

Ting-wen Chen (陳亭紋)

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Profiles

- ✧ Versatile Bioinformatician dealing with high throughput microarray and NGS data, integrating existing tools or developing new algorithms
- ✧ Motivated website engineer creating web-services or databases to investigate or visualize biological data

Education

- Ph.D. Institute of BioMedical Informatics,
National Yang-Ming University, Taipei, Taiwan (Sep. 2004 – May. 2011)
- B.S. Department of Life Science,
National Yang-Ming University, Taipei, Taiwan (Sep. 2000 – Jun. 2004)

Professional experiences

- ✧ Assistant professor, Institute of Bioinformatics and System Biology, National Chiao Tung University. (Feb. 2019 - now)
- ✧ Assistant research fellow, Molecular Medicine Research Center, Chang Gung University (Feb. 2017 – Jun. 2019)
- ✧ Post-doctoral Fellow, Molecular Medicine Research Center, Chang Gung University (Sep. 2011 – Feb. 2017)
- ✧ Post-doctoral Fellow, Head & Neck Surgery, The University of Texas MD Anderson Cancer Center (Apr. 2015 – Oct. 2015)
- ✧ Summer intern in Vita Genomics (July. 2005 – Sep. 2005)

Awards

- ✧ 2020, Fellow of the Higher Education Academy.
- ✧ 2020 AACR Team Science Award (TCGA project team)

PUBLICATIONS

1. Yang CY, Chen TW, Lu WL, Liang SS, Huang HD, Tseng CP, Tarng DC:
Synbiotics Alleviate the Gut Indole Load and Dysbiosis in Chronic Kidney

- Disease. *Cells* 2021, **10**(1).
2. Lin BZ, Wan SY, Lin MY, Chang CH, Chen TW, Yang MH, Lee YJ: **Involvement of Differentially Expressed microRNAs in the PEGylated Liposome Encapsulated 188Rhenium-Mediated Suppression of Orthotopic Hypopharyngeal Tumor.** *Molecules* 2020, **25**(16):3609.
 3. Yang WF, Qin N, Song X, Jiang C, Li T, Ji P, Li Y, Ding D, Wang C, Dai J, Jin G, Chen TW et al: **Genomic signature of mismatch repair deficiency in areca nut-related oral cancer.** *J Dent Res*, 2020
 4. Chen YC, Hsiao CC, Chen TW, Wu CC, Chao TY, Leung SY, Eng HL, Lee CP, Wang TY, Lin MC: **Whole Genome DNA Methylation Analysis of Active Pulmonary Tuberculosis Disease Identifies Novel Epigenotypes: PARP9/miR-505/RASGRP4/GNG12 Gene Methylation and Clinical Phenotypes.** *Int J Mol Sci* 2020, **21**(9).
 5. Chen TW, Chen CW: **Melanin production as a visual indicator of conjugal transfer in Streptomyces.** *J Appl Genet* 2020.
 6. Cheng YH, Huang TW, Juan CH, Chou SH, Tseng YY, Chen TW, Yang TC, Lin YT: **Tigecycline-non-susceptible hypervirulent Klebsiella pneumoniae strains in Taiwan.** *J Antimicrob Chemother* 2020, **75**(2):309-317.
 7. Wang CI, Kao HK, Chen TW, Huang Y, Cheng HW, Yi JS, Hung SY, Wu CS, Lee YS, Chang KP: **Characterization of Copy Number Variations in Oral Cavity Squamous Cell Carcinoma Reveals a Novel Role for MLLT3 in Cell Invasiveness.** *Oncologist* 2019.
 8. Huang SY, Huang CH, Chen CJ, Chen TW, Lin CY, Lin YT, Kuo SM, Huang CG, Lee LA, Chen YH et al: **Novel Role for miR-1290 in Host Species Specificity of Influenza A Virus.** *Molecular therapy Nucleic acids* 2019, **17**:10-23.
 9. Chou PH, Liao WC, Tsai KW, Chen KC, Yu JS, Chen TW*: **TACCO, a Database Connecting Transcriptome Alterations, Pathway Alterations and Clinical Outcomes in Cancers.** *Sci Rep* 2019, **9**(1):3877.
 10. Hsu CW, Chen YT, Hsieh YJ, Chang KP, Hsueh PC, Chen TW, Yu JS, Chang YS, Li L, Wu CC: **Integrated analyses utilizing metabolomics and transcriptomics reveal perturbation of the polyamine pathway in oral cavity squamous cell carcinoma.** *Analytica chimica acta* 2019, **1050**:113-122.
 11. Lin WC, Chakraborty A, Huang SC, Wang PY, Hsieh YJ, Chien KY, Lee YH, Chang CC, Tang HY, Lin YT et al: **Histidine-Dependent Protein Methylation Is Required for Compartmentalization of CTP Synthase.** *Cell reports* 2018, **24**(10):2733-2745 e2737.

