

PERSONAL INFORMATION

吳宗圃 Chung-Pu Wu

Laboratory Address

Laboratory of Cancer Biology, Department of Physiology and Pharmacology, Chang Gung University.
No.259, Wenhua 1st Rd., Guishan Dist.
Taoyuan City 33302, Taiwan.

Phone

+886 (3) 2118800 ext. 3751 or 3754

Email

wuchung@mail.cgu.edu.tw

Website

<http://paulwea.wix.com/2014-06-13>

ORCID

0000-0002-2434-3361

WORK EXPERIENCE

2015-present

長庚大學醫學院 生理暨藥理學科 副教授

2019-present

台北長庚醫院婦產科 合聘 副研究員

2016-2019

林口長庚醫院神經外科 合聘 副研究員

2010-2015

長庚大學醫學院 生理暨藥理學科 助理教授

2006-2010

美國國家衛生院 癌症研究中心 (NCI, NIH, USA) 博士後研究員

2005-2006

台灣國家衛生研究院 生物技術與藥物研究組 博士後研究員

2004-2005

美國國家衛生院 癌症研究中心 (NCI, NIH, USA) 訪問學人

學經歷

2002-2005

Ph.D. in Pharmacology

University of Cambridge (UK)

2000-2002

M.Sc. in Molecular and Cell Biology

University of Cape Town (RSA)

1999-2000

B.Sc Honours (Hons) in Pharmacology (First-class Honours)

University of Cape Town (RSA)

1996-1999

B.Sc in Chemistry and Biochemistry (Double Major)

University of Cape Town (RSA)

(EDUCATION & TRAINING)

學術專長

(ACADEMIC EXPERTISE)

Pharmacology 藥理學

Tumor Biology 腫瘤生物學

Biochemistry 生物化學

Molecular and Cell Biology 分子細胞生物學

學術服務

期刊編輯委員
(Journal Editor)

(EDITORIAL & REVIEW ACTIVITIES)

Frontiers in Oncology

Frontiers in Pharmacology

期刊審稿委員
(Ad hoc reviewer)

ACS Chemical Biology
Acta Pharmaceutica Sinica B
Advances and Applications in Bioinformatics and Chemistry
Biochimica et Biophysica Acta BBA Biomembranes
Biochemical Pharmacology
BioMed Research International
BMC Cancer
Cancer Letters
Cancer Research
Cell Biochemistry and Biophysics
Current Pharmaceutical Biotechnology
Current Medicinal Chemistry
Drug Metabolism and Disposition
European Journal of Medicinal Chemistry
Frontiers in Oncology
Frontiers in Pharmacology
International Journal of Pharmacology
Journal of Cancer Research Updates
Journal of Cellular and Molecular Medicine
Journal of Pharmaceutics
Journal of Photochemistry and Photobiology B: Biology
Marine Drugs
Molecular Cancer
Molecular Cancer Therapeutics
Molecular Pharmaceutics
Molecules
New Journal of Science
Pharmaceutical Research
The Scientific World Journal
The Journal of Biological Chemistry
The Journal of the National Cancer Institute
Theranostics

原創研究文章著作

2020

1. C-P Wu*, S-H Hsiao, Y-H Huang, L-C Hung, Y-J-Yu, Y-T Chang, T-H Hung, and Y-S Wu. Sitravatinib sensitizes ABCB1- and ABCG2-overexpressing multidrug resistant cancer cells to chemotherapeutic drugs. *Cancers* (2020) doi: 10.3390/cancers12010195.

2020

2. C-P Wu*, S. Lusvarghi, P-J Tseng, S-H Hsiao, Y-H Huang, T-H Hung, and S.V. Ambudkar. MY-5445, a phosphodiesterase type 5 inhibitor, resensitizes ABCG2-overexpressing multidrug-resistant cancer cells to cytotoxic anticancer drugs. *American Journal of Cancer Research* (2020).

2020

3. T-H Hung, S-Y Huang, S-F Chen, C-P Wu, and T-T Hsieh. Decreased placental apoptosis and autophagy in pregnancies complicated by gestational diabetes with large-for-gestational age fetuses. *Placenta* (2020) 90: 27-36.

2019

4. C-P Wu*, S. Lusvarghi, J-C Wang, S-H Hsiao, Y-H Huang, T-H Hung, and S.V. Ambudkar. The selective class IIA histone deacetylase inhibitor TMP195 resensitizes ABCB1- and ABCG2-overexpressing multidrug-resistant cancer cells to cytotoxic drugs. *International Journal of Molecular Sciences* (2019) doi: 10.3390/ijms21010238.

2019

5. T-H Hung, S-F Chen, C-H Wu, and C-P Wu. Increased soluble epoxide hydrolase in human gestational tissues from pregnancies complicated by acute chorioamnionitis. *Mediators of*

