Le Tong

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A highly skilled scientist with a strong background in oncology, stem cell biology, and pharmacy, seeking to leverage extensive research experience in **tumor immunology**, **stem cell research**, **organoid models, and pharmacy** for a challenging role in the pharmaceutical industry.

Education and Research Experience

Medical Science PhD at Karolinska Institutet, Department of Oncology-Pathology, Andreas Lundqvist / Rolf Kiessling Lab (October 2019 - April 2024)

• Focus: Tumor Immunology, Cancer Immunotherapy, Biomarker Discovery, Patient-derived Organoids, Drug Screening

- PhD thesis title: "NK cells in renal cell carcinoma: toward biomarker discovery and improved immunotherapeutic strategies" [PhD Thesis link]
- Led research on natural killer cells, tumor-infiltrating lymphocytes, and regulatory T cells in various cancer types including renal, sarcoma, breast, uveal melanoma, and colorectal.
- Developed patient-derived organoid models to study cancer metastasis and drug response, with significant contributions to **liver organoid models for metastatic uveal melanoma**, and **kidney organoid models for NK cell infiltration and killing research**.
- Collaborated with clinicians and multidisciplinary teams to advance research in cancer immunotherapy, contributing to several high-impact publications.
- Supervised a master's student on **drug screening using patient-derived colorectal organoids**.
- Delivered oral and poster presentations at webinars and international conferences.

Master of Science (MSC) at Peking University, State Key Laboratory of Natural and Biomimetic Drugs, School of Pharmaceutical Sciences (September 2016 - July 2019)

• Focus: Chemical Biology, Stem Cell Biology, Transdifferentiation, Organoids, **iPSCs Reprogramming**, Molecular Cloning, Gene Editing

- Pioneered the reprogramming of patient cells into iPSCs for disease modeling and gene editing, with applications in Duchenne Muscular Dystrophy.
- Optimizing **eRF1 to enable the readthrough** of three distinct nonsense mutations with unnatural amino acid systems in mammalian cells.
- **Cultured human organoids (lung, brain) for antiviral drug screening**, contributing to research on influenza and Zika virus infections.
- Reprogramming human stomach organoids to make insulin-secreting β cells.
- Excellent Scientific Research Award, Peking University Health Science Center (2018-2019)
- First prize of National Academic Scholarship (2016-2019, three times)

Bachelor of Science (BSC) at Nanjing University of Chinese Medicine, School of Pharmaceutical Sciences, Haitao Yu Lab (September 2012 - July 2016)

- Focus: Bio-pharmacy, **Organic Chemistry**, Pharmaceutics, Pharmacology
    - Total synthesis of sparstolonin B

Professional Experience

- Postdoctoral fellow, Karolinska Institutet, 2024.05 to present
- Lecturer, Tumor Biology and Oncology, DIS Stockholm (2023-2024)
- Teaching Assistant, Organic Chemistry, Peking University (2018)
- Teaching Assistant, Pharmaceutical Experiments, Peking University (2018)

Grants as project leader

- Robert Lundberg Memorial Foundation 2023, 50,000 SEK
- KI Research Foundation Grants 2024-2025, 156, 700 SEK

Selected publications (Full publication list available on google scholar)

1. **Tong L**, Jiménez-Cortegana C, Tay AH, et al. (2022) "NK cells and solid tumors: therapeutic potential and persisting obstacles." *Molecular Cancer*. [Google Scholar]

2. **Tong L**, Kremer V, Neo SY, et al. (2023) "Renal cell carcinoma escapes NK cell-mediated immune surveillance through the downregulation of DNAM-1. " *Cancer Communications*. [Google Scholar]

3. Neo SY, **Tong L**, Chong J, et al. (2024) "Tumor-associated NK cells drive MDSC-mediated tumor immune tolerance via the IL-6/STAT3 Axis." *Science Translational Medicine*. [Google Scholar]

4. **Tong L#**, Cui W, Zhang B, et al. (2024) "Patient derived organoids in precision cancer medicine. " *Med*. [Google Scholar]

5. Chen Z*, **Tong L***, Neo SY, et al: CD25bright NK cells display superior function and metabolic activity under regulatory T cell-mediated suppression. *OncoImmunology* 2023. (co-first)

Skills & Techniques

- Cell Culture & Organoid Models: Expertise in generating and culturing patient-derived organoids, iPSCs, and primary cell cultures.
- Gene Editing: Proficient in TALEN and other genome editing technologies for stem cells.
- Advanced Imaging & Assays: Experience with flow cytometry, microinjection, confocal microscopy, high-content imaging, and real-time imaging assays.
- Molecular Biology: Skilled in molecular cloning, Mito-CHIP, RT-qPCR, SDS PAGE, immunocytochemistry, reporter assay, and genetic code expansion techniques.
- Chemistry background: organic synthesis, drug screening.