francesco Michelangeli, Ivo Ricardo De Seabra Rodrigues Dias, Yu Han, Ni Zhang, Yuan Qing Qu, Tsz Wai Chan, Simon Wing Fai Mok, Xi Chen, Lu Yu, Hudan Pan, Sami Hamdoun, Thomas Efferth, Wen Jing Yu, Wei Zhang, Jian-Ru Guo, Yuesheng Xie, Riqiang Luo, Quan Jiang, Liang Liu*. Ca²+ signalling plays a role in celastrol-mediated suppression of synovial fibroblasts of rheumatoid arthritis patients and experimental arthritis in rats. *Br J Pharmacol*.

- 2019 May 23. doi: 10.1111/bph.14718
- 48. Wan-Yu Lia, Hong-Zhong Zhou, Yao Chen, Xue-Fei Cai, Hua Tang, Ji-Hua Ren. Vincent Kam Wai Wong, Betty Yuen Kwan Law, Yong Chen, Sheng-Tao Cheng, Hai-Bo Yu, Hao-Yang Cai, Wei-Xian Chen, Ni Tang, Wen-Lu Zhang, Na-Na Tao, Qiu-Xia Yang, Fang Ren, Lin He, Hui Jiang, Ai-Long Huang, Juan Chen. NAD(P)H: quinone oxidoreductase 1 overexpression in Hepatocellular Carcinoma potentiates apoptosis evasion through regulating stabilization of X-linked inhibitor of apoptosis protein. *Cancer Letters.* 2019 Jun 1;451:156-167. doi: 10.1016/j.canlet.2019.02.053.
- 49. Lu Yu, An-Guo Wu, Vincent Kam-Wai Wong, Da-Lian Qin, Bin Tang, Hui-Miao Wang, Qiong Wang*, Betty Yuen-Kwan Law*. The new application of UHPLC-DAD-TOF/MS in identification of inhibitors on β-amyloid fibrillation from *Scutellaria baicalensis*. *Frontiers in Pharmacology*. 2019 Mar 18;10:194. doi: 10.3389/fphar.2019.00194.
- 50. Giovanni Ribaudo[a] §, Paolo Coghi[b] §, Enrico Zanforlin[a] §, Yuki Yu Jun Wu[b], Yu Han[b], Alena Congling Qiu[b], Betty Yuen Kwan Law[b], Giuseppe Zagotto*[a] and Vincent Kam Wai Wong*[b]. Semi-synthetic isoflavones as BACE-1 inhibitors against Alzheimer's disease. *Bioorganic Chemistry*. 2019 Mar 15;87:474-483. doi: 10.1016/j.bioorg.2019.03.034.
- 51. Xiaobo Zhou#, Yuan Qing Qu#, Zhiyuan Zheng, Betty Yuen Kwan Law, Simon Wing Fai Mok, Zhi-Hong Jiang*, Vincent Kam Wai Wong*, Li-Ping Bai*. Novel Dauricine Derivatives Suppress Cancer via Autophagy-dependent Cell Death. *Bioorganic Chemistry*. Volume 83, March 2019, Pages 450-460.
- 52. Sara Abdelfatah¹, Angela Berg², Qi Huang³, Li Jun Yang³, Anette Klinger⁴, Henry J. Greten⁵, Edmond Fleischer⁴, Thorsten Berg², Vincent K.W. Wong³, Thomas Efferth¹*. MCC1019, A Selective Inhibitor of the Polo-Box Domain of Polo-Like Kinase 1 as Novel, Potent Anticancer Candidate. *Acta Pharmaceutica Sinica B.* https://doi.org/10.1016/j.apsb.2019.02.001.
- 53. Guodong Li, Joshua William Boyle, Chung-Nga Ko, Wu Zeng, Vincent Kam Wai Wong, Jian-Bo Wan, Philip Wai Hong Chan, Dik-Lung Ma and Chung-Hang Leung. Aurone derivatives as Vps34 inhibitors that modulate autophagy. *Acta Pharmaceutica Sinica B*. https://doi.org/10.1016/j.apsb.2019.01.016.
- 54. Li Zhou, Ji-Hua Ren, Sheng-Tao Cheng, Hong-Mei Xu, Wei-Xian Chen, Da-Peng Chen, Vincent Kam Wai Wong, Betty Yuen Kwan Law, Yi Liu, Xue-Fei Cai, Hua Tang, Hai-Bo Yu, Jie-Li Hu, Yuan Hu, Hong-Zhong Zhou, Fang Ren, Lin He, Zhong-Wen Hu, Hui Jiang, Hong-Yan Xu, Ai-Long Huang#, Juan Chen#. A functional variant in UBE2L3 contributes to HBV infection and maintains cccDNA

