

# Xin Tang

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## SUMMARY

Biomedical scientist with Ph.D. in Biomedical Engineering and 6+ years of postdoctoral research at USC Keck School of Medicine. Experienced in **molecular biology, gene editing (CRISPR/Cas9), and translational wound-healing and cancer research**, with additional expertise in **computational analysis and image processing** for biomedical data.

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## EDUCATION

**Master of Software Engineering (MSWE)** | University of California, Irvine | Expected Dec 2025

**Ph.D. in Biomedical Engineering** | Tongji University, Shanghai, China | July 2016

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## TECHNICAL SKILLS

- **Molecular Biology:** CRISPR/Cas9, gene cloning, western blot, transfection
- **Cell & Animal Models:** Primary and stem cell culture, knockout mouse generation
- **Protein & Imaging:** Purification, exosome isolation, fluorescence/confocal microscopy, ELISA, IP
- **Computational Tools:** Python, C++, OpenCV, Java, ImageJ, C#

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## SELECTED PROJECTS

**Hypertension Educational Tool** | UCI | *Winner – American Heart Association (AHA) Educational Tools Contest 2025* | React, Firebase | [Portfolio](#)

- Built interactive medical platform for clinicians, real-time sync and offline support.

**Automated Cell Type Annotation Platform** | UCI | 2025 | PyTorch, FastAPI, Postgres, Docker | [Portfolio](#)

- Designed a full-stack ML web app for single-cell RNA-seq annotation with 10× faster GPU-based prediction.
- Deployed containerized REST API using Docker Compose for scalable biomedical data analysis.

**Automated Cell Migration Analysis** | USC Keck School of Medicine | C#, OpenCV

- Automated wound-healing quantification; reduced analysis time by 70%, improved accuracy 50%.

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## RESEARCH EXPERIENCE

**2017-2023 | Research Associate | Dermatology**, USC Keck School of Medicine, Los Angeles

- Created CRISPR/Cas9 Hsp90α knockout mice revealing roles in spermatogenesis and wound repair (2 first-author papers).
- Performed molecular and cell assays (PCR, western blot, immunostaining) to study Hsp90α/HIF-1α pathway.
- Identified extracellular Hsp90α on tumor exosomes, uncovering new signaling mechanisms in cancer.

**2012-2016 | Graduate Researcher** | Medical School, Tongji University, Shanghai

- Synthesized polymers for gene delivery with high efficiency and low cytotoxicity.
- Generated TRAIL-expressing stem cells exhibiting tumor homing and anti-tumor activity.

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## SELECTED PUBLICATIONS

Tang X, et al. *Cells*, 2024 – Secretory autophagy pathway supplying eHsp90α for wound healing.

Tang X, et al. *Cancer Gene Ther.*, 2021 – Hsp90α stabilizes HIF-1α in spermatogenesis and tumorigenesis.

Tang X, et al. *Acta Biomaterialia.*, 2016 – Non-viral gene delivery using multifunctional polyurethanes.