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**Education**

1982-1986 B.S. National Cheng-Kung University, Taiwan  
1990-1992 M.S. Eastern Michigan University, USA  
1993-1997 Ph.D. University of Wisconsin-Madison, USA

**Research and Professional Positions Held in Chronological Sequence**

1998-2002 Assistant Professor, National Cheng Kung University, Taiwan  
2002-2005 Associate Professor, National Cheng Kung University, Taiwan  
2005-2008 Professor, National Cheng Kung University, Taiwan  
2008-2019 Distinguished Professor, National Cheng Kung University, Taiwan  
2019-2024 Chair Professor, National Cheng Kung University, Taiwan  
2024-present President and Chair Professor, National Chung Cheng University, Taiwan  
2010-2011 Visiting Professor, Baylor College of Medicine, USA  
2014-2017 Director General, Department of Life Sciences, Ministry of Science and Technology, R.O.C  
2016-2020 President, The Chinese Physiological Society, Taiwan  
2019-2020 President, Asian Society of Endometriosis and Adenomyosis  
2012-present Ambassador, World Endometriosis Society  
2024-present Editor-in-Chief, Journal of Physiological Investigation

**Research Interests**

**My research interests focus on understanding the molecular mechanisms of human diseases.**

**Our studies could be divided into two areas:**

**1. Endometriosis:** Endometriosis is a common gynecological disease with the prevalence of 10-15 %. It is a complex disease with unknown etiology and severely reduces life quality of affected women and their family. We focus on local and epigenetic factors that cause inflammation in the peritoneal cavity, aberrant production of steroid hormones, angiogenesis, lymphangiogenesis, and suppression of immune function. Recent study extends to investigate systemic and microenvironmental factors contributing to endometriosis-associated infertility and to dissect their cellular and molecular mechanisms.

**2. Cancer:** Drug resistance is the most critical issue that contributes to treatment failure and mortality. Hypoxia is one of the most critical factors contributing to drug resistance. However, mechanisms responsible for hypoxia-mediated increased in drug resistance remain largely

unknown. We have employed systems biology approach to investigate effects of hypoxia-mediated gene regulatory networks in drug resistance and cancer malignancy. Current focuses are on the regulation of extracellular vesicles-mediated pancreatic cancer malignancy, functions of novel kinases in colon cancer metastasis and drug resistance, and loss-of-function of tumor suppressor gene in causing drug resistance and cancer malignancy.

### Major Honors and Awards

2011	Distinguished Research Award, National Science Council
2014	Society for Experimental and Biology (SEBM) Distinguished Scientist Award
2018	Fellow, Society for Experimental Biology and Medicine
2018	Distinguished Research Award, Ministry of Science and Technology
2019	American Association for Cancer Research Most-Cited Article Award (Cancer Research 2017)
2020-2023	World's Top 2% Scientists
2021	Fuller W. Bazer SSR International Scientist Award, Society for the Study of Reproduction
2021	The Ministry of Education's 65th Annual Academic Awards
2022	International Union of Physiological Sciences Academy Fellow
2025	The 21 <sup>st</sup> Tien Te Lee Outstanding Biomedical Award

### Selected Publications

1. HT Hou, WN Li, TC Lin, CJ Lee, YJ Chen, YC Chen, PF Chen, CY Wang, MH Wu<sup>#</sup>, SJ Tsai<sup>#</sup> Disruption of primary ciliary prostaglandin E<sub>2</sub> signaling by transforming growth factor- $\beta$ 1 impairs endometrial receptivity. **J Biomed Sci** 33:28, 2026.
2. SC Lin<sup>#</sup>, YC Tsai, JL Wang, HJ Chin, CC Tsai, SC Lin, YS Lin, BW Lin, SJ Tsai<sup>#</sup>. Targeting NUDT21-mediated alternative polyadenylation of oncogenes ameliorates colorectal cancer malignancy and metastasis. **Br J Cancer** 2026, <https://doi.org/10.1038/s41416-026-03451-9>.
3. CA Wang, YC Hou, YJ Tai, YK Hong, PC Hou, JL Fu, CL Wu, SM Cheng, DY Hwang, YY Su, YS Shan<sup>#</sup>, SJ Tsai<sup>#</sup> Intercellular TIMP-1-CD63 signaling directs the evolution of immune escape and metastasis in KRAS-mutated pancreatic cancer cells. **Mol Cancer** 24, 25, 2025.
4. SC Lin, WN Li, SC Lin, HT Hou, YC Tsai, TC Lin, MH Wu<sup>#</sup>, SJ Tsai<sup>#</sup> Targeting YAP1 ameliorates progesterone resistance in endometriosis. **Hum Reprod** 38 (6): 1124-1134, 2023.
5. PL Hsu, CW Chien, YA Tang, BW Lin, SC Lin, YS Lin, SY Chen, HS Sun<sup>#</sup>, SJ Tsai<sup>#</sup> Targeting BRD3 eradicates nuclear TYRO3-induced colorectal cancer metastasis. **Sci Adv** 9(15): eade3422, 1 2023.
6. CB Chu, CC Yang, YY Hsueh, PC Chen, YK Hong, YY Kuo, S-J Tsai<sup>#</sup> Aberrant expression of IL-17A in mast cells contributes to the pathogenesis of hidradenitis suppurativa. **Br J Dermatol** 189(6):719-729, 2023.
7. WN Li, KY Hsiao, CA Wang, N Chang, PL Hsu, CH Sun, SR Wu, MH Wu<sup>#</sup>, SJ Tsai<sup>#</sup> Extracellular vesicle-associated VEGF-C promotes lymphangiogenesis and immune cells infiltration in endometriosis. **Proc Natl Acad Sci USA** 117 (41): 25859-25868, 2020.
8. CA Wang, YH Chang, PC Hou, YJ Tai, WN Li, PL Hsu, SR Wu, CF Li, YS Shan, SJ Tsai<sup>#</sup> DUSP2 regulates extracellular vesicle-VEGF-C secretion and pancreatic cancer early dissemination. **J Extracell Vesicles** 9 (1): 1746529, 2020
9. PS Chen, WT Chiu, PL Hsu, SC Lin, IC Peng, CY Wang, SJ Tsai<sup>#</sup> Pathophysiological implications of hypoxia in human diseases. **J Biomed Sci** 27: 63, 2020.