

"HIF1A Signaling Selectively Supports Proliferation of Breast Cancer in the Brain."



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Dr. Zachariah completed his MD/PhD in immunology in the laboratory of Dr. Jason Cyster at the University of California, San Francisco. He also completed a postdoctoral fellowship in cancer biology in the laboratory of Dr. Daniel Haber at Massachusetts General Hospital and Harvard Medical School. He is a pituitary and skull base fellowship-trained neurosurgeon. During his MD/PhD, he studied lymphocyte migration, demonstrating shuttling of B cells in the marginal zone of the spleen and egress of mature thymocytes at the corticomedullary junction of the thymus mediated by the GPCR S1P1 (*Nat. Immun.* 2008; *Sci.* 2010). As a postdoctoral fellow, he developed a model of brain metastasis using patient-derived circulating tumor cells xenografted into immune-compromised mice. During these studies, Dr. Zachariah identified HIF1 α and hypoxia-associated pathways as preferentially required for growth of tumor cells in the brain compared to other target organs. He further demonstrated that inhibitors of HIF1 α and associated pathways selectively abrogate cancer cell growth in the brain (*Nat. Commun.* 2020). He also has contributed to the literature in pituitary and skull base surgery and has participated in thirteen total journal articles and one book chapter.

Date: February 25, 2021

Time: Noon – 1:00 pm

Location: Virtual / WebEx