

# CHENGXI (TRACY) TAN

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Research Interest: Expand the dCas9, dCas12 and dCas13 toolbox

## EDUCATION / TRAINING

- 2016-2020 **Ottawa-Shanghai Joint School of Medicine**  
**University of Ottawa**, Ontario, Canada Exchange Student, [\[transcript\]](#)  
Highlighted Course: Psychology; Clinical Rotations: Medical Genetics at Children's Hospital of Eastern Ontario
- 2015-2020 **Shanghai Jiao Tong University School of Medicine, China**  
Joint Program with uOttawa, MBBS expected in 2020  
**Academic Distinction**
- Highlighted Courses: Metabolic Biochemistry, Cell Biology, Biostatistics, Advanced Reproductive Medicine (Grad course)
  - 52 weeks of clerkship rotations as **group leader** at Shanghai Mental Health Center, Shanghai Children's Medical Center and **Shanghai Renji Hospital**

## RELEVANT RESEARCH EXPERIENCE

- 2019-Present Undergraduate Research at **Center for Excellence in Brain Science and Intelligence Technology (CEBSIT)**, Chinese Academy of Science
- Supervisor: [Jie He, Ph.D. \[lab website\]](#)
  - Project 1: Enhancer RNA regulated transcription activation in retinal cell fate determination  
Skills: rt-PCR and in situ hybridization
  - Project 2: Live imaging of nascent RNAs in asymmetric divisions of zebrafish neural progenitor cells  
Tested 4 live imaging systems: ①24xMBSV6-MCP, ②**dCas13b+SgRNA**, ③RNA aptamer (HBC)+pepper, ④tDeg (Pepper RNA-regulated protein destabilization domain)
- 2018-2019 Undergraduate Thesis at **Institute of Embryo-Fetal Original Adult Disease**  
The International Peace Maternity and Child Health Hospital, Shanghai
- Project 1: Molecular mechanisms of cognition anomalies in offspring exposed to adverse intrauterine environment
  - Project 2: Transgenerational (F1 and F2) impact of circadian disruption on the neurodevelopment of mouse offspring (embryo and gamete origin of adult psychiatric disorders)
  - Bioinformatics, cell culture of newborn mouse hippocampal neurons.
- Summer 2018 **University of Nebraska Medical Center (UNMC) Summer Research** Omaha, NE
- Advisors: [Gurudutt Pendyala, Ph.D.](#), Sowmya Yelamanchili, Ph.D.
  - Project 1: *In utero* and post-partum impact of narcotic drugs on the synaptogenesis of newborns rats
  - Project 2: Role of extracellular vesicles in methamphetamine induced neurotoxicity
  - Mass spectrometry, molecular assay, primary neuron culture from rat prefrontal cortices, immunocytochemistry, exosome isolation and marble burying assay.
  - Mentored undergraduate students.

- 2017-2019      **SJTU Undergraduate Research Training Program in Neuroscience**
- Advisor: Weifang Rong, Ph.D., Department of Physiology, SJTU School of Medicine
  - Project: G Protein-coupled Estrogen Receptor GPER1: Its Effect on Pilocarpine Induced Epilepsy.
  - Performed immunohistochemistry and Nissl staining of brain slices.

## FELLOWSHIPS / AWARDS

- 2015-2020      Academic Excellence at SJTU
- 2016/10          Merit Student Award of SJTU **Top 5%**
- 2016/08          US Medical College Admission Test (MCAT)

## PUBLICATIONS (\* represents equal contributions.)

- Ye, T., Tan, C., Wang, H., Bai, W., Zhao, A., Zhu, J. (2020) Role of the hysteroscopy in management of the female recurrent spontaneous abortion and infertility, **Journal of Shanghai Jiaotong University Medical Science** (Under Review)
- Zou, K., Ren, J., Zhang, J., Zhou, C., Luo, S., Tan, C., Lv, P., Sun, X., Sheng, J., Huang, H., Liu, X., Ding, G. (2020) Intergenerational neurocognitive effects of intrauterine hyperglycemia on male offspring, **Science Bulletin** (Under Review)
- Chen, Q.\*, Gui, Y.\*, Hu, W.\*, Tan, C.\*, Wu, M.\*, Gao, P. and Rong, W. Estrogen and Estrogen Receptors: Their Effects on Epilepsy (In Preparation)

## ABSTRACTS / CONFERENCE PRESENTATIONS / POSTER

- Li, Y., Tan, C., and He, J. Identification of Novel Starburst Amacrine Types in Zebrafish Retina, Institute of Neuroscience, **CEBSIT Annual Meeting, Shanghai**, 2019 (Conference Presentation)
- Lee, S., and Tan, C. Transvaginal Natural Orifice Transluminal Endoscopic Surgery (vNOTES) Ovarian Cystectomy. **CA-AMIGO**, 2018 (Conference Abstract)
- Tan, C., Guda, R.S. and Pendyala, G. Oxycodone Dependency and Neurodevelopment, UNMC, Omaha, NE, September, 2018 ([Selected Presenter](#))

## EXTRACURRICULAR ACTIVITIES

- 2019/05      Thesis defense secretary at Renji Hospital, for SJTU Class of 2019
- 2019/04      23<sup>rd</sup> International Federation of Fertility Societies World Congress
- 2018/10      **“Rare Aware”** Rare Disease Innovation Workshop
- Collaborated with news editors and undergraduate students majoring in media from Fudan University
- 2018/07      Forum of Rainbow (Genetic Conference) Boston, MA
- Boston Children’s Hospital and Brigham and Women’s Hospital
- 2015-2020      Clinical electives
- Reproductive genetic counselling sessions, prenatal diagnosis consults and pediatric endocrine, genetic and metabolic clinics
- 2015-2020      Volunteer at Hongkou District Disabled Person’s Federation, Shanghai
- Teach baking skills and Ping-Pong to residents with intellectual disabilities
- 2015-2019      **Editor-in-Chief** for *Murmurs*
- Medical humanities journal jointly run by students from uOttawa and SJTUSM