- [Inflammation](#) (2019) doi: 10.1155/2019/8687120.
- 2019 6. C-P Wu*, S Lusvarghi, J-C Wang, S-H Hsiao, Y-H Huang, T-H Hung, and S.V. Ambudkar. Avapritinib: A Selective Inhibitor of KIT and PDGFR α that Reverses ABCB1 and ABCG2-Mediated Multidrug Resistance in Cancer Cell Lines. [Molecular Pharmaceutics](#) (2019) Jul;16(7):3040-3052.
 - 2019 7. S-H Hsiao, S Lusvarghi, Y-H Huang, S. V. Ambudkar, S-C Hsu, and C-P Wu*. The FLT3 inhibitor midostaurin selectively resensitizes ABCB1-overexpressing multidrug resistant cancer cells to conventional chemotherapeutic agents. [Cancer Letters](#) (2019) Mar; 445: 34-44.
 - 2018 8. S-H Hsiao, M Murakami, N Yeh, Y-Q Li, T-H Hung, Y-S Wu g, S. V. Ambudkar and C-P Wu*. The positive inotropic agent DPI-201106 selectively reverses ABCB1-mediated multidrug resistance in cancer cell lines. [Cancer Letters](#) (2018) Oct; 434: 81-90.
 - 2018 9. C-P Wu*, M Murakami, S-H Hsiao, T-C Liu, N Yeh, Y-Q Li, T-H Hung, Y-S Wu, SV. Ambudkar. SIS3, a specific inhibitor of Smad3 reverses ABCB1- and ABCG2-mediated multidrug resistance in cancer cell lines. [Cancer Letters](#) (2018) Oct; 433: 259-272.
 - 2018 10. C-P Wu*, Y-J Hsieh, M Murakami, S Vahedi, S-H Hsiao, N Yeh, A-W Chou, Y-Q Li, Y-S Wu, J-S Yu and S. V. Ambudkar. Human ATP-binding cassette transporters ABCB1 and ABCG2 confer resistance to histone deacetylase 6 inhibitor ricolinostat (ACY-1215) in cancer cell lines. [Biochemical Pharmacology](#) (2018) Sep; 155: 316-325.
 - 2017 11. T-H Hung, T-T Hsieh, C-P Wu, MJ Li, YL Yeh, SF Chen. Mammalian target of rapamycin signaling is a mechanistic link between increased endoplasmic reticulum stress and autophagy in the placentas of pregnancies complicated by growth restriction. [Placenta](#) (2017) Dec; 60:9-20.
 - 2017 12. C-W Huang, W-C Hsieh, S-T Hsu, Y-W Lin, Y-H Chung, W-C Chang, H Chiu, YH Lin, C-P Wu, T-C Yen, F-T Huang. The use of PET imaging for prognostic integrin $\alpha 2 \beta 1$ phenotyping to detect non-small cell lung cancer and monitor drug resistance responses. [Theranostics](#) (2017) 7(16):4013-4028.
 - 2017 13. C-P Wu*, SH Hsiao, M Murakami, M-J Lu, Y-Q Li, C-H Hsieh, S V. Ambudkar and Y-S Wu. Tyrphostin RG14620 selectively reverses ABCG2-mediated multidrug resistance in cancer cell lines. [Cancer Letters](#) (2017) Nov 28; 409:56-65.
 - 2017 14. C-P Wu*, SH Hsiao, M Murakami, YJ Lu, YQ Li, YH Huang, TH Hung, S V. Ambudkar, Y-S Wu. Alpha-Mangostin Reverses Multidrug Resistance by Attenuating the Function of the Multidrug Resistance-Linked ABCG2 Transporter. [Molecular Pharmaceutics](#) (2017) Aug 7;14(8):2805-2814.
 - 2017 15. T-H Hung, S-F Chen, C-P Wu, M-J Li, Y-L Yeh, T-T Hsieh. Micronized progesterone pretreatment affects the inflammatory response of human gestational tissues and the cervix to lipopolysaccharide stimulation. [Placenta](#) (2017) Sep. 57: 1–8.
 - 2017 16. C-P Wu*, M Murakami, S-H Hsiao, A-W Chou, Y-Q Li, Y-H Huang, T-H Hung, S. V. Ambudkar. Overexpression of ATP-binding cassette sub-family G member 2 confers resistance to phosphatidylinositol 3-kinase inhibitor PF-4989216 in cancer cells. [Molecular Pharmaceutics](#) (2017) Jul 3; 14(7):2368-2377.
 - 2017 17. Y-J Lin, W-C Shyu, C-W Chang, C-C Wang, C-P Wu, H-T Lee, L-J Chen, C-H Hsieh. Tumor Hypoxia Regulates Forkhead Box C1 to Promote Lung Cancer Progression. [Theranostics](#). (2017) Mar 5;7(5):1177-1191.

- 2016 18. SH Hsiao, YJ Lu, CC Yang, WC Tuo, YQ Li, YH Huang, CH Hsieh, TH Hung, C-P Wu*. Hernandezine, a bisbenzylisoquinoline alkaloid with selective inhibitory activity against multidrug resistance-linked ATP-binding cassette drug transporter ABCB1. *Journal of Natural Products* (2016) Aug. 79(8): 2135-42.
- 2016 19. SH Hsiao, YJ Lu, YQ Li, YH Huang, CH Hsieh, C-P Wu*. Osimertinib (AZD9291) attenuates the function of multidrug resistance-linked ATP-binding cassette transporter ABCB1 in vitro. *Molecular Pharmaceutics* (2016) June. 13(6):2117-25.
- 2016 20. C-P Wu*, YJ Hsieh, SH Hsiao, CY Su, YQ Li, YH Huang, CW Huang, CH Hsieh, JS Yu, YS Wu. Human ATP-Binding Cassette Transporter ABCG2 Confers Resistance to CUDC-907, a Dual Inhibitor of Histone Deacetylase and Phosphatidylinositol 3-Kinase. *Molecular Pharmaceutics* (2016). March. 13(3): 784-94.
- 2016 21. J-P Gillet, JB. Andersen, JP. Madigan, S Varma, RK. Bagni, K Powell, WE. Burgan, C-P Wu, AM Calcagno, SV. Ambudkar, SS. Thorgeirsson, MM. Gottesman. A gene expression signature associated with overall survival in patients with hepatocellular carcinoma suggests a new treatment strategy. *Molecular Pharmacology* (2016) Feb. 89(2)263-72.
- 2015 22. WL Chen, CC Wang, YJ Lin, C-P Wu, CH Hsieh. Cycling hypoxia induces chemoresistance through the activation of reactive oxygen species-mediated B-cell lymphoma extra-long pathway in glioblastoma multiforme. *Journal of Translational Medicine* (2015) Dec 28;13(1):389.
- 2015 23. Y-H Huang, S-H Hsiao and C-P Wu*. Isoreserpine reverses multidrug resistance mediated by ABCB1. *Journal of Cancer Research Updates* (2015) Nov, 4: 188-194.
- 2015 24. C-P Wu*, C-H Hsieh, S-H Hsiao, S-Y Luo, C-Y Su, Y-Q Li, Y-H Huang, C-W Huang and S-C Hsu. Human ATP-binding cassette transporter ABCB1 confers resistance to volasertib (BI 6727), a selective inhibitor of polo-Like kinase 1. *Molecular Pharmaceutics* (2015) Nov, 12(11): 3885-95.
- 2015 25. C-H Hsieh, Y-J Lin, C-P Wu, H-T Lee, W-C Shvu and C-C Wang. Livin contributes to tumor hypoxia-induced resistance to cytotoxic therapies in glioblastoma multiforme. *Clinical Cancer Research* (2015) Jan, 21(2): 460-70.
- 2014 26. C-P Wu*, S-H Hsiao, C-Y Su, S-Y Luo, Y-Q Li, Y-H Huang, C-H Hsieh and C-W Huang. Human ATP-Binding Cassette transporters ABCB1 and ABCG2 confer resistance to CUDC-101, a multi-acting inhibitor of histone deacetylase, epidermal growth factor receptor and human epidermal growth factor receptor 2. *Biochemical Pharmacology* (2014) Nov, 92: 567-576.
- 2014 27. C-P Wu*, S-H Hsiao, S-Y Luo, W-C Tuo, C-Y Su, Y-Q Li, Y-H Huang and C-H Hsieh. Overexpression of human ABCB1 in cancer cells leads to reduced activity of GSK461364, a specific inhibitor of polo-like kinase 1. *Molecular Pharmaceutics* (2014) Oct, 11(10): 3727-36.
- 2014 28. C-P Wu, SV Ambudkar. The pharmacological impact of ATP-binding cassette drug transporters on vemurafenib-based therapy. *Acta Pharm Sin B*. (2014) Apr;4(2):105-11.
- 2014 29. S-H Hsiao, S-Y Luo, C-Y Su, W-C Tuo, C-T Chiang, Y-Q Li, Y-H Huang and C-P Wu*. The overexpression of ABCG2 reduces the efficacy of volasertib (BI 6727) and GSK461364 in human S1-M1-80 colon carcinoma cells. *Journal of Cancer Research Updates* (2014) 3(2): 108-116.
- 2013 30. C-P Wu*, S-H Hsiao, H-M Sim, S-Y Luo, W-C Tuo, H-W Cheng, Y-Q

