Curriculum vitae Yi-Ching Wang (王憶卿)

Current Position

Chair Professor Department of Pharmacology & Institute of Basic Medical Sciences College of Medicine, National Cheng Kung University, Taiwan E-mail: <u>ycw5798@mail.ncku.edu.tw</u> Website: <u>https://ycw-lab.webnode.tw/yi-ching-wang/</u>

Education

1988~1993 PhD, Genetics, Michigan State University, USA

Research Interests

Dr. Yi-Ching Wang received her PhD in Genetics from Michigan State University, USA in 1993. She returned to Taiwan to join the Institute of Biomedical Sciences at Academia Sinica for post-doctoral training. Dr. Wang became an associate professor at the Institute of Toxicology at Chung Shan Medical University in 1995. She then joined the Department of Life Science at National Taiwan Normal University and was promoted to professor in 1999. In 2006, Dr. Wang moved to the Department of Pharmacology, College of Medicine, National Cheng Kung University, where she served as Distinguished Professor until 2015 when she took up the current position as a Chair Professor at the same university.

As a Principal Investigator for the last 29 years, Dr. Wang has published 177 SCI papers in journals such as *Journal of Clinical Oncology, Journal of Clinical Investigation, Nature Communications, Nucleic Acids Research, Journal of Thoracic Oncology, Cell Death & Differentiation, Cancer Research, Clinical Cancer Research, Theranostics with H-index of 47. In addition, her group has reported 376 conference papers, 4 book chapters, and obtained 4 Taiwan patents, 1 US patent, and 2 PCT patents.*

Dr. Yi-Ching Wang has a longstanding research interest in unraveling the molecular mechanisms underlying tumorigenesis. Dr. Wang specifically investigates the relationship between alterations in tumor suppressor genes, oncogenes, and cancer signaling. Over the years, Dr. Wang's research has focused on cancer genomics and epigenomics, with a particular emphasis on DNA methylation and chromatin alterations. Recently, Dr. Wang's attention has shifted towards studying the role of Rab37, a small GTPase, in regulating exocytosis and its potential dysfunction in tumorigenesis and the tumor microenvironment.

In addition to the fundamental research efforts, Dr. Wang's laboratory is also involved in the development of several potential anti-cancer drugs and immunomodulation antibodies. These ongoing projects aim to translate the scientific findings into practical applications that can benefit cancer patients.

<u>Awards</u>

| 2024 | NSC Appointed Outstanding Research Award, Taiwan |
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| | 國科會傑出特約研究員獎 |
| 2023 | Tien Te Lee Biomedical Foundation for Excellent Biomedical |
| | Award, Taiwan |
| | 第19屆永信李天德醫藥科技獎—卓越醫藥科技獎 |
| 2022 | The Ministry of Education's 66 th Annual Academic Award, Taiwan |
| | 第66 届教育部「學術獎」 |

| 2021 | The Foundation for the Advancement of Outstanding Scholarship Award, Taiwan 〇年度傑出人才發展基金會「傑出人才講座」 |
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| 2018 | K. T. Li Honorary Scholar Award, Taiwan 李國鼎科技與人文講座 榮譽學者獎 |
| 2017 | Dr. Wang Min-Ning Memory Foundation for Excellent Basic Medical Research Award, Taiwan 財團法人王民寧先生紀念基金會基礎醫學類 傑出貢獻獎 |
| 2014, 2010, 2004 | Outstanding research award of National Science Council / Ministry of Science and Technology, Taiwan 國科會傑出獎 |
| 2013 | Dr. Tung Ta-Cheng Memorial Award for Basic Cancer Research, Chinese Oncology Society, Taiwan 中華民國癌症醫學會董大成博士癌症基礎醫學研究傑出獎 |
| 2008 | Outstanding Research Award, Pharmacology Society, Taiwan 藥理學會傑出研究獎 |
| 2007 | Distinguished alumnus of Chinese Culture University, Taiwan 中國文化大學傑出校友 |
| 2002 | Keystone Symposium: Epigenetics in Development and Cancer. Young Investigator Award, USA |

<u>Selected publications</u> (from a total of 177 peer-reviewed publications)

- Yang YE, Hu MH, Zeng YC, Tseng YL, Chen YY, Su WC, Chang CP*, <u>Wang</u> <u>YC*</u>. 2024. IL-33/NF-κB/ST2L/Rab37 positive-feedback loop promotes M2 macrophage to limit chemotherapeutic efficacy in lung cancer. *Cell Death Dis.* 15, 356. doi.org/10.1038/s41419-024-06746-y
- Kuo WT, Kuo IY, Hsieh HC, Wu ST, Su WC, <u>Wang YC*</u>. 2024. Rab37 mediates trafficking and membrane presentation of PD-1 to sustain T cell exhaustion in lung cancer. *J Biomed Sci.* 7;31(1):20.
- Hsieh CH, Kuan WH, Chang WL, Kuo IY, Liu H, Shieh DB, Liu H, Tan B, <u>Wang</u> <u>YC*</u>. 2022. Dysregulation of SOX17/NRF2 axis confers chemoradiotherapy resistance and emerges as a novel therapeutic target in esophageal squamous cell carcinoma. *J Biomed Sci.* 29(1):90.
- Yang PS, Yu MH, Hou YC, Chang CP, Lin SC, Kuo IY, Su PC, Cheng HC, Su WC, Shan YS*, <u>Wang YC*</u>. 2022. Targeting protumor factor chitinase-3-like-1 secreted by Rab37 vesicles for cancer immunotherapy. *Theranostics*, 12(1):340-361 (cover article).
- Kuo IY, Yang YE, Yang PS, Tsai YJ, Tzeng HT, Cheng HC, Kuo WT, Su WC, Chang CP*, <u>Wang YC*</u>. 2021. Converged Rab37/IL-6 trafficking and STAT3/PD-1 transcription axes elicit an immunosuppressive lung tumor microenvironment. *Theranostics* 11(14):7029-7044 (cover article).
- Hsieh CH, Hsieh HC, Fu FH, Wang PW, Yang LX, Shieh DB*, <u>Wang YC*</u>. 2021. An innovative NRF2 nano-modulator induces lung cancer ferroptosis and elicits an immunostimulatory tumor microenvironment. *Theranostics*, 11(14):7072-7091 (cover article).
- Jen J, Chen YT, Wu LT, Liu CY, Shieh YC, Lai WW, <u>Wang YC*</u>. 2019. Oncogenic zinc finger protein ZNF322A promotes stem cell-like properties in lung cancer through transcriptional suppression of c-Myc expression. *Cell Death & Differentiation* 26(7):1283-1298.

