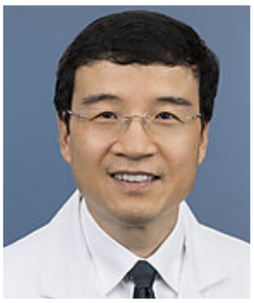


Allen Gao, M.D., Ph.D.

Research/Academic Interests

Dr. Gao's research interests focus on understanding molecular mechanisms associated with progression of castration-resistant prostate cancer and metastasis to bone with the goal of identification of potential therapeutic targets for prostate cancer. Particular emphasis includes microRNAs, aberrant androgen receptor activation by cytokines and transcriptional factors such as Stat3 and NF-kB, targeting cell signaling pathways (AR, IL-6 and Stat3), and mechanisms of drug resistance in prostate cancer.

Dr. Gao's lab was among the first to find that selenium regulates androgen signaling and that IL-4 activates the androgen receptor mediated by NF-B and Stat6, made the discovery that IL-6 signaling in prostate cancer involves Stat3, defined Stat3 and NF-B interactions in prostate cancer, discovered niclosamide as a novel inhibitor of androgen receptor variants (AR-V7), and identified several novel resistance mechanisms to enzalutamide/abiraterone/docetaxel including p52, IL-6/Stat3, intracrine androgens/AKR1C3, and ABCB1.

Dr. Gao has published over 100 peer-reviewed articles in the area of prostate cancer. His research findings such as the discovery of niclosamide as a novel inhibitor of androgen receptor variants have translated into several clinical trials (NCT02807805, NCT03123978) that test the combination treatments with current therapies to advanced resistant prostate cancer. Another recent discovery of indomethacin as an inhibitor of AKR1C3 and synergizing enzalutamide has also translated into clinical trial (NCT02935205) to test the combination treatments with current therapies to advanced resistant prostate cancer.

Dr. Gao has served numerous NIH, NCI, DOD and VA merits, and American Cancer Society (ACS) review panels including SPORE and PPG study sections.

Title

Professor
Ralph de Vere White Professor and Director of Urologic Research
Co-Leader, Prostate Cancer Program

Specialty

Cancer, Urologic Oncology, Urology

Department

Urologic Surgery

Division

Urology

Clinic

Urology Clinic

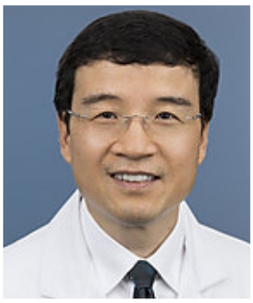
Center/Program Affiliation

UC Davis Comprehensive Cancer Center

Address/Phone

Research III, Research Building III, 4645 Second Ave Sacramento, CA 95817

UCDAVIS HEALTH



Allen Gao, M.D., Ph.D.

Additional Phone

Phone: 916-734-8718

Fax: 916-734-8714

Education

M.D., Sichuan Medical College, Chengdu, Sichuan, 1985

Ph.D., MD Anderson Cancer Center, University of Texas, Houston, 1995

Fellowships

John Hopkins University School of Medicine, Baltimore, Maryland, 1998

Professional Memberships

2018-2019 President, Society of Basic Urologic Research

American Association for Cancer Research

American Society of Clinical Oncology

American Urological Association

Editorial Board, The Prostate, American J. of Pathology

European Urological Association

Society of Basic Urologic Research

Honors and Awards

Ralph deVere White Endowed Professor of Urologic Research, University of California, Davis, 2008

Research Career Scientist, VA Northern California Health Care System, Sacramento, CA, 2015

Select Recent Publications

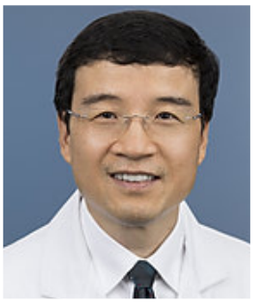
Lombard AP, Liu L, Cucchiara V, Liu C, Armstrong CM, Zhao R, Yang JC, Lou W, Evans CP, Gao AC. Intra versus inter cross-resistance determines treatment sequence between taxane and AR-targeting therapies in advanced prostate cancer. Mol Cancer Ther. 17(10):2197-2205, 2018.

Liu C, Lou W, Yang JC, Liu L, Armstrong CM, Lombard AP, Zhao R, Noel ODV, Tepper CG, Chen HW, Dall'Era M, Evans CP, Gao AC. Proteostasis by STUB1/HSP70 complex controls sensitivity to androgen receptor targeted therapy in advanced prostate cancer. Nat Commun. 9(1):4700, 2018.

Liu C, Lou W, Zhu Y, Yang JC, Nadiminty N, Gaikwad NW, Evans CP, Gao AC. Intracrine androgens and AKR1C3 activation confer resistance to enzalutamide in prostate cancer. Can Res. 75(7):1413-22, 2015.

Lombard AP, Liu C, Armstrong CM, Cucchiara V, Gu X, Lou W, Evans CP, Gao AC. ABCB1 mediates cabazitxel-docetaxel cross-resistance in advanced prostate cancer. Mol Cancer Ther. 16 (10):2257-2266, 2017.

UCDAVIS HEALTH



Allen Gao, M.D., Ph.D.

Liu C, Armstrong C, Lou W, Lombard A, Evans CP, and Gao AC. Inhibition of AKR1C3 activation overcomes resistance to abiraterone in advanced prostate cancer. Mol Cancer Ther. 16(1):35-44, 2017.

Nadiminty N, Tummala R, Liu C, Lou W, Evans CP, Gao AC. NF-kB/p52:c-myc:hnRNPA1 pathway regulates expression of androgen receptor splice variants and enzalutamide sensitivity in prostate cancer. Mol Cancer Ther. 14:1884-95, 2015.

Zhu Y, Liu C, Armstrong C, Lou W, Sandher A, Gao AC. Antiandrogens inhibit ABCB1 efflux and ATPase activity and reverse docetaxel resistance in advanced prostate cancer. Clin Can Res. 21: 4133-42, 2015.

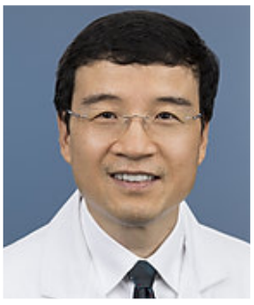
Liu C, Lou W, Zhu Y, Nadiminty N, Schwartz C, Evans CP, Gao AC. Niclosamide inhibits androgen receptor variants expression and overcomes enzalutamide resistance in castration resistant prostate cancer. Clin Can Res. 20:3198-210, 2014.

Zhu YZ, Liu, C.F., Nadiminty, N., Lou, W., Tummala, R., Evans, C.P., Gao, A. C. Inhibition of ABCB1 expression overcomes acquired docetaxel resistance in prostate cancer. Mol Cancer Ther 2013 12 (9): 1829-36.

Zhu YZ, Liu, C.F., Nadiminty, N., Lou, W., Tummala, R., Evans, C.P., Gao, A. C. Inhibition of ABCB1 expression overcomes acquired docetaxel resistance in prostate cancer. Mol Cancer Ther 2013 12 (9): 1829-36.

Nadiminty N, Tummala R, Lou W, Zhu YZ, Evans CP, Gao AC. NF-kB2/p52 induces resistance to enzalutamide in prostate cancer: role of androgen receptor and its variants. Molecular Cancer Ther 2013 12 (8): 1629-37.

UCDAVIS HEALTH



Allen Gao, M.D., Ph.D.

UCDAVIS HEALTH