- Li, Y-H Huang and SV Ambudkar. Human ABCB1 (P-glycoprotein) and ABCG2 mediate resistance to BI 2536, a potent and selective inhibitor of polo-like kinase 1. *Biochemical Pharmacology* (2013) Oct, 86(7): 904-913.
- 2013 31. Y Fukuda, K Takenaka, A Sparreboom, SB Cheepala, C-P Wu, S Ekins, SV Ambudkar, and JD Schuetz. HIV protease inhibitors interact with ABCC4/MRP4: a basis for unanticipated enhanced cytotoxicity. *Molecular Pharmacology* (2013) Sep, 84(3): 361-71.
- 2013 32. M-T Tsai, J-D Lee, Y-J Lee, C-K Lee, H-L Jin, F-Y Chang, K-Y Hu, C-P Wu, C-P Chiang, and CC Yang. Differentiation of oral precancerous stages with optical coherence tomography based on the evaluation of optical scattering property. *Laser Physics* (2013) April, 23: 045602.
- 2013 33. C-P Wu*, H-M Sim, Y-H Huang, Y-C Liu, S-H Hsiao, H-W Cheng, Y-Q Li, SV Ambudkar and S-C Hsu. Overexpression of ATP-Binding Cassette transporter ABCG2 as a potential mechanism of acquired resistance to vemurafenib in BRAF(V600E) mutant cancer cells. *Biochemical Pharmacology* (2013) Feb, 85(3): 325-334.
- 2013 34. M-T Tsai, C-K Lee, F-Y Chang, J-T Wu, C-P Wu, T-T Chi and C-C Yang. Noninvasive imaging of heart chamber in Drosophila with dual-beam optical coherence tomography. *Journal of Biophotonics* (2013) Sep, 6(9): 708-717.
- 2012 35. C-W Chou, C-C Wang, C-P Wu, Y-J Lin, Y-C Lee, Y-W Cheng and C-H Hsieh. Tumor cycling hypoxia induces chemoresistance in glioblastoma multiforme by upregulating the expression and function of ABCB1. *Neuro-Oncology* (2012) Oct, 14(10): 1227-38.
- 2012 36. Y-H Kuang, JP Patel, K Sodani, C-P Wu, L-Q Liao, A Patel, AK Tiwari, C-L Dai, X Chen, L-W Fu, SV Ambudkar, VL Korlipara and Z-S Chen. OSI-930 analogues as novel reversal agents for ABCG2-mediated multidrug resistance. *Biochemical Pharmacology* (2012) Sep, 84(6): 766-774.
- 2012 37. C-H Hsieh, C-P Wu, H-T Lee, J-A Liang, C-Y Yu and Y-J Lin. NADPH oxidase subunit 4 mediates cycling hypoxia-promoted radiation resistance in Glioblastoma multiforme. *Free Radical Biology and Medicine* (2012) Aug, 53(4): 649-658.
- 2012 38. H-M Lin, J-C Wang, H-S Hu, P-S Wu, C-C Yang, C-P Wu, S-Y Pu, T-A Hsu, W-T Jiaang, Y-S Chao, T-K Yeh, J-H Chern and A Yueh. Resistance analysis and characterization of a Thiazole analogue, BP008, as a potent Hepatitis C Virus NS5A inhibitor. *Antimicrobial Agents and Chemotherapy* (2012) Jan, 56(1): 44-53.
- 2011 39. C-P Wu, C-H Hsieh and Y-S Wu. The emergence of drug transporter-mediated multidrug resistance to cancer chemotherapy. *Molecular Pharmaceutics* (2011) Dec, 8(6): 1996-2011.
- 2011 40. HM Sim, C-P Wu, SV Ambudkar and ML Go. *In vitro* and *in vivo* modulation of ABCG2 by functionalized auronones and structurally related analogs. *Biochemical Pharmacology* (2011) Aug, 82(11): 1562-1571.
- 2011 41. S Shukla, AP Skoumbourdis, MJ Walsh, AMS Hartz, KL Fung, C-P Wu, MM Gottesman, B Bauer, CJ Thomas, SV Ambudkar. Synthesis and characterization of a BODIPY conjugate of the BCR-ABL kinase inhibitor Tassigna (Nilotinib): Evidence for transport of Tassigna and its fluorescent derivative by ABC drug transporters. *Molecular Pharmaceutics* (2011) Aug, 8(4): 1292-1302.
- 2011 42. MB Lucia, M Handley, J-P Gillet, C-P Wu, GM De Donatis, R Cauda