- stability by inducing degradation of APOBEC3A protein. *Hepatology. 2019 Jan 7. doi: 10.1002/hep.30497*
- 55. Yongxin Qiu ^{1,*}, Yi Dai ^{2, 3, *}, Chi Zhang ^{1,*}, Ye Yang ^{2,*}, Ming Jin ^{2,*}, Wenqi Shan ², Jian Shen ¹, Ming Lu ¹, Zhaoyang Tang ¹, Yuting Wang ², Ruonan Jiao ², Yunwei Xia ², Guangming Huang ¹, Lihua Yang ¹, Yuan Li ^{2, 3, ∞}, Jianping Zhang ^{1, ∞}, Vincent Kam Wai Wong ^{3, ∞}, and Zhihong Jiang ^{3 ∞}. Arsenic Trioxide Reverses the Chemoresistance in Hepatocellular Carcinoma: A Targeted Intervention of 14-3-3η/NF-κB Feedback Loop. *Journal of Experimental & Clinical Cancer Research*. 2018 Dec 20;37(1):321. doi: 10.1186/s13046-018-1005-y.
- 56. Zheng Li^{†||}, Hui-Xia Zhang^{†||}, Yan Li[†], Christopher Wai Kei Lam[†], Cai-Yun Wang[†], Wei-Jia Zhang[‡], Vincent Kam Wai Wong[†], Su-Seng Pang[§], Mei-Cun Yao*[‡], and Wei Zhang*[†]. Method for Quantification of Ribonucleotides and Deoxyribonucleotides in Human Cells Using (Trimethylsilyl)diazomethane Derivatization Followed by Liquid Chromatography-Tandem Mass Spectrometry. *Anal Chem.* 2018 Dec 11. doi: 10.1021/acs.analchem.8b04281.
- 57. Guan-Jun Yang, Wanhe Wang, Simon Wing Fai Mok, Chun Wu, Betty Yuen Kwan Law, Xiang-Min Miao, Ke-Jia Wu, Hai-Jing Zhong, Chun-Yuen Wong, Vincent Kam Wai Wong*, Dik-Lung Ma,* and Chung-Hang Leung*. Selective inhibition of lysine-specific demethylase 5A (KDM5A) using a rhodium(III) complex for triple-negative breast cancer therapy. *Angewandte Chemie International Edition*. 2018 Jul 1. doi: 10.1002/anie.201807305.
- 58. Wenjing Yu,* Yuancai Xiang,* Guosong Luo, Xiaofang Zhao, Bin Xiao, Ying Cheng, Chunhong Feng, Chunyan Duan, Xianming Xia, Vincent Kam Wai Wong# and Rongyang Dai#. Salubrinal Enhances Doxorubicin Sensitivity in Human Cholangiocarcinoma Cells Through Promoting DNA Damage. *Cancer Biotherapy and Radiopharmaceuticals*. 2018 Jun 29. doi: 10.1089/cbr.2018.2447.
- 59. Simon Wing Fai Mok, Wu Zeng, Yuzhen Niu, Paolo Coghi, Yujun Wu, Wai Man Sin, Sio Ian Ng, Flora Gordillo-Martinez, Jia Ying Gao, Betty Yuen Kwan Law, Liang Liu*, Xiao Jun Yao* and Vincent Kam Wai Wong*. A Method for Rapid Screening of Anilide-containing AMPK Modulators Based on Computational Docking and Biological Validation. *Frontiers in Pharmacology*. 2018, 12 June doi: 10.3389/fphar.2018.00710
- 60. Ren JH, Hu JL, Cheng ST, Yu HB, Wong VKW, Law BYK, Yang YF, Huang Y, Liu Y, Chen WX, Cai XF, Tang H, Hu Y, Zhang WL, Liu X, Long QX, Zhou L, Tao NN, Zhou HZ, Yang QX, Ren F, He L, Gong R, Huang AL, Chen J. SIRT3 restricts HBV transcription and replication via epigenetic regulation of cccDNA involving SUV39H1 and SETD1A histone methyltransferases. *Hepatology*. 2018 Apr 6. doi: 10.1002/hep.29912.

