Biographical Sketch

NAME SHANG SU		POSITION TITLE POSTDOCTORAL FELLOW	
EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE (IF APPLICABLE)	YEAR(S)	FIELD OF STUDY
Tsinghua University, Beijing, China	B.S.	2007-2011	Biology
Tsinghua University, Beijing, China	Ph. D.	2011-2019	Cell Biology/Cancer Biology
Van Andel Institute, Grand Rapids, MI	Post-doc	2019-2020	Cancer Biology
The University of Toledo, Toledo, OH	Post-doc	2020-2021	Cancer Biology

RESEARCH AND PROFESSIONAL EXPERIENCE:

Positions and Employment

2017-2018 Senior Scientific Consultant/Project Managing Scientist, Abmart Biotech, Shanghai, China
2019-2020 Postdoctoral research, Van Andel Institute, Grand Rapids, MI
2020- date, Postdoctoral research, the University of Toledo, Toledo, OH

Other experiences

Scientific community services

2021 – date, Reviewer for PeerJ. 1 article reviewed got published.
2021 – date, Reviewer for Chinese Journal of Cell Biology

Professional Memberships

American Association for Cancer Research, Associate Member since 2019
American Society of Biochemistry and Molecular Biology, Affiliate Member since 2019
Society for Basic Urologic Research, In-training Member since 2020
Association of Chinese Americans in Cancer Research, Member since 2021

Invited talks and presentations

2019, Oral Presentation at CSHL symposium "Biology of Cancer: microenvironment & metastasis". Title: *Enzalutamide down-regulation of TGFBR2 in osteoblasts contributes to resistance in prostate cancer bone metastasis*.
2021, Invited speaker at Interdisciplinary Science Seminar at Center of Mathematical Sciences and Applications, Harvard University. Title: *In silico design and evaluation of PROTAC-based protein degrader–Introductory case studies.*

RESEARCH AND PROFESSIONAL EXPERIENCE (CONTINUED).

Teaching experience

2019 – 2020, Group Leader for High School Journal Club in Van Andel Institute.
2019 – 2020, Instructor for Internal Seminar Course in Graduate School of Van Andel Institute.

Awards and Honors

2011, Level I Excellent Graduates of Tsinghua University (TOP 2% among 3000 graduates)
2014, Tsinghua Scholarship for Graduate Student, "WU Zhengyi 3-generation"Memorial Award
2016, Excellent PhD student list in School of Life Sciences, Tsinghua University
2021, Free Registration Award for Keystone Symposia's eSymposia on Tumor Metabolism and the Microenvironment
2021, Free Registration Award for Keystone Symposia's eSymposia on Targeted Protein Degradation: From Small Molecules to Complex Organelles

Publications

I developed my expertise in the field of targeted protein degradation under the supervision of Dr. Yu Rao and Dr. Wei Wu. Dr. Rao trained me how to design and characterize a proteolysis-targeting chimera (PROTAC) and Dr. Wu trained me to investigate the underlying biological mechanism of this potent tool. Together, we developed and published three categories of PROTAC degraders, and also developed a fluorescence-based tool to visualize the degradation in real time.

1. **Su S**[#], Yang Z[#], Gao H, Yang H, Zhu S, An Z, Wang J, Li Q, Chandarlapaty S, Deng H, Wu W and Rao Y. Potent and Preferential Degradation of CDK6 via Proteolysis Targeting Chimera. Journal of Medicinal Chemistry, 2019, 62 (16), 7575-7582. (#, co-first author)
2. An Z, Lv W, **Su S**, Wu W and Rao Y. Developing potent PROTACs tools for selective degradation of HDAC6 protein. Protein & Cell, 2019, 10(8): 606-609.
3. Zhao Q, Lan T, **Su S**, Rao Y. Induction of Apoptosis in MDA-MB-231 Breast Cancer Cells by a PARP1-Targeting PROTAC Small Molecule. Chemical Communications, 2019, 55 (3), 369-372.

I began to investigate the mechanisms of prostate cancer bone metastasis since I joined Dr. Xiaohong Li's group. We discovered that enzalutamide could trigger the degradation of TGFBR2 in osteoblasts which in turn led to the resistance of prostate cancer bone metastases to enzalutamide. The enzalutamide-induced TGFBR2 loss was fulfilled by endocytosis-mediated by another membrane protein PTH1R and PTH1R blockade could rescue the TGFBR2 decrease.

4. Su S[#], Cao J[#], Meng X[#], Liu R, Vander Ark A, Woodford E, Zhang R, Stiver I, Zhang X, Madaj Z, Bowman M, Wu Y, Chen B, Yu H, Li X. Enzalutamide-induced PTH1R-mediated TGFBR2 decrease in osteoblasts contributes to resistance in prostate cancer bone metastases. BioRxiv, 2019. (#, co-first author)
5. Su S, Li X. Dive into Single, Seek out Multiple: Probing Cancer Metastases via Single-Cell Sequencing and Imaging Techniques. Cancers, 2021, 13, 1067.

I also got trained in the signal transduction studies on cell cycle and Wnt signaling.

6. Ding Y[#], **Su S**[#], Tang W, Zhang X, Chen S, Zhu G, Liang J, Wei W, Guo Y, Liu L, Chen Y-G and Wu W. Enrichment of the β-catenin–TCF complex at the S and G2 phases ensures cell survival and cell cycle progression. Journal of Cell Science, 2014, 127: 4833-4845. (#, co-first author)
7. Su S, Wu W. Regulation of target gene transcription by Wnt/β-catenin signaling. SCIENTIA SINICA Vitae, 2014, 44: 1029–1042. (Invited review in Chinese)