- and MM Gottesman. Exposure to HIV-protease inhibitors selects for increased expression of P-glycoprotein (ABCB1) in Kaposi's Sarcoma cells. *British Journal of Cancer* (2011) Aug, 105(4): 513-522.
- 2011 43. C-P Wu, S Ohnuma, SV Ambudkar. Discovering natural product modulators to overcome multidrug resistance in cancer chemotherapy. *Current Pharmaceutical Biotechnology* (2011) Apr;12(4):609-20.
- 2011 44. C-C Yang, Y-C Hsieh, S-J Lee, S-H Wu, C-L Liao, C-H Tsao, Y-S Chao, C-P Wu* and A Yueh. Novel dengue virus-specific NS2B/NS3 protease inhibitor, BP2109, discovered by a High-Throughput Screening assay. *Antimicrobial Agents and Chemotherapy* (2011) Jan, 55(1): 229-238.
- 2010 45. I Abraham, S Jain, C-P Wu, Y Kuang, Z Shi, X Chen, L Fu, SV Ambudkar, KEI Sayed, Z-S Chen. Marine sponge-derived siphonane triterpenoids reverse P-glycoprotein (ABCB1)-mediated multidrug resistance in cancer cells. *Biochemical Pharmacology* (2010) Nov, 80(10): 1497-506.
- 2010 46. AM Calcagno, CD Salcido, J-P Gillet, C-P Wu, JM. Fostel, M Mumau, MM Gottesman, L Varticovski, SV Ambudkar. Prolonged drug selection of breast cancer cells and enrichment of cancer stem-cell characteristics. *JNCI-Journal of the National Cancer Institute* (2010) Nov, 102(21): 1637-52.
- 2010 47. Y-J Mi, Y-J Liang, H Huang, H-Y Zhao, C-P Wu, F Wang, L-Y Tao, C-Z Zhang, C-L Dai, AK Tiwari, X-X Ma, KKW To, SV Ambudkar, Z-S Chen, L-W Fu. Apatinib (YN968D1) reverses multidrug resistance by inhibiting the efflux function of multiple ATP-binding cassette transporters. *Cancer Research* (2010) Oct, 70(20): 7981-91.
- 2010 48. M Kucka, K Kretschmannova, T Murano, C-P Wu, H Zemkova, SV Ambudkar, SS Stojilkovic. Dependence of multidrug resistance protein-mediated cyclic nucleotide efflux on the background sodium conductance. *Molecular Pharmacology* (2010) Feb, 77(2):270-9.
- 2009 49. C-L Dai, Y-J Liang, L-M Chen, X Zhang, W-J Deng, X-D Su, Z Shi, C-P Wu, C Ashby Jr, S Akiyama, SV Ambudkar, Z-S Chen and L-W Fu. Sensitization of ABCB1 overexpressing cells to chemotherapeutic agents by FG020326 via binding to ABCB1 and inhibiting its function. *Biochemical Pharmacology* (2009) Aug, 78(4): 355-64.
- 2009 50. JN Orina, AM Calcagno, C-P Wu, J Shih, S Varma, G Eichler, J Weinstein, SV Ambudkar, MM Gottesman, and J-P Gillet. Evaluation of current methods used to analyze the expression profiles of ABC transporters yields an improved drug-discovery database. *Molecular Cancer Therapeutics* (2009) Jul, 8(7): 2057-2066.
- 2008 51. C-L Dai[#], AK Tiwari[#], C-P Wu[#], X-D Su, S-R Wang, D-G Liu, CR Ashby Jr, YH, RW Robey, Y-J Liang, L-M Chen, C-J Shi, SV Ambudkar, Z-S Chen, and L-W Fu. Lapatinib (Tykerb, GW572016) reverses multidrug resistance in cancer cells by inhibiting the activity of ATP-binding cassette subfamily B member 1 and G member 2. *Cancer Research* (2008) Oct, 68: 7905-7914.
- 2008 52. C-P Wu, AM Calcagno, SV Ambudkar. Reversal of ABC drug transporter-mediated multidrug resistance in cancer cells: evaluation of current strategies. *Current Molecular Pharmacology* (2008) Jun;1(2):93-105.
- 2008 53. AM Calcagno, JM Fostel, KW To, SE Martin, KJ Chewning, C-P Wu, SE Bates, NJ Caplen and SV Ambudkar. Single-step