- 8. Jen J, Tang YA, Lu YH, Lin CC, Lai WW, <u>Wang YC*.</u> 2017. Oct4 transcriptionally regulates the expression of long non-coding RNAs *NEAT1* and *MALAT1* to promote lung cancer progression. *Mol Cancer* 16(1):104 (highly cited article).
- Tzeng HT, Tsai CH, Yen YT, Cheng HC, Chen YC, Pu SW, Wang YS, Shan YS, Tseng YL, Su WC, Lai WW, Wu LW, <u>Wang YC*</u>. 2016. Dysregulation of Rab37mediated cross-talk between cancer cells and endothelial cells via thrombospondin-1 promotes tumor neovasculature and metastasis. *Clin. Cancer Res.* 23(9):2335-2345 (highlighed article).
- Tang YA, Chen CH, Sun S, Cheng CP, Tseng VS, Hsu HS, Su WC, Lai WW, <u>Wang YC*.</u> 2015. Global Oct4 target gene analysis reveals novel downstream *PTEN* and *TNC* genes required for drug-resistance and metastasis in lung cancer. *Nucleic Acids Res.* 43(3):1593-608.
- Tseng RC, Chang JM, Chen JH, Huang WR, Tang YA, Kuo IY, Yan JJ, Lai WW*, <u>Wang YC*</u>. 2015. Deregulation of SLIT2-mediated Cdc42 activity is associated with esophageal squamous carcinoma cancer metastasis and poor prognosis. *J. Thorac. Oncol.* 10(1):189-198.
- Tsai CH, Cheng HC, Wang YS, Lin P, Jen J, Kuo IY, Chang YH, Liao PC, Chen RH, Yuan WC, Hsu HS, Yang MH, Hsu MT, Wu CY, <u>Wang YC*</u>. 2014. Small GTPase Rab37 targets tissue inhibitor of metalloproteinase 1 for exocytosis and thus suppresses tumor metastasis. *Nat Commun* 5:4804
- Yang YC, Tang YA, Shieh JM, Lin RK, Hsu HS, <u>Wang YC*</u>. 2014. DNMT3B overexpression by deregulation of FOXO3a-mediated transcription repression and MDM2 overexpression in lung cancer. *J. Thorac. Oncol.* 9(9):1305-15.
- Tang YA, Lin RK, Tsai YT, Hsu HS, Yang YC, Chen CY, <u>Wang YC*</u>. 2012. MDM2 overexpression deregulates the transcriptional control of RB/E2F leading to DNA methyltransferase 3A overexpression in lung cancer. *Clin. Cancer Res.* 18:4325-33.
- Chen JY, Tang YA, Huang SM, Juan HF, Wu LW, Sun YC, Wang SC, Wu KW, Balraj G, Chang TT, Li WS, Cheng HC, <u>Yi-Ching Wang*</u>. 2011. A novel sialyltransferase inhibitor suppresses FAK/paxillin signaling and cancer angiogenesis and metastasis pathways. *Cancer Res.* 71:473-483.
- Lin RK, Wu CY, Chang JW, Juan LJ, Hsu HS, Chen CY, Lu YY, Tang YA, Yang YC, Yang PC, <u>Wang YC*</u>. 2010. Dysregulation of p53/Sp1 control leads to DNA methyltransferase 1 overexpression in lung cancer. *Cancer Res.* 70:5807-5817 (highlighed article).
- Lin RK, Hsieh YS, Lin P, Hsu HS, Chen CY, Tang YA, Lee CF, <u>Wang YC*</u>. 2010. The tobacco-specific carcinogen NNK induces DNA methyltransferase 1 accumulation and tumor suppressor gene hypermethylation in mice and lung cancer patients. *J. Clin. Invest.* 120:521–532 (cover article).
- Wang YC, Lin RK, Tan YH, Chen JT, Chen CY, <u>Wang YC*</u>. 2005. Wild-type p53 overexpression and its correlation with MDM2 and p14ARF alterations: an alternative pathway to non-small cell lung cancer. J. Clin. Oncol. 23:154-164.
- <u>Wang YC*</u>, Lu YP, Tseng RC, Lin RK, Chang JW, Chen JT, Shih CM, Chen CY. 2003. Inactivation of *hMLH1* and *hMSH2* by promoter methylation in primary non-small cell lung tumors and matched sputum samples. *J. Clin. Invest.* 111:887-895. (highlighted article)
- <u>Wang YC</u>, Chen CY, Chen SK, Cherng SH, Ho WL, Lee H*. **1998**. High frequency of deletion mutations in *p53* gene from squamous-cell lung cancer patients in Taiwan. *Cancer Res.* 58(2):328-333.