- 61. Simon Wing Fai Mok, Betty Yuen Kwan Law, Vincent Kam Wai Wong* and Liang Liu* (2018). Immunotherapeutic approaches of rheumatoid arthritis and the implication on novel interventions for refractoriness, Immunotherapy, Dr. Seyyed Shamsadin Athari (Ed.), InTech, ISBN 978-953-51-6100-4. Accepted on 16-2-2018.
- 62. Paolo Coghi§, Ivan A. Yaremenko§, Parichat Prommana§, Peter S. Radulov, Mikhail A. Syroeshkin, Yu Jun Wu, Jia Ying Gao, Floria M. Gordillo, Simon Mok, Vincent Kam Wai Wong*, Chairat Uthaipibull*, and Alexander O. Terent'ev*. Novel peroxides as promising anticancer agents with unexpected depressed antimalarial activity. *ChemMedChem. 2018 May 8;13(9):902-908*.
- 63. Yuan Qing Qu*, Flora Gordillo-Martinez*, Betty Yuen Kwan Law, Yu Han, Anguo Wu, Wu Zeng, Simon Wing Fai Mok, Vincent Kam Wai Wong*, Renxiao Wang*. 2-aminoethoxydiphenylborane (2-APB) suppresses bortezomib (BZM)-induced protective autophagy and sensitizes the anti-tumor effect of BZM *in vivo*. *Cell death* & *Disease*. 2018 9:361 DOI 10.1038/s41419-018-0397-0
- 64. Elaine Lai Han Leung^{1#}, Lian Xiang Luo^{1#}, Zhong Qiu Liu, Vincent Kam Wai Wong, Lin Lin Lu, Ying Xie, Ni Zhang, Yuan Qing Qu, Xing Xing Fan, Ying Li, Min Huang, Dai Kai Xiao, Jun Huang, Yan Ling Zhou, Jian Xing He, Jian Ding, Xiao Jun Yao*, David C. Ward*, and Liang Liu*. Inhibition of KRAS-dependent lung cancer cell growth by deltarasin: blockage of autophagy increases its cytotoxicity. *Cell death & Disease*. 9, Article number: 216 (2018) doi:10.1038/s41419-017-0065-9.
- 65. Ivo Ricardo de Seabra Rodrigues Dias#, Simon Wing Fai Mok#, Flora Gordillo Martínez, Imran Khan, Wendy Wen Luen Hsiao, Betty Yuen Kwan Law, Vincent Kam Wai Wong* and Liang Liu*. The calcium-induced regulation in the molecular and transcriptional circuitry of human inflammatory response and autoimmunity. *Frontiers in Pharmacology*. 2018 Jan 8;8:962. doi: 10.3389/fphar.2017.00962.
- **66.** Jianru Guo, Zheng Li, Caiyun Wang, Christopher Lam, Qianqian Chen, Weijia Zhang, Vincent Kam Wai Wong, Meicun Yao and Wei Zhang. Profiling of ribonucleotides and deoxyribonucleotides pools in response to DNA damage and repair induced by methyl methanesulfonate in cancer and normal cells. *Oncotarget*. 2017 Oct 4;8(60):101707-101719.
- 67. Xiao Lei Sun, Betty Yuen Kwan Law, Ivo Ricardo de Seabra Rodrigues Dias, Simon Wing Fai Mok, Yan-zheng He*, Vincent Kam-Wai Wong*. Pathogenesis of thromboangiitis obliterans: Gene polymorphism and immunoregulation of human vascular endothelial cells. *Atherosclerosis* 2017 Aug 18. pii: S0021-9150(17)31231-5. doi: 10.1016