12. Chou LF, Chen TW, Yang HY, Chang MY, Shu SH, Tsai CY, Ko YC, Huang CT, Tian YC, Hung CC et al: **Murine Renal Transcriptome Profiles upon Leptospiral Infection: Implications for Chronic Kidney Diseases** *The Journal of Infectious Diseases* 2018, 218(9):1411-1423.
13. Li HP, Peng CC, Wu CC, Chen CH, Shih MJ, Huang MY, Lai YR, Chen YL, Chen TW, Tang P et al: **Inactivation of the tight junction gene CLDN11 by aberrant hypermethylation modulates tubulins polymerization and promotes cell migration in nasopharyngeal carcinoma.** *J Exp Clin Cancer Res* 2018, 37(1):102.
14. Campbell JD, Yau C, Bowlby R, Liu Y, Brennan K, Fan H, Taylor AM, Wang C, Walter V, Akbani R et al: **Genomic, pathway network, and immunologic features distinguishing squamous carcinomas.** *Cell Rep* 2018, 23(1):194-212 e196.
15. Berger AC, Korkut A, Kanchi RS, Hegde AM, Lenoir W, Liu W, Liu Y, Fan H, Shen H, Ravikumar V et al: **A comprehensive Pan-Cancer molecular study of gynecologic and breast cancers.** *Cancer Cell* 2018, 33(4):690-705 e699.
16. Chiu HS, Somvanshi S, Patel E, Chen TW, Singh VP, Zorman B, Patil SL, Pan Y, Chatterjee SS, Cancer Genome Atlas Research N et al: **Pan-Cancer Analysis of lncRNA Regulation Supports Their Targeting of Cancer Genes in Each Tumor Context.** *Cell Rep* 2018, 23(1):297-312 e212.
17. Lai YH, Liu H, Chiang WF, Chen TW, Chu LJ, Yu JS, Chen SJ, Chen HC, Tan BC: **MiR-31-5p-ACOX1 Axis Enhances Tumorigenic Fitness in Oral Squamous Cell Carcinoma Via the Promigratory Prostaglandin E2.** *Theranostics* 2018, 8(2):486-504.
18. Chen PC*, Chen TW*, Han YA, Ng WV, Yang CS: **Complete Genome Sequence of a New Halophilic Archaeon, Haloarcula taiwanensis, Isolated from a Solar Saltern in Southern Taiwan.** *Genome Announc* 2018, 6(5).*
19. Sablok G*, Chen TW*, Lee CC, Yang C, Gan RC, Wegrzyn JL, Porta NL, Nayak KC, Huang PJ, Varotto C et al: **ChloroMitoCU: Codon patterns across organelle genomes for functional genomics and evolutionary applications.** *DNA Res* 2017.*
20. Chen YC, Chen KD, Su MC, Chin CH, Chen CJ, Liou CW, Chen TW, Chang YC, Huang KT, Wang CC et al: **Genome-wide gene expression array identifies novel genes related to disease severity and excessive daytime sleepiness in patients with obstructive sleep apnea.** *PLoS One* 2017, 12(5):e0176575.
21. Chen TW, Lee CC, Liu H, Wu CS, Pickering CR, Huang PJ, Wang J, Chang IYF, Yeh YM, Chen CD et al: **APOBEC3A is an oral cancer prognostic**

