

Stanford



Zijie Sun

Professor of Urology, Emeritus

Bio

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Urology
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Stanford Cancer Institute

HONORS AND AWARDS

- Best Asian American Faculty Award, Stanford University (2004)
- The FIRST Award, The National Institute of Health (1997-2002)
- Edward Livingston Trudeau Scholar, the American Lung Association (1994-1996)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Transcriptional control is a key step in the regulation of eukaryotic gene expression. Our lab focuses on understanding the molecular mechanism of transcription factors that govern the transformation of normal mammalian cells to a neoplastic state. We are especially interested in the biological roles of steroid hormone receptors and their co-regulators in development and oncogenesis. We use targeted conditional and inducible mouse models and other cellular and molecular approaches to uncover gene-expression and genomic and epigenetic alteration that occur during tumor development and progression and to functionally analyze the biological significance of these changes in oncogenic transformation. Our central goals are to identify the factors and signaling pathways that promote prostate cancer initiation and progression to castration resistant prostate cancer (CRPC) in tumor initiating cells in order to develop novel therapeutics to target these tumor cells.

CLINICAL TRIALS

- Identification and Characterization of Novel Proteins and Genes in Head and Neck Cancer, Recruiting
- In Vitro Activation of Dormant Follicles for Patients With Primary Ovarian Insufficiency, Not Recruiting
- Phase Ib/II Study of MEDI4736 Evaluated in Different Combinations in Metastatic Pancreatic Ductal Carcinoma, Not Recruiting
- Radiation Therapy in Treating Patients With Extensive Stage Small Cell Lung Cancer, Not Recruiting

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Cancer Biology (Phd Program)

Publications

PUBLICATIONS

- **Loss of the tumor suppressor, Tp53, enhances the androgen receptor-mediated oncogenic transformation and tumor development in the mouse prostate.** *Oncogene*
He, Y., Johnson, D. T., Yang, J. S., Wu, H., You, S., Yoon, J., Lee, D., Kim, W. K., Aldahl, J., Le, V., Hooker, E., Yu, E., Geradts, et al
2019
- **A pivotal role of androgen signaling in Notch-responsive cells in prostate development, maturation, and regeneration** *DIFFERENTIATION*
Aldahl, J., Yu, E., He, Y., Hooker, E., Wong, M., Le, V., Olson, A., Lee, D., Kim, W., Murtaugh, C. L., Cunha, G. R., Sun, Z.
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- **Androgen signaling is essential for development of prostate cancer initiated from prostatic basal cells** *ONCOGENE*
He, Y., Hooker, E., Yu, E., Cunha, G. R., Liao, L., Xu, J., Earl, A., Wu, H., Gonzalgo, M. L., Sun, Z.
2019; 38 (13): 2337–50
- **Deletion of the p16INK4a tumor suppressor and expression of the androgen receptor induce sarcomatoid carcinomas with signet ring cells in the mouse prostate.** *PloS one*
Lee, D. H., Yu, E. J., Aldahl, J., Yang, J., He, Y., Hooker, E., Le, V., Mi, J., Olson, A., Wu, H., Geradts, J., Xiao, G. Q., Gonzalgo, et al
2019; 14 (1): e0211153
- **ZMIZ1 Variants Cause a Syndromic Neurodevelopmental Disorder.** *American journal of human genetics*
Carapito, R., Ivanova, E. L., Morlon, A., Meng, L., Molitor, A., Erdmann, E., Kieffer, B., Pichot, A., Naegely, L., Kolmer, A., Paul, N., Hanauer, A., Tran Mau-Them, et al
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- **Activation of hepatocyte growth factor/MET signaling initiates oncogenic transformation and enhances tumor aggressiveness in the murine prostate** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Mi, J., Hooker, E., Balog, S., Zeng, H., Johnson, D. T., He, Y., Yu, E., Wu, H., Vien Le, Lee, D., Aldahl, J., Gonzalgo, M. L., Sun, Z.
2018; 293 (52): 20123–36
- **An Indispensable Role of Androgen Receptor in Wnt Responsive Cells During Prostate Development, Maturation, and Regeneration** *STEM CELLS*
He, Y., Hooker, E., Yu, E., Wu, H., Cunha, G. R., Sun, Z.
2018; 36 (6): 891–902
- **LZTS2 and PTEN collaboratively regulate ss-catenin in prostatic tumorigenesis** *PLOS ONE*
Yu, E., Hooker, E., Johnson, D. T., Kwak, M. K., Zou, K., Luong, R., He, Y., Sun, Z.
2017; 12 (3)
- **YXQN Reduces Alzheimer's Disease-Like Pathology and Cognitive Decline in APPswePS1dE9 Transgenic Mice.** *Frontiers in aging neuroscience*
Wang, X., Song, R., Lu, W., Liu, Z., Wang, L., Zhu, X., Liu, Y., Sun, Z., Li, J., Li, X.
2017; 9: 157
- **Androgen signaling is a confounding factor for beta-catenin-mediated prostate tumorigenesis** *ONCOGENE*
Lee, S. H., Luong, R., Johnson, D. T., Cunha, G. R., Rivina, L., Gonzalgo, M. L., Sun, Z.
2016; 35 (6): 702-714
- **Conditional Expression of the Androgen Receptor Increases Susceptibility of Bladder Cancer in Mice** *PLOS ONE*
Johnson, D. T., Hooker, E., Luong, R., Yu, E., He, Y., Gonzalgo, M. L., Sun, Z.
2016; 11 (2)
- **Wnt/beta-Catenin-Responsive Cells in Prostatic Development and Regeneration** *STEM CELLS*
Lee, S. H., Johnson, D. T., Luong, R., Yu, E. J., Cunha, G. R., Nusse, R., Sun, Z.
2015; 33 (11): 3356-3367
- **Crosstalking between Androgen and PI3K/AKT Signaling Pathways in Prostate Cancer Cells.** *journal of biological chemistry*
Lee, S. H., Johnson, D., Luong, R., Sun, Z.
2015; 290 (5): 2759-2768

