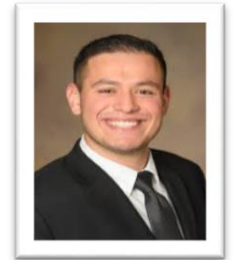


Hippocampal RNA Expression Gene Sets and Biological Pathways with Prognostic Value for Seizure Outcome following Anterior Temporal Lobectomy with Amygdalohippocampectomy

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Abstract

Approximately 1% of the U. S. population suffers from epilepsy. Among these patients, 30% are defined as medically intractable and thus potential candidates for epilepsy surgery, most commonly amygdalohippocampectomy (AH) with or without anterior temporal lobectomy (ATL) in temporal lobe epilepsy (TLE). Approximately 65% of patients treated with AH will be seizure-free. Therefore, there is need to improve prognostic value of selection criteria for AH surgical candidates. Thus, we pursue an approach known as neurosurgical genomics, where the identification of RNA-Seg biomarkers will establish gene expression profiles in patients with different seizure outcomes. Whole transcriptome analyses were performed to test the hypothesis that hippocampal tissue RNA expression differs between patients rendered seizure-free (SF) and non-seizure-free (NSF) to establish predictive prognostic biomarkers. A total of 14 patients (mean age: 33.1 years, range 16-56 years; 10 males, 4 females) with intractable TLE have undergone AH/ATL with 1-year minimum follow-up dichotomized into SF and NSF. Logistic regression analysis of Next Generation Sequencing reveals sufficient statistical power for hippocampal RNA expression data.



Biography:

From homelessness at 15 to obtaining Physiology, Sociology, and Neuroscience degrees to attending medical school, Albert Alan is a voice for the marginalized. He has tutored thousands of students and was one of 25 in the country to receive The Neurosurgery Research & Education Foundation Fellowship. Albert has joined Borderlands Produce Rescue, a 24-year-old nonprofit that rescues and distributes fresh produce. As President of his host site he has distributed over half-million pounds of fresh produce to local homeless shelters and low-income apartments located in food-deserts and started a scholarship to serve first generation students. Albert strives to become one of 3,700 practicing board certified neurosurgeons serving 325 million people. From his nomination form: 'As we rise, we will take others with us by treating, educating and inspiring the next generation. The social stratifications of class, race, and gender will be eradicated in his practice as a future physician. 'Each one, teach one. Each one, reach one.'

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