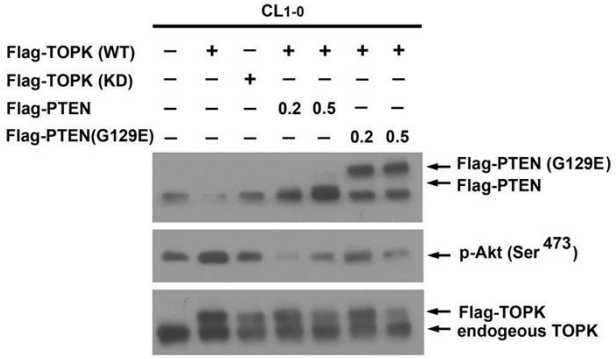
Lai Jin-Mei Ph.D.
Associate Professor,
Department of Life Science, College of Science and Engineering
E-mail：jmlai@mail.fju.edu.tw

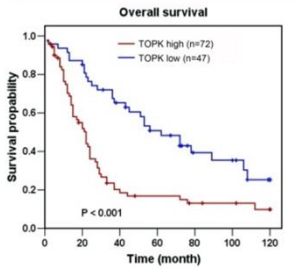
Education & Professional Experience

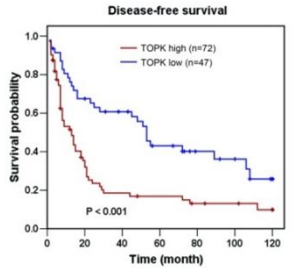
B.S. Medical Technology, Chang Gung University, R.O.C. (09/92~06/96)
M.S. Microbiology (Virology), National Taiwan University, R.O.C. (09/96-06/98).
Ph.D. Biochemistry and Molecular Biology, National Taiwan University, R.O.C. (09/98-01/03)
Postdoctoral Fellow in Department of Biochemistry and Molecular Biology (National Taiwan University) (01/03-03/04)
NHRI Postdoctoral Fellowship (04/04~07/04)
Assistant Professor in Department of Life Science, Fu-Jen Catholic University. (08/04~01/13)

Research interest

My research interest focuses on the identification and characterization of oncogenic signaling that is activated in lung cancer [1-2] and hepatocellular carcinoma (HCC). For example, my laboratory has previously set up a bioinformatics platform to integrate different transcriptome datasets for identification of metastasis associated genes in lung adenocarcinoma. One gene, namely TOPK, has been extensively studied in my lab. We have shown TOPK may activate a PI3K/AKT-dependent cell migration through modulating the protein level of PTEN, which is a negative regulator of PI3K/AKT-dependent signaling. In addition, high TOPK expression, either







alone or in combination with a low level of PTEN, may serve as a prognostic marker for lung cancer [4]. Moreover, overexpression of TOPK may predetermine the metastatic capability of tumors and can serve as a significant prognostic predictor of shortened overall survival and time to recurrence in patients with stage I lung adenocarcinoma [3]. Recently, we also investigate the signaling that targeted cancer stem cells. For example, we have identified some potential Wnt/β-catenin signaling inhibitors that have therapeutic potentials in treating HCC. Mechanistic investigation of these drugs are ongoing.

Selected publication

1. Emodin induces a reactive oxygen species-dependent and ATM-p53-Bax mediated cytotoxicity in lung cancer cells. Eur J Pharmacol. 623(1-3):1-9 (2009).
2. Aurora-A promotes gefitinib resistance via a NF-κB signaling pathway in p53 knockdown lung cancer cells. Biochem Biophys Res Commun. 405(2):168-72 (2011).
3. Overexpression of TOPK predicts poor prognosis in patients with stage I lung adenocarcinoma. Cancer Sci. 103(4):731-8 (2012).
4. TOPK/PBK promotes cell migration via modulation of the PI3K/PTEN/AKT pathway and is associated with poor prognosis in lung cancer. Oncogene 31(19):2389-400 (2012)

Financial support for Ph.D. students

[Stipend]
1.National Science Council (NSC) Scholarship for Ph.D : up to NT 28,000/mo
2.Ministry of Education Teaching Excellent Project for Ph.D: up to NT 12,000/mo (Teaching assistant, optional)
3.Fu Jen Catholic University International PhD student Scholarship: NT 10,000/mo

[Tuition]
1.The 1st and 2nd year tuition is waived (around NT 220.000).
2.The tuition will be free after the 3rd year of Ph.D program