

# ***Curriculum Vitae***

**Po-Hsiang Hung Ph.D.**

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## ***Education***

2012.09 – 2019.06, **Ph.D.**, Genome and Systems Biology Degree Program, College of Life Science, National Taiwan University and Academia Sinica, Taipei, Taiwan

**Advisors: Jun-Yi Leu Ph.D. and Huai-Kuang Tsai Ph.D.**

Thesis: Hsp90 regulates genotype-to-phenotype transition among wild isolates of *Saccharomyces cerevisiae*

- RNA-sequencing analysis of expression differences among yeast strains in response to Hsp90 inhibition
- Bioinformatics analysis pipeline to identify the transcription factors involved in strain-specific Hsp90-dependent expression differences
- TF activity assay and promoter activity assay for validation the candidate TFs
- CRISPR-based genome editing for verifying the causal variants in the promoter regions
- Bulk segregant analysis for identification of the Hsp90-regulated causal variants

2011.09 – 2012.06, **Master**, Genome and Systems Biology Degree Program, College of Life Science, National Taiwan University and Academia Sinica, Taipei, Taiwan

**Advisor: Jun-Yi Leu Ph.D.**

2008.09 – 2011.06, **Bachelor**, Department of Biomedical Sciences, College of Medicine, Chang Gung University, Taoyuan, Taiwan

**Advisor: Sheng-Chieh Hsu Ph.D.**

- Confocal-based image analysis for E-cadherin

## ***Research experience***

2019.07 – present, **Postdoctoral researcher**, Institute of Molecular Biology, Academia Sinica, Taipei, Taiwan

**Principal investigator: Jun-Yi Leu Ph.D.**

## ***Advanced laboratory techniques***

### **1. DNA-related techniques:**

- Cloning, CRISPR-based genome editing, CHIP-qPCR

### **2. Protein related techniques:**

- Western blotting, protein purification, co-immunoprecipitation, polyclonal antibody preparation

### **3. mRNA related techniques:**

- RNA extraction, RT-qPCR

## ***Computational skills***

### **1. R programming language**

- Statistic analysis

### **2. Python language**

- Genome comparison for yeast strains
- Simulation for QTL analysis
- Transcription factor binding site prediction

### **3. Linux system**

- RNA-sequencing analysis
- DNA remapping sequencing analysis

### **4. Matlab programming language**

- Simulation for the ODE models

## ***Teaching experience***

2014.09 – 2016.06, **Teaching Assistant**, Genome and Systems Biology Degree Program, College of Life Science, National Taiwan University, Taipei, Taiwan

## ***Publication***

1. Hsieh, Y.Y., Hung, P.H., and Leu, J.Y., Hsp90 regulates nongenetic variation in response to environmental stress. *Mol Cell*, 2013. **50**(1): p. 82-92.
2. Hung, P.H., Liao, C.W., Tsai, H.K., and Leu, J.Y., Hsp90-dependent strain-specific differential gene expression is common in yeast populations (in preparation)

## ***Conference presentations***

- 2019 “Hsp90-dependent strain-specific differential gene expression is common in yeast populations” Poster presentation, International conference on systems biology, Okinawa, Japan
- 2019 “Hsp90-dependent strain-specific differential gene expression is common in yeast populations” Poster presentation, Yeast Research: Origins, Insights, Breakthroughs, Cold Spring Harbor Laboratory, America
- 2019 “Hsp90-dependent strain-specific differential gene expression is common in yeast populations” Oral presentation, Taiwan yeast meeting, Taipei, Taiwan
- 2018 “Hsp90 buffers genetic variations through Hsp90-dependent transcriptional regulation” Poster presentation, IMB retreat, Hsinchu, Taiwan
- 2017 “Investigation of cryptic genetic variations buffered by Hsp90 among wild yeast populations ” Oral presentation, GSB retreat, New Taipei City, Taiwan
- 2016 “Identification of cryptic genetic variations buffered by Hsp90 in wild yeast populations” Poster presentation, International conference on systems biology, Barcelona, Spain
- 2016 “Investigation of cryptic genetic variations buffered by Hsp90” Oral presentation, GSB retreat, Taoyuan, Taiwan
- 2015 “Identification of cryptic genetic variations buffered by Hsp90 in wild yeast populations” Poster presentation, GSB retreat, Yi-Lan, Taiwan
- 2013 “Using transcriptomic analysis to identify cryptic genetic variation buffered by Hsp90 in wild yeast populations” Poster presentation, IMB retreat, Yi-Lan, Taiwan

## ***Awards***

- 2019 Traveling Fellowship, The Society of Taiwan Women in Science and Technology, Taipei, Taiwan
- 2019 IMB Student Technician and Postdoc Traveling Fellowship application (October 1-14), Academia Sinica, Taipei, Taiwan

2015 2<sup>nd</sup> place of the poster competition, GSB retreat, Yi-Lan, Taiwan

## ***Courses and workshops***

2018 “System Dynamics in Biology: Principles and Applications in Basic and Clinical Studies” workshop, Nantou, Taiwan

2015 “Pathway and Network Analysis for Omics Data” course in Taipei Summer Institute in Statistical Genetics, Taipei, Taiwan

2015 “QTL mapping” course in Taipei Summer Institute in Statistical Genetics, Taipei, Taiwan

2015 “Quantitative Genetics” course in Taipei Summer Institute in Statistical Genetics, Taipei, Taiwan

2015 “Population Genetics Data Analysis” course in Taipei Summer Institute in Statistical Genetics, Taipei, Taiwan

2012 the EMBO course on “Logic of Regulatory Circuits”, Taipei, Taiwan

## ***Extracurricular services***

2016.01 – 2017.01, member of Student Association of Genome and Systems Biology Degree Program, College of Life Science, National Taiwan University and Academia Sinica, Taipei, Taiwan

2015.07 – 2016.06, member of Student, Technician, Postdoctoral fellow Association, Institute of Molecular Biology, Academia Sinica, Taipei, Taiwan

2012.07 – 2013.06, Deputy Minister of Public Relations Department, Student Association of Genome and Systems Biology Degree Program, College of Life Science, National Taiwan University and Academia Sinica, Taipei, Taiwan

2010.07, counselor of the Summer Camp, Department of Biomedical Sciences, College of Medicine, Chang Gung University, Taoyuan, Taiwan

2009.09 – 2010.06, Minister of Public Relations Department, Student Association of Department of Biomedical Sciences, College of Medicine, Chang Gung University, Taoyuan, Taiwan

## ***References***

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Assistant Research Fellow

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