- **68.** Hideaki Tsuyoshi, Vincent Kam Wai Wong, Yu Han, Makoto Orisaka, Yoshio Yoshida, Benjamin K. Tsang. Saikosaponin-d, a Calcium Mobilizing Agent, Sensitizes Chemoresistant Ovarian Cancer Cells to Cisplatin-induced Apoptosis by Facilitating Mitochondrial Fission and G2/M Arrest. *Oncotarget*. **September 2017**; **DOI:** 10.18632/oncotarget.21076
- 69. Betty Yuen Kwan Law#, Yuan Qing Qu#, Simon Wing Fai Mok, Hauwei Liu, Zeng Wu, Yu Han, Flora Gordillo-Martinez, Wai-Kit Chan, Keith Man-Chung Wong*, Vincent Kam Wai Wong*. New perspectives of cobalt tris(bipyridine) system: Anti-cancer effect and its collateral sensitivity towards multidrug-resistant (MDR) cancers. *Oncotarget.* 2017 Jul 5. doi: 10.18632/oncotarget.18991.)
- 70. Betty Yuen Kwan Law#, Simon Wing Fai Mok#, Juan Chen, Francesco Michelangeli, Zhi-Hong Jiang, Yu Han, Yuan Qing Qu, Alena Cong Ling Qiu, Su-Wei Xu, Wei-Wei Xue, Xiao-Jun Yao, Jia Ying Gao, Masood-ul-Hassan Javed, Paolo Coghi, Liang Liu* and Vincent Kam Wai Wong*. N-desmethyldauricine induces autophagic cell death in apoptosis-defective cells via Ca²⁺ mobilization. *Frontiers in Pharmacology.* 2017 Jun 16;8:388. doi: 10.3389/fphar.2017.00388.
- 71. Vincent Kam Wai Wong, Wu Zeng, Juan Chen, Xiao-Jun Yao, Elaine Lai-Han Leung, Qian Qian Wang, Pauline Chiu*, Ben C.B. Ko*, Betty Yuen-Kwan Law*. Tetrandrine, an activator of autophagy, induces autophagic cell death via PKC-α inhibition and mTOR-dependent mechanisms. *Frontiers in Pharmacology.* 2017 Jun 8;8:351. doi: 10.3389/fphar.2017.00351.
- 72. Onat Kadioglu, Betty Yuen Kwan Law, Simon Wing Fai Mok, Su-Wei Xu, Thomas Efferth*, Vincent Kam Wai Wong*. Mode of action analyses of neferine, a bisbenzylisoquinoline alkaloid of Lotus (Nelumbo nucifera) against multidrugresistant tumor cells. *Frontiers in Pharmacology* 2017 May 5;8:238. doi: 10.3389/fphar.2017.00238.
- 73. Tian-Shu Kang, Wanhe Wang, Hai-Jing Zhong, Zhen-Zhen Dong, Qi Huang, Simon Wing Fai Mok, Chung-Hang Leung*, Vincent Kam Wai Wong*, Dik-Lung Ma. An anti-prostate cancer benzofuran-conjugated iridium(III) complex as a dual inhibitor of STAT3 and NF-κB. *Cancer Letters*. 2017 Jun 28;396:76-84.
- 74. Vincent Kam-Wai Wong, Wu Zeng and Betty Yuen Kwan Law*. Perspective: Role of Autophagy in Neuroprotective Properties of Traditional Chinese Medicines. *Journal of Neuroinfectious Diseases*. 8: 239. doi:10.4172/2314-7326.1000239.
- 75. Betty Yuen Kwan Law, Flora Gordillo-Martínez, Yuan Qing Qu, Ni Zhang, Su Wei Xu, Paolo Saul Coghi, Simon Wing Fai Mok, Jianru Guo, Wei Zhang, Elaine Lai Han Leung, Xing Xing Fan, An Guo Wu, Wai Kit Chan, Xiao Jun Yao, Jing Rong Wang, Liang Liu* and Vincent Kam Wai Wong*. Thalidezine, A Novel AMPK

