YUE TONG

+32 494064561 | yue.tong@ulb.be | yue.tong94@gmail.com | https://bagel-yt.github.io
Route de Lennik 808, 1070 Brussels, Belgium

Education

ULB Center for Diabetes Research, Université Libre de Bruxelles — Brussels, Belgium
PhD of Biomedical and Pharmaceutical Science — *Oct. 2020 – Current*

The Second Xiangya Hospital, Central South University — Hunan, Changsha, China
Master of Clinical Medicine: Internal Medicine — *Sep. 2017 – Jun. 2020*

Xiangya School of Medicine, Central South University — Hunan, Changsha, China
Bachelor of Clinical Medicine — *Sep. 2012 – Jun. 2017*

Research Experience

Doctoral Fellow — Sep. 2020 – Present
ULB Center for Diabetes Research, Université Libre de Bruxelles — *Brussels, Belgium*
FRIA fellowship, F.R.S - FNRS — *Brussels, Belgium*

- **Modeling rare and common forms of diabetes using gene editing and organoids technologies**
  Developed and coordinated 6 disease-specific models using human induced pluripotent stem cell (iPSC)-derived islets, leveraging clinical and omics-driven data. Advanced the understanding of how genetic variants contribute to disease pathogenesis, focusing on the roles of *ER-Golgi stress*, *autoimmunity*, and *gluco-lipotoxicity*.

  Keywords: iPSC; organoids; CRISPR/Cas; monogenic and polygenic diseases; clinical trials; GWAS; eQTL

- **Modeling nutrient metabolism in developing pancreatic beta cells: cross-species insights**
  Led the human model segment in a collaborative project investigating iron metabolism in pancreatic beta cells. Conducted cross-species cellular and molecular investigations from iron-level-tethered human and mouse beta cell models to explore iron transportation impact beta cell development, function, and survival.

  Keywords: cross-species model; cell/organ development; nutrient regulation; transcriptomics

Graduate Research Fellow — Sep. 2017 – Jun. 2020
The Second Xiangya Hospital, Central South University — *Hunan, Changsha, China*

- **Biomarkers in classifying and predicting diabetes**
  Conceptualized studies in biomarker-based disease classification through clinical observations and literature review. Oversaw the recruitment and follow-up of 1000+ participants in 3 clinical trials ensuring standardization of protocols. Processed comprehensive clinical and laboratory datasets to identify biomarker patterns and validate clinical relevance.

  Keywords: biomarkers; cross-sectional studies; cohort studies; disease subtypes

Clinical Experience

Junior Clinical Fellow — Sep. 2015 – Jun. 2020
The Second Xiangya Hospital, Central South University — *Hunan, Changsha, China*
Xiangya Hospital, Central South University
The 1st Hospital of Changsha

- **Certified Physician Credentials and Medical Licensure (P. R. China)**
  Set a solid foundation in diagnostics, patient care, and multidisciplinary teamwork, while addressing diverse clinical challenges. Delivered comprehensive diabetes management with a focus on treatment planning, early diagnosis, and lifestyle counseling. Demonstrated expertise in laboratory methods and diagnostic techniques, ensuring high standards in clinical practice.

  Keywords: Case studies; patient data analysis; multidisciplinary collaboration

Publications

1. **Tong Y**, Becker M, Schierloh U, et al. Homozygous and heeterozygous *INS* mutations cause divergent clinical and iPSC-derived beta-Cell phenotypes. (manuscript in preparation)
2. Van Mulders A, Willems L, Coenen S; et al., **Tong Y**, et al. A critical role for iron import through the transferrin receptor in developing beta-cells. (manuscript in preparation)
3. Mandla R, Lorenz K, Yin X, et al., **Tong Y**, et al. Multi-omics characterization of type 2 diabetes associated genetic variation. medRxiv. 2024.07.15.24310282.
4. Bourgeois S; Van Mulders A; Heremans Y; et al., **Tong Y**, et al. ER stress relief drives ß-cell proliferation. (submitted to Diabetologia)
5. Arunagiri A, Alam M, Haataja L, et al., **Yue Tong**, et al. Proinsulin folding and trafficking defects trigger a common pathological disturbance of endoplasmic reticulum homeostasis. Protein Science. 2024;33(4):e4949.
6. **Tong Y**, Yang L, Shao F, et al. Distinct secretion pattern of serum proinsulin in different types of diabetes. Ann Transl Med. 2020;8(7):452.
7. Xing Y, Lin Q, **Tong Y**, et al. Abnormal Neutrophil Transcriptional Signature May Predict Newly Diagnosed Latent Autoimmune Diabetes in Adults of South China. Front Endocrinol (Lausanne). 2020;11:581902.
8. Hu J, Liu Z, **Tong Y**, et al. Fibroblast Growth Factor 19 Levels Predict Subclinical Atherosclerosis in Men With Type 2 Diabetes. Front Endocrinol (Lausanne). 2020;11:282.

Awards and Scholarships

ISPAD Standard Travel Grant | *International Society for Pediatric and Adolescent Diabetes (ISPAD)*	Oct. 2023
SFD Travel grants for research meetings in diabetes | *French-Speaking Diabetes Society (SFD)*	Oct. 2023
FRIA Doctoral Fellowship | *F.R.S.-FNRS*	Oct. 2021
First-prize Academic Scholarship | *Central South University*	Sep. 2017
Third-prize School Scholarship | *Central South University*	Sep. 2013

Conference Talk and Poster

2024 Homozygous and heterozygous *INS* mutations cause divergent clinical and iPSC-derived beta-cell phenotypes, *The 9th Meeting of Study Group on Genetics of Diabetes (SGGD)*, Exeter, UK | Talk

2023 Discovery of a new treatment for a novel form of rare diabetes caused by an insulin gene mutation using patients' iPSC-derived beta-cells, *The European Association for the Study of Diabetes (EASD) 2024 Annual Meeting & The International Society for Pediatric and Adolescent Diabetes (ISPAD) 2024 Annual Meeting*, Hamburg, Germany & Rotterdam, the Netherlands | Talks

2023 Bedside-inspired diabetes modeling: learn from monogenic diabetes to understand the pathogenic mechanisms of T1D, *19th Immunology of Diabetes Society (IDS) Congress*, Paris, France | Invited talk

2020 Distinct secretion pattern of serum proinsulin in different types of diabetes, *15th Xiangya International Diabetes Immunology Forum & 17th Immunology of Diabetes Society (IDS) Congress*, Beijing, China | Poster

Skills

Cell biology: stem cell technologies, cell culture, cell engineering, transfection, RNA-interference, cell&tissue imaging, flow cytometry, magnetic-activated cell sorting, perifusion assay, Seahorse assay
Molecular biology: ELISA, Western Blotting, BCA, PCR, RT/qPCR, CRISPR/Cas genome editing
Omics: transcriptome study, epigenome-wide association study, cross-species study
Clinical Practice: Certificate of Physician Credentials and Certificate of Medical Licensure (China)
Coding language: R, Python, LaTeX
Softwares: SPSS, Graphpad Prism, CellProfiler, ImageJ, Geneious Prime, SnapGene
Language: English (professional proficiency); Chinese-Mandarin (native); Chinese-Cantonese (conversational proficiency); French (conversational proficiency)