

Tallie Z. Baram Brief CV:

Tallie Z. Baram is the Danette Shepard Professor of Neurological Sciences, with appointments in Pediatrics, Anatomy/Neurobiology, Neurology, and Physiology/Biophysics. Baram is a developmental neuroscientist and child neurologist and has focused her efforts on the influence of early-life experiences on the developing brain, and on the underlying mechanisms. She is studying this broad topic in two contexts: a) How early-life experiences including adversity/stress influence resilience and vulnerability to cognitive and emotional disorders; and b) how early-life seizures, especially those associated with fever, can convert a normal brain into an epileptic one, and impact the construction of memory circuits.

Baram has strong track-records in the use of cutting-edge molecular, epigenetic and MR imaging methods to uncover how adverse early-life experiences sculpt circuit maturation in the developing brain, focusing on memory-, stress- and reward-related networks. In addition, she is uncovering the orchestrated converging actions of multiple mediators (including endogenous local CRH) on the stabilization or destruction of individual synapses/spines during stress in the mature brain. Whereas the Baram-lab employs primarily experimental animal models, the scope of her research, executed via the NIMH-funded Conte Center @ UCI involves humans from fetal life through adolescence and embraces n cross-species and translational approaches.

Baram and her work have been internationally recognized, as is apparent from awards including the NIH NINDS Javits Merit Award and the premier Research Awards of the AES (2005), CNS (2013), ANA (2014) and AAN (2018). Her work has been cited > 25,000 times (H = 88, google scholar),

Baram has strived to contribute to the scientific community. She has contributed and led NIH review panels, has held executive roles in national societies and foundations organized numerous conferences and symposia and has contributed to editorial boards.

Baram has a passion and commitment to mentoring: She is PI of one of only two NIH-funded T32s focused on Epilepsy, and mentor of several, recently funded NIH K awardees. Baram's prior students, from diverse countries and backgrounds, are now contributing independently to developmental neuroscience.

Four recent salient publications:

Short AK, Baram, TZ Adverse early-life experiences and neurologic disease: Age-old questions and novel answers. **Nat Rev Neuro** 2019 (IF = 21)

Luby JL, Baram TZ, Rogers CE, Barch DM. Neurodevelopmental Optimization after Early-Life Adversity: Cross-Species Studies to Elucidate Sensitive Periods and Brain Mechanisms to Inform Early Intervention. **Trends Neurosci**. 2020 Aug 27.0)30175-2. doi: 10.1016/j.tins.2020.08.001.

Birnie MT, Kooiker CL, Short AK, Bolton JL, Chen Y, Baram TZ. Plasticity of the Reward Circuitry After Early-Life Adversity: Mechanisms and Significance. **Biol Psychiatry**. 2020 87(10):875-884.

Davis EP, Stout SA, Molet J, Vegetabile B, Glynn LM, Sandman CA, Heins K, Stern H, **Baram TZ**. Exposure to unpredictable maternal sensory signals influences cognitive development across species. **PNAS**, 2017, 114:10390-10395. PMC5625898.

Active Research Support

NIH NIMH P50 MH 096889 (Conte center; PI: Baram) Fragmented early life environment and cognitive /emotional vulnerabilities	06/17/2013 - 2024
NIH NIMH R01 MH 73136 (PI: Baram) Effects of early-life experience: Role of CRH	12/01/1999 - 05/31/2021
NIH NINDS RO1 NS108296 (MPI Holmes, Baram) Cognitive deficits after early-life seizures: Neurobiology & Biomarkers	07/01/2018 - 06/30/ 2023
NIH NINDS T32 NS 45540: (Baram, PI) Training grant for pre and post-doctoral fellows focused on Epilepsy Research	07/01/2003 - 06/30/2024