

Ting-Wei Lin, MD

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Education

National Taiwan University

Master Joint Program in Genome and Systems Biology, National Taiwan University & Academia Sinica

- ◇ NTU Active learner scholarship (five per annum)
- ◇ Ministry of Education Innovative and Creative Competition

Taipei, Taiwan
Sep 15 –

Chang Gung University

Doctor of Medicine

- ◇ National Science Council College Student Research Scholarship (2014)
- ◇ Zheng, De-Ling Medical Development Foundation Research Scholarship (2013)
- ◇ Certificated with Taiwan Medical Doctor License (2015)

TaoYuan, Taiwan
Sep 07 – Jun 15

Selected Research Experiences

Institute of Statistical Science, Academia Sinica

Graduate Research Assistant of Research Fellow, Hsuan-Yu Chen, PhD

- ◇ Develop statistic analysis method of next-generation sequencing data in time-series data and variant calling

Taipei, Taiwan
Sep 15 –

National Taiwan University, Department of Medicine

Graduate Research Assistant of Huei-Wen Chen, Director of Toxicology institute

- ◇ Analysis high throughput data of the lung cancer stem cell transformation during microenvironment change

Nov 15 –

Chang Gung Memorial Hospital

Undergraduate Research Assistant of Pediatric Infectious disease Laboratory

Director, Dr. Yhu-Chering Huang

- ◇ Epidemiology study of MRSA prevalence and molecular characteristic in the public bus system

Jan 13 – June 14

Chang Gung University, Thin Film Measurement Lab.

Undergraduate Research Assistant of Professor. Tung-Ming Pan (Biomedical engineering)

- ◇ Develop label-free detection of rheumatoid factor using semiconductor device
- ◇ Create new protocol of semiconductor surface modification greatly improve the detection rate

Sep 12 – June 14

Chang Gung University, Neurodevelopment Laboratory

Undergraduate Research Assistant of Professor. Yi-Chuan Cheng (Development Biology)

- ◇ Study the gene regulation of SOX7 in Zebrafish with nested-PCR Design and microinjection technique

Sep 09 – June 11

Selected Bioinformatic and Data analysis Experiences

Major experience with R, Shellscript, MySQL, Perl, PHP, Git, Python, Matlab

Study Clonal Evolution of Lung Cancer Stem Cells with cancer-associated fibroblast

- ◇ Analysis with cancer cell line **microarray** and **RNAseq** data with **Cufflink**, **Samtools**, **IGV**, **HTseq**, **RNAQC**
- ◇ Familiar with **R** Bioconductor package **Affy**, **gcrma**, **GEOquery**, **Biomart**, **heatmap**
- ◇ Using the Topology-based cancer classification and related pathway mining method
- ◇ Basic working experiment on cluster Computer in Centos environment

Dynamic Modeling of the interaction gene expression under microRNA regulation

- ◇ Modeling with non-linear function and numerical processing

Construct Genetic Database with Ensembl API and Ensembl Schema

- ◇ Project in the Ensemble Workshop using basic **Perl**, **MySQL** command

Hospital Lab Data Visualization with Shiny application

- ◇ Create **Shiny** application in preprocessing poor structural Chang Gung Memorial Hospital lab raw data

Principle Component Analysis of Oral Cancer, Gastric Cancer and Colon Cancer microarray data

- ◇ Use the GEO database to collect the three GI-origin cancer experiment data for meta-analysis

Developing tool for monitoring the city's age-friendliness status with Taiwan Government Open Data

- ◇ Team project in the data science camp with **dplyr**, **ggplot2**, **shiny**, **rgeos**, **broom**
- ◇ Poster presentation accepted in 2016 using R conference

Selected Leadership experience

Caregiver: a online matching platform for caregivers and patients

<https://myfavoritecare.com/>

Taipei, Taiwan

Co-Founder

Jan 15 –

◇ a web service in order to break the information gap between patient and caregiver

I-Dressing: Hackathon team project

Team Leader

July 15 – Dec 15

◇ detecting wound environment status with biosensor and integrating with cloud service

◇ the project went into final contest of the 2015 China Innovation & Entrepreneurship Competition