- doxorubicin-selected cancer cells overexpress the ABCG2 drug transporter through epigenetic changes. *British Journal of Cancer* (2008) May, 98: 1515-1524.
- 2008 54. S Shukla, C-P Wu, SV Ambudkar. Development of inhibitors of ATP-binding cassette drug transporters: present status and challenges. *Expert Opinion on Drug Metabolism & Toxicology* (2008) Feb;4(2):205-23.
- 2007 55. C-P Wu, S Shukla, AM Calcagno, MD Hall, MM Gottesman and SV Ambudkar. Evidence for dual mode of action of a thiosemicarbazone, NSC73306: a potent substrate of the multidrug resistance-linked ABCG2 transporter. *Molecular Cancer Therapeutics* (2007) Dec, 6: 3287-3296.
- 2007 56. S Shukla, C-P Wu and SV Ambudkar. The naphthoquinones, vitamin K3 and its structural analog plumbagin, are substrates of the multidrug resistance-linked ABC drug transporter ABCG2. *Molecular Cancer Therapeutics* (2007) Dec, 6: 3279-3286.
- 2007 57. J Golin, ZN Kon, C-P Wu, J Martello, L Hanson, S Supernavage, SV Ambudkar, and ZE Sauna. Complete inhibition of the Pdr5p multidrug efflux pump ATPase activity by its transport substrate clotrimazole suggests that ATP as well as GTP may be used as an energy source. *Biochemistry-US* (2007) Nov 46: 13109-13119.
- 2007 58. AM Calcagno, I-W Kim, C-P Wu, S Shukla, and SV Ambudkar. ABC drug transporters as molecular targets for the prevention of multidrug resistance and drug-drug interactions. *Current Drug Delivery* (2007) Oct, 4: 324-333.
- 2006 59. AM Calcagno, KJ Chewning, C-P Wu and SV Ambudkar. Plasma membrane calcium ATPase (PMCA4): A housekeeper for RT-PCR relative quantification of polytopic membrane proteins. *BMC Molecular Biology* (2006) Sep, 7(29): 1-10.
- 2006 60. W Chearwae, C-P Wu, H-Y Chu, TR Lee, SV Ambudkar and P Limtrakul. Curcuminoids purified from turmeric powder modulate the function of human Multidrug Resistance Protein 1 (ABCC1). *Cancer Chemotherapy and Pharmacology* (2006) Feb, 14: 1-13.
- 2005 61. C-P Wu, AM Calcagno, SB Hladky, SV Ambudkar, and MA Barrand. Modulatory effect of plant polyphenols on human multidrug resistance proteins 1, 4 and 5. *FEBS Journal* (2005) Sep, 272: 4725-40.
- 2005 62. C-P Wu, DA van Schalkwyk, D Taylor, PJ Smith and K Chibale. Reversal of chloroquine resistance in *Plasmodium falciparum* by 9H-Xanthene derivatives. *International Journal of Antimicrobial Agents* (2005) Aug, 26: 170-175.
- 2005 63. C-P Wu, A Klokouzas, SB Hladky, SV Ambudkar and MA Barrand. Interactions of mefloquine with ABC transporters, MRP1 (ABCC1) and MRP4 (ABCC4), in human erythrocyte cell membranes. *Biochemical Pharmacology* (2005) Aug, 70: 500-510.
- 2005 64. C-P Wu, H Woodcock, SB Hladky, and MA Barrand. cGMP transport across human erythrocyte membranes: factors influencing its ATP-dependent uptake into inside-out membrane vesicles. *Biochemical Pharmacology* (2005) Apr, 69: 1257-62.
- 2004 65. A Klokouzas, T Tiffert, DA van Schalkwyk, C-P Wu, HW van Veen, MA Barrand, SB Hladky. *Plasmodium falciparum* expresses a multidrug resistance associated protein. *Biochemical and Biophysical Research Communications* (2004) Aug, 321: 197-201.
- 2003 66. A Klokouzas, C-P Wu, HW van Veen, MA Barrand and SB Hladky. cGMP and glutathione-conjugate transport in human erythrocytes. *FEBS Journal* (2003) Sep, 270: 3696-3708.

專書

2018

(BOOK CHAPTER)

" Protein Kinase Inhibitors as Sensitizing Agents for Chemotherapy, Volume 4 (Cancer Sensitizing Agents for Chemotherapy) 1st Edition "
[Elsevier S&T Books](#)

會議演說與文獻摘要

2020

(CONFERENCE ABSTRACTS & INVITED TALKS)

1. Chung-Pu Wu, S-H Hsiao, Y-J Yu, L-C Hung and Y-S Wu. Erdafitinib resensitizes ABCB1-overexpressing multidrug-resistant cancer cells to conventional chemotherapeutic agents. [American Association for Cancer Research Annual Meeting](#), Sand Diego, CA, USA (2020)
- 2019 2. Chung-Pu Wu, S-H Hsiao, S. Lusvardi and S. V. Ambudkar. Avapritinib (BLU-285), a selective exon 17 mutant KIT kinase inhibitor, reverses multidrug resistance mediated by ABCB1 and ABCG2 in cancer cell lines. [11th AACR-JCA Joint Conference on Breakthroughs in Cancer Research: Biology to Precision Medicine](#). Hawaii, USA (2019)
- 2018 3. Chung-Pu Wu, S-H Hsiao, T-C Liu, N. Yeh and Y-S Wu. SIS, a specific inhibitor of Smad3, reverses multidrug resistance mediated by ABCB1 and ABCG2 in cancer cell lines. [18th World Congress of Basic and Clinical Pharmacology 2018](#), Kyoto, Japan (2018)
- 2018 4. S-H Hsiao, S. Vahedi, S. V. Ambudkar and Chung-Pu Wu. Human ATP-binding cassette proteins ABCB1 and ABCG2 confer resistance to histone deacetylase 6 inhibitor ricinostat (ACY-1215) in cancer cell lines. [American Association for Cancer Research Annual Meeting](#), Chicago, IL, USA (2018)
- 2017 5. Chung-Pu Wu, M Murakami, S-H Hsiao and S. V. Ambudkar. Human ATP-binding cassette transporter ABCG2 confers resistance to PF-4989216, a selective phosphoinositide 3-kinase inhibitor. [Multi-Drug Efflux Systems - Gordon Research Conference](#), Galveston, Texas, USA (2017) [Conference Travel Award]
- 2017 6. S-H Hsiao, M Murakami, S. V. Ambudkar and Chung-Pu Wu. α -Mangostin reverses ABCG2-mediated drug resistance. [Multi-Drug Efflux Systems - Gordon Research Conference](#), Galveston, Texas, USA (2017)
- 2016 7. SH Hsiao and Chung-Pu Wu. Hernandezine, a bisbenzylisoquinoline alkaloid with selective inhibitory activity against multidrug-resistance-linked ATP-binding cassette drug transporter ABCB1. [The 3rd International Biotechnology, Chemical Engineering and Life Science Conference 2016](#), Okinawa, Japan (2016)
- 2016 8. M-L Lin and Chung-Pu Wu. Overexpression of ATP-binding cassette transporter ABCG2 mediates acquired resistance LDC000067, a selective inhibitor of cyclin-dependent kinase CDK9. [Experimental Biology 2016](#), San Diego, USA (2016)
- 2015 9. Chung-Pu Wu, S-H Hsiao, C-Y Su, Y-Q Li and Y-H Huang. Overexpression of ABCB1 represents a novel mechanism for acquired resistance to polo-like kinase 1 inhibitor volasertib. [AACR-AACR-SIC Special Conference 2015](#), Florence, Italy (2015)
- 2015 10. C-Y Su, S-H Hsiao, S-Y Luo, Y-Q Li, Y-H Huang and Chung-Pu Wu. Overexpression of ABCB1 or ABCG2 in cancer cells reduced the