- biomarker in Taiwanese carriers of an APOBEC deletion polymorphism.** *Nat Commun* 2017, **8**.*
22. Chen TW, Gan RC, Fang YK, Chien KY, Liao WC, Chen CC, Wu TH, Chang IY, Yang C, Huang PJ *et al*: **FunctionAnnotator, a versatile and efficient web tool for non-model organism annotation.** *Sci Rep* 2017, **7**(1):10430.
 23. Bradic M, Warring SD, Tooley GE, Scheid P, Secor WE, Land KM, Huang PJ, Chen TW, Lee CC, Tang P *et al*: **Genetic Indicators of Drug Resistance in the Highly Repetitive Genome of *Trichomonas vaginalis*.** *Genome Biol Evol* 2017, **9**(6):1658-1672.
 24. Tsai KW, Leung CM, Lo YH, Chen TW, Chan WC, Yu SY, Tu YT, Lam HC, Li SC, Ger LP *et al*: **Arm Selection Preference of MicroRNA-193a Varies in Breast Cancer.** *Sci Rep* 2016, **6**:28176.
 25. Gan RC*, Chen TW*, Wu TH, Huang PJ, Lee CC, Yeh YM, Chiu CH, Huang HD, Tang P: **PARRoT- a homology-based strategy to quantify and compare RNA-sequencing from non-model organisms.** *BMC bioinformatics* 2016, **17**(Suppl 19):513.*
 26. Fang YK, Chien KY, Huang KY, Cheng WH, Ku FM, Lin R, Chen TW, Huang PJ, Chiu CH, Tang P: **Responding to a Zoonotic Emergency with Multi-omics Research: Pentatrachomonas hominis Hydrogenosomal Protein Characterization with Use of RNA Sequencing and Proteomics.** *Omics : a journal of integrative biology* 2016, **20**(11):662-669.
 27. Chen YC, Chen TW, Su MC, Chen CJ, Chen KD, Liou CW, Tang P, Wang TY, Chang JC, Wang CC *et al*: **Whole Genome DNA Methylation Analysis of Obstructive Sleep Apnea: IL1R2, NPR2, AR, SP140 Methylation and Clinical Phenotype.** *Sleep* 2016, **39**(4):743-755.
 28. Chang PY, Chen CC, Chang YS, Tsai WS, You JF, Lin GP, Chen TW, Chen JS, Chan EC: **MicroRNA-223 and microRNA-92a in stool and plasma samples act as complementary biomarkers to increase colorectal cancer detection.** *Oncotarget* 2016.
 29. Chen TW, Gan RC, Chang YF, Liao WC, Wu TH, Lee CC, Huang PJ, Lee CY, Chen YY, Chiu CH *et al*: **Is the whole greater than the sum of its parts? De novo assembly strategies for bacterial genomes based on paired-end sequencing.** *BMC genomics* 2015, **16**:648.
 30. Tsai KW, Chang B, Pan CT, Lin WC, Chen TW, Li SC: **Evaluation and application of the strand-specific protocol for next-generation sequencing.** *BioMed research international* 2015, **2015**:182389.
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- in gastric cancer.** *Oncology reports* 2015, **33**(1):485-493.
32. Huang PJ, Lee CC, Tan BC, Yeh YM, Huang KY, Gan RC, Chen TW, Lee CY, Yang ST, Liao CS *et al*: **Vanno: a visualization-aided variant annotation tool.** *Human mutation* 2015, **36**(2):167-174.
33. Huang PJ, Lee CC, Tan BC, Yeh YM, Julie Chu L, Chen TW, Chang KP, Lee CY, Gan RC, Liu H *et al*: **CMPD: cancer mutant proteome database.** *Nucleic acids research* 2015, **43**(Database issue):D849-855.
34. Weng RR, Shu HW, Chin SW, Kao Y, Chen TW, Liao CC, Tsay YG, Ng WV: **OMICS in Ecology: Systems Level Analyses of Halobacterium salinarum Reveal Large-scale Temperature-Mediated Changes and a Requirement of CctA for Thermotolerance.** *Omics : a journal of integrative biology* 2014, **18**(1):65-80.
35. Leung CM, Li SC, Chen TW, Ho MR, Hu LY, Liu WS, Wu TT, Hsu PC, Chang HT, Tsai KW: **Comprehensive microRNA profiling of prostate cancer cells after ionizing radiation treatment.** *Oncology reports* 2014, **31**(3):1067-1078.
36. Leung CM, Chen TW, Li SC, Ho MR, Hu LY, Liu WS, Wu TT, Hsu PC, Chang HT, Tsai KW: **MicroRNA expression profiles in human breast cancer cells after multifraction and single-dose radiation treatment.** *Oncology reports* 2014, **31**(5):2147-2156.
37. Chou LF, Chen TW, Ko YC, Pan MJ, Tian YC, Chiu CH, Tang P, Hung CC, Yang CW: **Potential impact on kidney infection: a whole-genome analysis of Leptospira santarosai serovar Shermani.** *Emerging microbes & infections* 2014, **3**(11):e82.
38. Chen TW, Li HP, Lee CC, Gan RC, Huang PJ, Wu TH, Lee CY, Chang YF, Tang P: **ChIPseek, a web-based analysis tool for ChIP data.** *BMC genomics* 2014, **15**:539.*
39. Huang PJ, Yeh YM, Gan RC, Lee CC, Chen TW, Lee CY, Liu H, Chen SJ, Tang P: **CPAP: Cancer Panel Analysis Pipeline.** *Human mutation* 2013, **34**(10):1340-1346.
40. Chen WS*, Chen TW*, Yang TH, Hu LY, Pan HW, Leung CM, Li SC, Ho MR, Shu CW, Liu PF *et al*: **Co-modulated behavior and effects of differentially expressed miRNA in colorectal cancer.** *BMC genomics* 2013, **14**.
41. Wu TH, Chu LJ, Wang JC, Chen TW, Tien YJ, Lin WC, Ng WV: **Meta-analytical biomarker search of EST expression data reveals three differentially expressed candidates.** *BMC genomics* 2012, **13 Suppl 7**:S12.
42. Chen TW, Gan RR, Wu TH, Lin WC, Tang P: **VIP DB--a viral protein**

- domain usage and distribution database. *Genomics* 2012, **100**(3):149-156.**
43. Chen TW, Gan RC, Wu TH, Huang PJ, Lee CY, Chen YY, Chen CC, Tang P: **FastAnnotator--an efficient transcript annotation web tool. *BMC genomics* 2012, **13 Suppl 7**:S9.**
44. Chen TW, Wu TH, Ng WV, Lin WC: **Interrogation of alternative splicing events in duplicated genes during evolution. *BMC genomics* 2011, **12 Suppl 3**:S16.**
45. Chen TW, Wu TH, Ng WV, Lin WC: **DODO: an efficient orthologous genes assignment tool based on domain architectures. Domain based ortholog detection. *BMC bioinformatics* 2010, **11 Suppl 7**:S6.**