



Alexander David Borowsky, M.D.

Clinical Interests	Dr. Alexander Borowsky's clinical interests include: Breast Diagnostics, Ductal Carcinoma in situ (DCIS), Molecular Cancer Diagnosis, Breast Health/Risk Assessment, Genomics and Prostate Cancer.
Research/Academic Interests	Dr. Borowsky's research interests include: Pathology of mouse models of cancer, modeling pre-cancer to investigate mechanisms of neoplastic progression.
Title	Professor Director of Molecular Diagnostics
Specialty	Cancer , Pathology and Laboratory Medicine, Pathology - Anatomic, Pathology - Molecular
Department	Pathology and Laboratory Medicine
Division	Pathology
Center/Program Affiliation	UC Davis Comprehensive Cancer Center
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Email	adborowsky@ucdavis.edu
Education	M.D., Vanderbilt University School of Medicine, Nashville TN 1994 B.A., Physics, Pomona College, Claremont CA 1989
Residency	Pathology, Vanderbilt Medical Center, Nashville TN 1994-1996
Fellowships	Molecular Oncology (Research), Harvard Medical School, Boston MA 1998-2001 Pathology/Cancer, Harvard Medical School, Brigham and Women's Hospital, Boston MA 1998-2001 Pathology/Breast Pathology, Vanderbilt Medical Center, Nashville TN 1996-1997
Board Certifications	American Board of Pathology, Anatomic Pathology Medical Board of California
Professional Memberships	American Association for the Advancement of Science American Association of Cancer Research



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Honors and Awards

College of American Pathologists

United States and Canadian Academy of Pathology

Selection Committee for the AACR Distinguished Lecture in Breast Cancer Research Annual Award, 2018, 2019, 2020, 2021

Thriving Pink Community Service Award, 2020

Josie King Hero Award, Awarded to the Molecular Diagnostics Laboratory for outstanding service in bringing up COVID testing, 2020

Prostate Cancer Foundation Movember Challenge Award, HongWu Chen (Project Lead): Targeting RORg with Novel Therapeutics for Lethal Prostate Cancer, 2016

Dean's Team Award for Excellence in Research, UC Davis School of Medicine, 2015

Select Recent Publications

Huilgol YS, Keane H, Shieh Y, Hiatt RA, Tice JA, Madlensky L, Sabacan L, Fiscalini AS, Ziv E, Acerbi I, Che M, Anton-Culver H, Borowsky AD, Hunt S, Naeim A, Parker BA, van 't Veer LJ; Athena Breast Health Network Investigators and Advocate Partners, Esserman LJ. Elevated risk thresholds predict endocrine risk-reducing medication use in the Athena screening registry. *NPJ Breast Cancer*. 2021 Aug 3;7(1):102. doi:10.1038/s41523-021-00306-9. PMID:34344894.

Ginzel JD, Acharya CR, Lubkov V, Mori H, Boone PG, Rochelle LK, Roberts WL, Everitt JI, Hartman ZC, Crosby EJ, Barak LS, Caron MG, Chen JQ, Hubbard NE, Cardiff RD, Borowsky AD, Lysterly HK, Snyder JC. HER2 Isoforms Uniquely Program Intratumor Heterogeneity and Predetermine Breast Cancer Trajectories During the Occult Tumorigenic Phase. *Mol Cancer Res*. 2021 Oct;19(10):1699-1711. doi:10.1158/1541-7786.MCR-21-0215. Epub 2021 Jun 15. PMID: 34131071.

Vogel CFA, Lazennec G, Kado SY, Dahlem C, He Y, Castaneda A, Ishihara Y, Vogeley C, Rossi A, Haarmann-Stemann T, Jugan J, Mori H, Borowsky AD, La Merrill MA, Sweeney C. Targeting the Aryl Hydrocarbon Receptor Signaling Pathway in Breast Cancer Development. *Front Immunol*. 2021 Mar 8;12:625346. doi:10.3389/fimmu.2021.625346. PMID:33763068.

Mori H, Bolen J, Schuetter L, Massion P, Hoyt CC, VandenBerg S, Esserman L, Borowsky AD, Campbell MJ. Characterizing the Tumor Immune Microenvironment with Tyramide-Based Multiplex Immunofluorescence. *J Mammary Gland Biol Neoplasia*. 2020 Dec;25(4):417-432. doi:



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10.1007/s10911-021-09479-2. Epub 2021 Feb 15. PMID:33590360.

Zhang H, Tang WL, Kheirloom A, Fite BZ, Wu B, Lau K, Baikoghli M, Raie MN, Tumbale SK, Foiret J, Ingham ES, Mahakian LM, Tam SM, Cheng RH, Borowsky AD, Ferrara KW. Development of thermosensitive resiquimod-loaded liposomes for enhanced cancer immunotherapy. *J Control Release*. 2021 Feb 10;330:1080-1094. doi:10.1016/j.jconrel.2020.11.013. Epub 2020 Nov 13. PMID:33189786.

Fite BZ, Wang J, Kare AJ, Ilovitsh A, Chavez M, Ilovitsh T, Zhang N, Chen W, Robinson E, Zhang H, Kheirloom A, Silvestrini MT, Ingham ES, Mahakian LM, Tam SM, Davis RR, Tepper CG, Borowsky AD, Ferrara KW. Immune modulation resulting from MR-guided high intensity focused ultrasound in a model of murine breast cancer. *Sci Rep*. 2021 Jan 13;11(1):927. doi:10.1038/s41598-020-80135-1. PMID:33441763.

Nachmanson D, Steward J, Yao H, Officer A, Jeong E, O'Keefe TJ, Hasteh F, Jepsen K, Hirst GL, Esserman LJ, Borowsky AD, Harismendy O. Mutational profiling of micro-dissected pre-malignant lesions from archived specimens. *BMC Med Genomics*. 2020 Nov 18;13(1):173. doi:10.1186/s12920-020-00820-y. PMID:33208147.

Bacorn C, Kim E, Borowsky AD, Lin LK. Previously undiagnosed neuroendocrine tumour mimicking breast cancer metastasis to the orbit. *BMJ Case Rep*. 2020 May 20;13(5):e234629. doi:10.1136/bcr-2020-234629. PMID:32439746.

McNamara G, Lucas J, Beeler JF, Basavanhally A, Lee G, Hedvat CV, Baxi VA, Locke D, Borowsky A, Levenson R. New Technologies to Image Tumors. *Cancer Treat Res*. 2020;180:51-94. doi:10.1007/978-3-030-38862-1_2. PMID:32215866.

Moon H, White AC, Borowsky AD. New insights into the functions of Cox-2 in skin and esophageal malignancies. *Exp Mol Med*. 2020 Apr;52(4):538-547. doi:10.1038/s12276-020-0412-



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2. Epub 2020 Apr 1. PMID:32235869.

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