Hui-Fang Hung, Ph.D. Candidate

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EDUCATION

Ph.D. candidate, University of Massachusetts Medical School	2009 – Present
M.S. Biopharmaceutical Sciences, National Yang-Ming University	2007
B.S. Biology, National Cheng-Kung University	2005

RESEARCH EXPERIENCE

PhD candidate in Program of Molecular Medicine at University of Massachusetts Medical School with Dr. Stephen Doxsey. 2012-Present

- Role of centrosome in cell division, spindle assembly, and polarity establishment.
- Discovered that a mother-centriole appendage component, Cenexin, is a way to connect these three processes.

PhD candidate in Department of Cancer Biology at University of Massachusetts Medical School with Dr. Stephen Lyle. 2010-2012

- Elucidate the role of ARRDC3 in squamous cell carcinoma.

Research assistant at Taipei Veterans General Hospital with Dr. Chin-Wen Chi. 2007-2009

- Elucidate the anti-tumor mechanism of Quercetin.

Graduate research at National Yang-Ming University with Dr. Yeu Su. 2005-2007

- Isolation and characterization of colon cancer initiating cells.

Undergraduate research at National Cheng-Kung University with Dr. Ai-Li Shiau. 2003-2005

- Elucidate the role of Toll-like receptor 4 (TLR4) in tumor targeting activity of attenuated *Salmonella choleraesuis.*

AWARD

EMBO Travel Fellowship, 2014.

TEACHING & MENTORING EXPERIENCE

- Volunteer to instruct Worcester area AP-Bio students on microscopy techniques and cell cycle regulation (2012- Present).

- Teaching assistant at Analytical and Quantitative Light Microscopy course, 2014.

PUBLICATIONS

Published:

Hehnly H, **Hung HF**, Doxsey S. (2013) One among many: ODF2 isoform 9, a.k.a. Cenexin-1, is required for ciliogenesis. *Cell Cycle* 12(7):1021.

Hung HF, Hehnly H, Doxsey S. (2012) Multiplying madly: Deacetylases take charge of centrosome duplication and amplification. *Cell Cycle* 11(23):4304.

Wang JJ, **Hung HF**, Huang ML, Lee HJ, Chern YT, Chang YF, Chi CW, Hsu YC (2012) Role of p21 as a determinant of 1,6-Bis[4-(4-amino-3-hydroxyphenoxy) phenyl] diamantane response in human HCT-116 colon carcinoma cells. *Oncol Rep* 27(2):529-534.

Chang YF*, Hsu YC*, **Hung HF**, Lee HJ, Lui WY, Chi CW, Wang JJ (2009) Quercetin induces oxidative stress and potentiates the apoptotic action of 2-methoxyestradiol in human hepatoma cells. *Nutr Cancer* 61(5):735-45. * equal contribution

In preparation:

Hung HF, Hehnly H, Doxsey S. Cenexin, a mother centriole appendage protein, is required for spindle orientation during mitosis.

Hung HF, Lyle S. Down-regulation of arrestin domain-containing protein 3 in squamous cell carcinoma promotes cell migration and β4 Integrin re-distribution.

Draheim KM, **Hung HF**, Chen HB, Tao QF, Moore N, Guo Z, Xu X, Lyle S. Arrestin domain-containing protein 3 controls stem cell motility through modulating β4 Integrin protein degradation.

TECHNICAL EXPERIENCE

Imaging / Microscopy: Spinning disk and laser scanning confocal microscopy; Wide-field epifluorescence microscopy; Live-cell imaging; Fluorescence recovery after photobleaching (FRAP).

Flow cytometry: Detection of cell surface antigens; Cell cycle analysis; Detection of side-population in tumor by dye exclusion; Apoptosis detection (Annexin V, PI staining); ROS detection (HE, DCF staining); Mitochondrial functional assay (membrane potential measurement by JC-1 staining, and NAO staining of total mass).

Molecular biology and biochemistry: Plasmid and genomic DNA prep, RNA prep; Gene cloning; PCR; Blotting (Southern, northern, and western); Protein interaction assays (co-immunoprecipitation); Lentivirus and retrovirus synthesis; Centrosome and vesicle isolation.

Cell biology: Mammalian cell culture; Transfection and virus infection; Cancer biology related assays (migration, invasion, colony formation, focus formation); Lumen formation in 3-D culture; Immunofluorescence staining.

Animal handling: Subcutaneous and intrapleural injection; Measure tumor volume; Microtome and cryostat sectioning; Immunohistochemistry staining.