- activity of CUDC-101, a multi-targeted inhibitor of HDAC, EGFR and HER2. *EACR-AACR-SIC Special Conference 2015*, Florence, Italy (2015)
- 2014 11. W-C Tuo, Y-Q Li, Y-H Huang and Chung-Pu Wu. AC1N5DA, a novel and selective inhibitor of human ABCG2 protein. *The 29th Joint Annual Conference of Biomedical Sciences*. 第29屆生物醫學聯合學術年會, Taipei, Taiwan (2014)
- 2014 12. S-Y Luo, S-H Hsiao, W-C Tuo, C-Y Su, C-T Chiang, Y-Q Li, Y-H Huang and Chung-Pu Wu. Human ABCB1 and ABCG2 confer acquired resistance to Polo-like kinase 1 inhibitors, BI 2536, volasertib and GSK641364. *The 29th Joint Annual Conference of Biomedical Sciences*. 第29屆生物醫學聯合學術年會, Taipei, Taiwan (2014)
- 2014 13. Chung-Pu Wu, H-M Sim and SV. Ambudkar. Human ABCB1 and ABCG2 confer acquired resistance to Polo-like kinase 1 inhibitors, BI 2536, volasertib and GSK641364. *American Association for Cancer Research Annual Meeting*, San Diego, LA, USA (2014)
- 2013 14. J-P Gillet, JB. Andersen, JP. Madigan, S Varma, Chung-Pu Wu, AM. Calcagno, SV. Ambudkar, SS. Thorgeirsson and M M. Gottesman. Multidrug resistance transcriptome analysis highlights compounds that sensitize resistant hepatocellular carcinoma through increased histone acetylation *American Association for Cancer Research Annual Meeting*, Washington, DC, USA (2013)
- 2013 15. Chung-Pu Wu, H-M Sim, S-H Hsiao, S-Y Luo, W-C Tuo, H-W Cheng, Y-Q Li, Y-H Huang and SV. Ambudkar. Human ABCB1 (P-glycoprotein) and ABCG2 Mediate Resistance to BI 2536, a Potent and Selective Inhibitor of Polo-like Kinase 1. *10th North American ABC workshop*, Frederick, Maryland, USA (2013)
- 2013 16. Chung-Pu Wu, H-M Sim, Y-H Huang, Y-C Liu, S-H Hsiao, H-W Cheng, Y-Q Li, SV. Ambudkar and S-C Hsu. Overexpression of ATP-binding cassette transporter ABCG2 as a potential mechanism of acquired resistance to vemurafenib in BRAF(V600E) mutant cancer cells. *American Association for Cancer Research Annual Meeting*, Washington, DC, USA (2013)
- 2013 17. S-H Hsiao, H-W Cheng, Y-Q Li, Y-H, S-C Hsu and Chung-Pu Wu. Vemurafenib is a high-affinity substrate of human ABCG2 protein. *The 28th Joint Annual Conference of Biomedical Sciences*. 第28屆生物醫學聯合學術年會, Taipei, Taiwan (2013).
- 2011 18. Y-H. Kuang, J. Patel, K. Sodani, Chun-Pu Wu, L-Q. Liao, A.K. Tiwari, C-L. Dai, X. Chen, L-W. Fu, S.V. Ambudkar, V.L. Korlipara and Z-S. Chen. Analogues of OSI-930, novel dual c-Kit and KDR tyrosine kinase inhibitors, reverse ABCG2-mediated multidrug resistance. *American Association for Cancer Research Centennial Meeting*, Orlando, FL, USA (2011).
- 2010 19. AM. Calcagno, X. Liu, Chung-Pu Wu, BC. Paria, KJ. Chewning, IS. Ambudkar and SV. Ambudkar. Cancer stem cell characteristics exhibited by doxorubicin-selected drug-resistant breast cancer cells. *American Association for Cancer Research Centennial Meeting*, Washington D.C, USA (2010).
- 2009 20. JP. Gillet, R. Rutledge, Chung-Pu Wu, T. Eliseeva, KG. Chen, PC. Fitzgerald, HM. Fales, D. Xia, SV. Ambudkar and MM. Gottesman. Characterization of ABCB5, a poorly studied ABC transporter highly expressed in melanomas. *American Association for Cancer Research Annual Meeting*, Denver, CO, USA (2009).
- 2009 21. I. Abraham, S. Jain, Chung-Pu Wu, Y. Kuang, Z. Shi, X. Chen, W. Deng, L. Fu, SV. Ambudkar, K.El Sayed, Z-S. Chen. Marine sponge-derived siphonane triterpenoids reverse P-glycoprotein

