Name: **Jer-Yen Yang , Ph. D.**

Current Positions: **Associate Professor of Cancer and Developmental Biology**
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Education

Dr. Yang was awarded Ph. D. from UT MD Anderson Cancer Center in 2009, and he studies cancer metabolism and Hedgehog (Hh) signaling in Medulloblastoma (MB), a pediatric brain cancer, since he was a postdoc in MD Anderson and Stanford University (2009-2012).

Expertise

Dr. Yang's research focuses on dissecting molecular mechanism and cellular regulation in brain and breast cancer. He studies cancer metabolism and Hh signaling in neuronal development and cancer progression. His lab uses mouse genetics model and proteomic, whole genome sequence and bioinformatics to investigate the function of gene in regulation of normal and cancer cell growth, and drug resistance in cancer treatment.

Research Interests

In 2012, Dr. Yang as an assistant professor in Purdue University, his group was studying how metabolic checkpoint controls Hh developmental pathway in cerebellum and MB, and dysregulation of metabolic sensor will lose control in neuronal cell development and leads to tumor progression. His group identifies many novel chemicals against the major players in Hh and AMPK signaling for the application in the treatment of cancer and metabolism disease. In 2020, Dr. Yang moves to CMU and launches his lab in the brand new Suinan campus.

Selected Grants:

1. CMU startup fund (2020-2025)

Selected Publications

1. Li YH, et al., Scott MP and **Yang JY***. AMP-Activated Protein Kinase Directly Phosphorylates and Destabilizes Hedgehog Pathway Transcrition Factor GLI1 in Medulloblastoma. **Cell Reports.** (2015) Jul 28;12(4):599-609.
2. Zhang, R., Huang, S.Y., Li, K., Zhang G, Chang CJ, and **Yang, JY*.** (2017) Dual degradation signals destruct GLI1: AMPK inhibits GLI1 through β-TrCP-mediated proteasome degradation. **Oncotarget.** Jul 25;8 (30): 49869-49881.
3. Wu MJ, Chen YS, Kim MR, Chang CC, Gampala S, Zhang Y, Wang Y, Chang CY, **Yang JY**, Chang CJ. (2018) Epithelial-Mesenchymal Transition Directs Stem Cell Polarity via Regulation of Mitofusin. **Cell Metabolism** Nov 27.
4. Kim MR, Wu MJ, Zhang YS, **Yang JY*** and Chang CJ*. (2020) TET2 directs mammary luminal cell differentiation and endocrine response. **Nature Communications** 11, 4642.