The Investigator: Bioscience Honor Society Taiwan

Sep 13 – Dec 15

Leader of activity department

◇ the largest life science student organization in Taiwan, sharing the interview of the young scientist, holding the workshop on various topics on career plan, interdisciplinary science talk and running website

Chang Gung University Visual Art and Movie Club

Sep 08 – Dec 09

President

◇ organized movie curations on documentary, human right, sci-fi topics, assisted the video documentary works on university's formal ceremony

Selected Work Experiences

DNArails

Taipei, Taiwan

Biomedical informatics Engineer Internship

Jan 17 – Jun 17

◇ Integrated pharmacogenomic database system with visualization plot design

◇ Biomedical ontology data (RDF, OWL) processing using SPARQL/Cypher

GeneDock

Beijing, China

Bioinformatic Engineer Internship

July 16 – Oct 16

◇ Building the automated circularRNA analysis pipeline with docker in the cloud computing environment

◇ Design the reporting system implemented with R

Linkou Chang Gung Memorial Hospital

Tao-Yuan, Taiwan

Clinical Internship

Jun 14 – May 15

◇ Rotation Training in departments of Internal Medicine, General Surgery, Pediatric medicine, Rehabilitation department, Obstetrics, Gynecology, Orthopedics, Oncology, Pathology

National Taiwan University Hospital

Clinical Internship

April 15 – May 15

◇ Rotation Training in Cardiology

Hospitals Da Universidade De Coimbra

July 12 – Aug 12

Clerkship, Professor Exchange Program under International Federation of Medical Students Associations

◇ Rotation Training in Intensive Care Unit under supervised

Chinese Knowledge Management Association

Sep 11 – June 12

Associate Trainee

◇ one year mentorship program with senior managers in Marketing, Business development, Consulting, Financial

Extracurricular Experiences

Experienced Mountain Hiker

◇ conquer top 5 mountains in Taiwan and climbing over 20 mountains

Marathon runner

◇ finish 11 times of marathon (7 half)

Backpacker

◇ travel to Tibet, India, East China, Cambodia, Portugal

MOOC

2015 Introduction to System Biology

Ravi Iyengar, Icahn School of Medicine at Mount Sinai

2015 Bioconductor for Genomic Data Science

Kasper Daniel Hansen, Johns Hopkins University

2015 Command Line Tools for Genomic Data Science

Liliana Florea, Johns Hopkins University

2015 Shell Scripting: Automate Command line, Udemy

Jason Cannon

2016 Statistics for Genomic Data Science

Jeff Leek, John Hopkins University

2016 Using Databases with Python

Charles Severance, Michigan University

2015–2016 DataCamp

Intermediate R programming/ggplot2/markdown/shiny/ggvis /dplyr/machine learning

2016 Networking analysis in system biology, Coursera

Avi Ma'ayan, Icahn School of Medicine at Mount Sinai

Publication

Pan TM, **Lin TW**, Chen . Label-free detection of rheumatoid factor using YbYxOy electrolyte-insulator-semiconductor devices. Anal Chim Acta. 2015 Sep 3;891:304–11.

Ting Wei, Lin. Wen Tsai, Hsu. Zheng Wan, Lin. Yu Wen, Kao. Po Shang, Yang. Chi Tse, Teng. (2016). Using R with Taiwan Government Open Data to Create a Tool For Monitoring the City's Age-Friendly Status. useR!2016conference

Chan, M., Lin, Y., Lin, L., **Lin, T.**, Hsu, W., Chang, C., ... Hsu, J. Y. (2017). WAKKEY : Assisting Parent-child Communication for Better Morning Routines. The 20th ACM Conference on Computer-Supported Cooperative Work and Social Computing

Ting-Wei Lin, Tsun-Wei Tseng, Yu-Hsuan Lin, ..., Johnson Hsieh. (2017). Applying Data Science For Social Good In Nonprofit Organization With Troubled Family Risk Profiling R Dashboard Application. useR!2017conference

Ting-Wei Lin, Huei-Wen Chen, Hsuan-Yu Chen. (2017). Master Regulators Network Of Plasticity And Stemness related to Cancer-Associated Fibroblast in Primary Non-Small Cell Lung Cancer Stem Cel. Taiwan Genomics and Genetics Society 2017 Conference