- (ABCB1)-mediated multidrug resistance in cancer cells. *6th North American ABC workshop*, Frederick, Maryland, USA (2009).
- 2009 22. S. Shukla, A. Skoumbourdis, Chung-Pu Wu, AMS. Hartz, B. Bauer, CJ. Thomas and SV. Ambudkar. P-glycoprotein (ABCB1) mediates resistance to the novel BCR-ABL kinase inhibitor, Tasigna. *6th North American ABC workshop*, Frederick, Maryland, USA (2009).
- 2009 23. Chung-Pu Wu, S. Zdanov, E. Shacter and SV. Ambudkar. Small molecule NSC659321 selectively sensitizes P-glycoprotein overexpressing cancer cells by inducing apoptosis and autophagy. *6th North American ABC workshop*, Frederick, Maryland, USA (2009).
- 2009 24. JP. Gillet, R. Rutledge, Chung-Pu Wu, T. Eliseeva, KG. Chen, PC. Fitzgerald, HM. Fales, D. Xia, SV. Ambudkar and MM. Gottesman. Multi-Drug Efflux Systems. The characterization of ABCB5 reveals a full length transporter mediating multidrug resistance. *Gordon Research Conference*, Galveston , TX , USA (2009).
- 2009 25. S. Shukla, Chung-Pu Wu, AM. Calcagno, H. Zaher, JA. Ware, AMS. Hartz, B. Bauer, WD. Vieira, ZE. Sauna and SV. Ambudkar. Natural product nutraceutical curcumin and small molecule compounds as modulators for reversal of drug resistance-mediated by ABC drug transporters. *The 2009 National Cancer Institute Intramural Scientific Investigators Retreat*, Bethesda, MD, USA (2009).
- 2009 26. JP. Gillet, R. Rutledge, Chung-Pu Wu, T. Eliseeva, KG. Chen, PC. Fitzgerald, HM. Fales, D. Xia, SV. Ambudkar and MM. Gottesman. The characterization of ABCB5 reveals a full length transporter mediating multidrug resistance. *Society for melanoma research, International congress*, Boston, MA, USA (2009).
- 2009 27. JP. Gillet, R. Rutledge, Chung-Pu Wu, T. Eliseeva, KG. Chen, PC. Fitzgerald, HM. Fales, D. Xia, SV. Ambudkar and MM. Gottesman. The characterization of ABCB5 reveals a full length transporter mediating multidrug resistance. *22nd National Institutes of Health Research Festival*, Bethesda, MD , USA (2009).
- 2008 28. Chung-Pu Wu, S. Zdanov, S. Shukla, AMS. Harts, AM. Calcagno, E. Shacter, B. Bauer and SV. Ambudkar. Evaluation of a potential new anti-MDR agent NSC659321 for modulation of drug resistance in cancer cells overexpressing ABC drug transporters. *1st abcam Multidrug Resistance and ABC Transporters Conference*, Baltimore, MD, USA (2008).
- 2008 29. Z-S. Chen, AK. Tiwari, Z. Shi, C-L. Dai, S. Shukla, Chung-Pu Wu, S-R. Wang, K. Sodani, CR. Ashby Jr, Y. Kuang et al. Tyrosine kinase inhibitors as modulators of multidrug resistance in cancer. *1st abcam Multidrug Resistance and ABC Transporters Conference*, Baltimore, MD, USA (2008).
- 2008 30. S. Shukla, Chung-Pu Wu, A. Skoumbourdis, CJ. Thomas and SV. Ambudkar. A Multidrug resistance protein, MRP4 (ABCC4) confers resistance to BCR-ABL tyrosine kinase inhibitor, Nilotinib. *1st abcam Multidrug Resistance and ABC Transporters Conference*, Baltimore, MD, USA (2008).
- 2008 31. Chung-Pu Wu, S. Zdanov, S. Shukla, AMS. Hartz, AM. Calcagno, E. Shacter, B. Bauer, and SV. Ambudkar. Evaluation of a potential new anti-MDR agent NSC659321 for modulation of drug resistance in cancer cells overexpressing ABC drug transporters. *The 5th Annual North American ABC Genetic Workshop*,

- Frederick, MD, USA (2008).
- 2008 32. C-L. Dai, A. Tiwari, Chung-Pu Wu, X-D. Su, D-G. Liu, Y. Huang, Y-J. Liang et al. Reversal of multidrug resistance by lapatinib. *The 5th Annual North American ABC Genetic Workshop*, Frederick, MD, USA (2008).
- 2008 33. Chung-Pu Wu, S. Shukla, AM. Calcagno, K. Garfield and SV. Ambudkar. A novel therapy for MDR: NSC659321 selectively targets drug-induced ABCB1-overexpressing cancer cells and re-sensitizes cancer cells to ABCG2 substrates. *National Cancer Institute, Center for Cancer Research Molecular Targets Faculty Retreat*, Bethesda, MD, USA (2008).
- 2008 34. S. Shukla, Chung-Pu Wu, AP. Skoumbourdis, AM. Calcagno, CJ. Thomas and SV. Ambudkar. Selective BCR-ABL tyrosine kinase inhibitor nilotinib (AMN107), but not imatinib, interacts with multidrug resistance-associated proteins 1 and 4 (ABCC1 and C4). *National Cancer Institute Center for Cancer Research Fellows and Young Investigators Retreat*, Ocean City, MD, USA (2008).
- 2008 35. Chung-Pu Wu, S. Shukla, AP. Skoumbourdis, AM. Calcagno, CJ. Thomas, and SV. Ambudkar. Selective BCR-ABL tyrosine kinase inhibitor nilotinib (AMN107), but not imatinib, interacts with multidrug resistance-associated proteins 1 and 4 (ABCC1 and C4). *ABC2008-FEBS Special Meeting: ATP-Binding Cassette (ABC) Transporter Proteins: From Multidrug Resistance to Genetic Diseases*, Innsbruck, Austria (2008).
- 2008 36. JP. Gillet, JN. Orina, AM. Calcagno, Chung-Pu Wu, S. Varma, M. Lin, M. Vora, JH. Shih, G. Eichler, JN. Weinstein, SV. Ambudkar and MM Gottesman. Identification of multi-drug resistance mechanisms in the NCI-60 cell lines using Taqman Low Density Array and its evaluation as a diagnostic tool for the clinical setting. *Molecular Targets Faculty Retreat*, Bethesda, MD, USA (2008).
- 2008 37. Chung-Pu Wu, S. Zdanov, S. Shukla, AMS. Hartz, AM. Calcagno, E. Shacter, B. Bauer, and SV. Ambudkar. The small molecule NSC659321 restores drug sensitivity to ABCG2- and P-glycoprotein-overexpressing cells by direct inhibition and preferential induction of apoptosis. *Gordon Research Conference*, Galveston, TX, USA (2008).
- 2007 38. Chung-Pu Wu, S. Shukla, AM. Calcagno, MD. Hall, MM. Gottesman, and SV. Ambudkar. Dual modulatory functions of thiosemicarbazone: interactions of NSC73306 with the multidrug resistance-linked ABCG2 transporter. *4th Annual North American ABC Genetic Workshop*, Frederick, MD, USA (2007). [Invited speaker]
- 2007 39. AM. Calcagno, JM. Fostel, KW. To, C. Salcido, SE. Martin, KJ. Chewning, Chung-Pu Wu, L. Varticovski, S. Bates, NJ. Caplen and SV. Ambudkar. ABCG2 mediates the early stages of multidrug resistance in breast, ovarian and colon cancer cells. *4th Annual North American ABC Genetic Workshop*, Frederick, MD, USA (2007).
- 2007 40. S. Shukla, Chung-Pu Wu, K. Nandigama and SV. Ambudkar. The naphthoquinones, vitamin K3 and its structural analog plumbagin, are substrates of the multidrug resistance-linked ABC drug transporter ABCG2. *4th Annual North American ABC Genetic*