- Activator, Eliminates Apoptosis-resistant Cancer Cells Through Energy-mediated Autophagic Cell Death. *Oncotarget*. 2017 May 2;8(18):30077-30091.
- 76. An-Guo Wu*, Wu Zeng*, Vincent Kam-Wai Wong, Yi-Zhun Zhu, Amy C.Y. Lo, Liang Liu and Betty Yuen-Kwan Law. Hederagenin and α-hederin promote degradation of proteins in neurodegenerative diseases and improve motor deficits in MPTP-mice. *Pharmacological Research*. Volume 115, January 2017, Pages 25–44
- 77. Betty Law Yuen Kwan and Vincent Wong Kam Wai* (2016). Autophagy in Multidrug-Resistant Cancers, Autophagy in Current Trends in Cellular Physiology and Pathology, Dr. Nikolai Gorbunov (Ed.), InTech, Available from: http://www.intechopen.com/books/autophagy-in-current-trends-in-cellular-physiology-and-pathology/autophagy-in-multidrug-resistant-cancers
- 78. Vincent Kam-Wai Wong[#], Betty Yuen-Kwan Law[#], Xiao-Jun Yao, Xi Chen, Su Wei Xu, Liang Liu* and Elaine Lai-Han Leung*. Advanced research technology for discovery of new effective compounds from Chinese herbal medicine and their molecular targets. *Pharmacological Research*. 2016 Sep;111:546-555.
- 79. Su-Wei Xu, Betty Yuen Kwan Law, Simon Wing Fai Mok, Elaine Lai Han Leung, Xing Xing Fan, Paolo Saul Coghi, Wu Zeng, Chung-Hang Leung, Dik-Lung Ma, Liang Liu* and Vincent Kam Wai Wong*. Autophagic degradation of epidermal growth factor receptor in gefitinib-resistant lung cancer by celastrol. *Int J Oncol*. 2016 Aug 3. doi: 10.3892/ijo.2016.3644.
- 80. Betty Yuen Kwan Law, Simon Wing Fai Mok, An Guo Wu, Christopher Wai Kei Lam, Margaret Sum Yee Yu, Vincent Kam Wai Wong*. New Potential Pharmacological Functions of Chinese Herbal Medicines via Regulation of Autophagy. *Molecules*. 2016 Mar 17;21(3). pii: E359. doi: 10.3390/molecules21030359.
- 81. Klionsky DJ,......Betty Yuen Kwan Law,...Liang Liu,...Vincent Kam Wai Wong,...et al. Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition). *Autophagy*. 2016 Jan 2;12(1):1-222.
- 82. Betty Yuen Kwan Law, Simon Wing Fai Mok, Wai Kit Chan, Su Wei Xu, An Guo Wu, Xiao Jun Yao, Jing Rong Wang, Liang Liu* and Vincent Kam Wai Wong* Hernandezine, a Novel AMPK Activator Induces Autophagic Cell Death in Drugresistant Cancers. *Oncotarget*. 2016 Feb 16;7(7):8090-104.
- 83. Vincent Kam Wai Wong#, Hang Dong#, Xu Liang#, Li Ping Bai, Zhi-Hong Jiang, Yue Guo, Tony A.-N Kong, Rui Wang, Richard Kin Ting Kam, Betty Yuen Kwan Law, Wendy Wen Luen Hsiao, Ka Man Chan, Jingrong Wang, Rick Wai Kit Chan, Jianru Guo, Wei Zhang, Feng Gen Yen, Hua Zhou, Elaine, Lai Han Leung, Zhiling Yu, Liang Liu*. Rh2E2, a Novel Metabolic Modulator, Specifically Suppresses

Tumor Cell Growth by Inhibiting Energy-based Metabolism. *Oncotarget*. 2016 Jan 18. doi: 10.18632/oncotarget.6934. (# Authors with equal contribution).

Book Chapter Publication

1. Betty Yuen-Kwan Law and Vincent Kam-Wai Wong*.

Autophagy in Multidrug-Resistant Cancers, Autophagy in Current Trends in Cellular Physiology and Pathology, Dr. Nikolai Gorbunov (Ed.), InTech, Available from:

http://www.intechopen.com/books/autophagy-in-current-trends-in-cellular-physiology-and-pathology/autophagy-in-multidrug-resistant-cancers

Book chapter in "Autophagy" ISBN 978-953-51-4815-9.

2. Simon Wing Fai Mok, Betty Yuen Kwan Law, **Vincent Kam Wai Wong** and Liang Liu*

Immunotherapeutic approaches of rheumatoid arthritis and the implication on novel interventions for refractoriness, Immunotherapy, Dr. Seyyed Shamsadin Athari (Ed.),

InTech, ISBN 978-953-51-6100-4. Accepted on 16-2-2018.

3. Yu Zhong Peng, Li Jun Yang, Hang Hong Lo, Betty Yuen Kwan Law, Vincent Kam Wai Wong*

Chapter 7: Tumor Therapeutic Modes

ebook "New Nanomaterials and Techniques for Tumor-targeted Systems".

Editors: Huang, Rongqin, Wang, Yi (Eds.).

Publisher: Springer Singapore; ISBN: 978-981-15-5158-1.

4. Jiu Jie Yang, Jerome P. L. Ng, Kaixi Zhang, Liang Liu*, Vincent Kam Wai Wong*.

Pathogenic role of microRNA in rheumatoid arthritis. *Book Chapter in "Rheumatoid Arthritis"* edited by Prof. Hechmi Toumi (IntechOpen). Accepted on 2-7-2021

ACADEMIC AWARDS

1. 2013 Bank of China Excellent Research Award Winner

- 2. 2014 Science and Technology Award of Macao Special Administrative Region-Second-class Natural Science Award
- 3. 2015 高等學校科學研究優秀成果獎自然科學獎一等獎
- 4. 2016 Science and Technology Award of Macao Special Administrative Region-First-class Natural Science Award
- 5. 2016 Zhongzhu Awards for Life Science Recognizing First Prize in Research
- 6. 2017 Zhongzhu Awards for Life Science Recognizing First Prize in Service
- 7. 2018 高等學校科學研究優秀成果獎自然科學獎一等獎