- **[Impact of AR-V7 expression on overall survival for patients with metastatic prostate cancer].** *Zhonghua wai ke za zhi [Chinese journal of surgery]*
Qu, Y., Ye, D., Dai, B., Kong, Y., Chang, K., Gu, C., Sun, Z., Zhang, H., Zhu, Y., Shi, G.
2014; 52 (8): 622-626
- **Identification of a Novel Role of ZMIZ2 Protein in Regulating the Activity of the Wnt/ β -Catenin Signaling Pathway.** *journal of biological chemistry*
Lee, S. H., Zhu, C., Peng, Y., Johnson, D. T., Lehmann, L., Sun, Z.
2013; 288 (50): 35913-35924
- **Deletion of Leucine Zipper Tumor Suppressor 2 (Lzts2) Increases Susceptibility to Tumor Development** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Johnson, D. T., Luong, R., Lee, S. H., Peng, Y., Shaltouki, A., Lee, J. T., Lin, D., Wang, Y., Sun, Z.
2013; 288 (6): 3727-3738
- **Conditional Deletion of the Pten Gene in the Mouse Prostate Induces Prostatic Intraepithelial Neoplasms at Early Ages but a Slow Progression to Prostate Tumors** *PLOS ONE*
Kwak, M. K., Johnson, D. T., Zhu, C., Lee, S. H., Ye, D., Luong, R., Sun, Z.
2013; 8 (1)
- **The Leucine Zipper Putative Tumor Suppressor 2 Protein LZTS2 Regulates Kidney Development** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Peng, Y., Clark, C., Luong, R., Tu, W. H., Lee, J., Johnson, D. T., Das, A., Carroll, T. J., Sun, Z.
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- **The beta-Catenin Binding Protein ICAT Modulates Androgen Receptor Activity** *MOLECULAR ENDOCRINOLOGY*
Zhuo, M., Zhu, C., Sun, J., Weis, W. I., Sun, Z.
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- **Conditional Expression of the Androgen Receptor Induces Oncogenic Transformation of the Mouse Prostate** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Zhu, C., Luong, R., Zhuo, M., Johnson, D. T., McKenney, J. K., Cunha, G. R., Sun, Z.
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- **ZMIZ1 Preferably Enhances the Transcriptional Activity of Androgen Receptor with Short Polyglutamine Tract** *PLOS ONE*
Li, X., Zhu, C., Tu, W. H., Yang, N., Qin, H., Sun, Z.
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- **Efficacy of c-Met inhibitor for advanced prostate cancer** *BMC CANCER*
Tu, W. H., Zhu, C., Clark, C., Christensen, J. G., Sun, Z.
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Wang, H., Li, J., Gao, Y., Xu, Y., Pan, Y., Tsuji, I., Sun, Z., Li, X.
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- **A Novel Role for Protein Inhibitor of Activated STAT (PIAS) Proteins in Modulating the Activity of Zimp7, a Novel PIAS-like Protein, in Androgen Receptor-mediated Transcription** *JOURNAL OF BIOLOGICAL CHEMISTRY*
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