- [Workshop](#), Frederick, MD, USA (2007).
- 2007 41. AM. Calcagno, JM. Fostel, KW. To, C. Salcido, SE. Martin, KJ. Chewning, [Chung-Pu Wu](#), L. Varticovski, S. Bates, NJ. Caplen and SV. Ambudkar. ABCG2 mediates the early stages of multidrug resistance in breast, ovarian and colon cancer cells. [2007 National Institutes of Health Research Festival](#), Bethesda, MD, USA (2007).
- 2007 42. AM Calcagno, JM. Fostel, KW. To, SE. Martin, KJ. Chewning, [Chung-Pu Wu](#), S. Bates, NJ. Caplen and SV. Ambudkar. ABCG2: A biomarker for the early stages of multidrug resistance. [American Association for Cancer Research Molecular Diagnostics in Cancer Therapeutic Development: Maximizing Opportunities for Personalized Treatment Meeting](#), Atlanta, GA, USA (2007).
- 2007 43. AM. Calcagno, JM. Fostel, KW. To, SE. Martin, KJ. Chewning, [Chung-Pu Wu](#), S. Bates, NJ. Caplen and S. V. Ambudkar. Molecular mechanism of drug resistance in single-step selected cancer cells: Overexpression of ABCG2 due to epigenetic changes. [National Institute of General Medical Sciences Chemistry-Biology Interface Training Summit](#), Bethesda, MD, USA (2007).
- 2007 44. AM. Calcagno, JM. Fostel, KW. To, SE. Martin, KJ. Chewning, [Chung-Pu Wu](#), S. Bates, NJ. Caplen and SV. Ambudkar. The multidrug transporter ABCG2: A molecular target during early stages of development of multidrug resistance in breast cancer cells. [American Association for Cancer Research Annual Meeting](#), Los Angeles, CA, USA (2007).
- 2007 45. [Chung-Pu Wu](#), S. Shukla, AM. Calcagno, MD. Hall, MM. Gottesman, S. V. Ambudkar. The P-glycoprotein (ABCB1)-specific cytotoxic thiosemicarbazone, NSC73306, is a potent modulator of the multidrug resistance-linked ABCG2 transporter. [American Association for Cancer Research Annual Meeting](#), Los Angeles, CA, USA (2007).
- 2007 46. AM. Calcagno, JM. Fostel, KW. To, SE. Martin, KJ. Chewning, [Chung-Pu Wu](#), S. Bates, NJ. Caplen and SV. Ambudkar. Upregulation of ABCG2 following low dose drug treatments in MCF-7 cells. [American Association of Pharmaceutical Scientists \(AAPS\) Workshop on Drug Transporters in ADME: From the Bench to the Bedside](#), Bethesda, MD, USA (2007).
- 2007 47. AM. Calcagno, JM. Fostel, KW. To, SE. Martin, KJ. Chewning, [Chung-Pu Wu](#), S. Bates, NJ. Caplen, and SV. Ambudkar. ABCG2: A molecular target during early stages of multidrug resistance development in breast cancer cells. [National Cancer Institute Center for Cancer Research Fellows and Young Investigators Retreat](#), Ocean City, MD, USA (2007).
- 2007 48. [Chung-Pu Wu](#), S. Shukla, AM. Calcagno, MD. Hall, MM. Gottesman and SV. Ambudkar. The ABCB1-specific cytotoxic thiosemicarbazone NSC73306 is a potent modulator of multidrug resistance-linked ABCG2 transporter. [7th National Cancer Institute Center for Cancer Research Fellows and Young Investigators Retreat](#), Ocean City, MD, USA (2007). [Winner of Outstanding Oral Presentation]

- 2006 49. AM. Calcagno, JM. Fostel, KW. To, SE. Martin, KJ. Chewning, Chung-Pu Wu, S. Bates , NJ. Caplen and SV. Ambudkar. ABC Transporter mRNA Expression Patterns in MCF-7 Cells Vary with Single vs. Multi-Step Selection with Doxorubicin. [2006 National Institutes of Health Research Festival](#), Bethesda, MD, USA (2006).
- 2006 50. AM. Calcagno, JM. Fostel, KW. To, SE. Martin, KJ. Chewning, Chung-Pu Wu, S. Bates , NJ. Caplen and SV. Ambudkar. Single-step selection with doxorubicin causes overexpression of ABCG2 in MCF-7 cells. [3rd Annual North American ABC Genetic Workshop](#), Frederick, MD, USA (2006).
- 2005 51. Chung-Pu Wu, AM. Calcagno, SB. Hladky, SV. Ambudkar and MA. Barrand. Modulatory effects of plant polyphenols on human multidrug resistance proteins 1, 4, and 5 (ABCC1, 4, and 5). [2nd Annual North American ABC Genetic Workshop](#), Frederick, MD, USA (2005).
- 2005 52. AM Calcagno, Chung-Pu Wu, G. Szakacs, MM. Gottesman and SV. Ambudkar. Evaluating the Expression Profiles of Multidrug Resistance-linked ATP-binding Cassette Transporters in Drug Selected and Transfected Cell Lines. [National Cancer Institute Center for Cancer Research Fellows and Young Investigators Retreat](#), Williamsburg, VA, USA (2005).
- 2003 53. Chung-Pu Wu, A. Klokouzas, S. Hladky and MA. Barrand. Effect of quinoline-based drugs on transport mediated by Multidrug Resistance-Associated Proteins in human erythrocytes. [The British Pharmacological Society-Winter Meeting](#), University of London, London, UK (2003).