

The Graduate Program in Biomedical Sciences
is proud to announce the

Ph.D. Dissertation Defense of

BRYANT AVALOS LEYVA

Biomedical Sciences Ph.D. Candidate
in the DiPatrizio Lab

Dr. Nicholas V. DiPatrizio, Chairperson



The Peripheral Endocannabinoid System's Role in Energy Imbalance during Obesity and the Impact of Chronic Cannabis Exposure on Adipose Tissue

Adipose tissue is primarily composed of adipocytes which function as energy storage units capable of secreting fat-derived hormones (i.e. adipokines) that directly influence appetite and glucose homeostasis. Abnormal expansion of adipose tissue during diet-induced obesity (DIO) contributes to dysregulation of the adipoinsular axis, a communication feedback loop between adipose tissue and the pancreas, and is major risk factor for the development of type 2 diabetes (T2D). The peripheral endocannabinoid (eCB) system is a regulator of energy homeostasis that can further exacerbate adiposity in DIO by promoting caloric overconsumption via overactivation of the cannabinoid type-1 receptor (CB1R). Moreover, the eCB system can also be hijacked by cannabinoids found in Cannabis sativa, such as Δ^9 -tetrahydrocannabinol (THC) which stimulates appetite by activating CB1R. Despite these hunger-stimulating effects, emerging evidence from human observational studies suggests that cannabis use is associated with lower prevalence of obesity and decreased incidence of T2D. Although these paradoxical findings may highlight cannabis' therapeutic potential, additional research is required to understand the mechanism(s) involved with the evident restoration of adipoinsular function. By utilizing a mouse model of DIO, this research examines the impact of chronic exposure to THC or whole cannabis extract on adipoinsular dysfunction. This work also assesses the role of the adipocyte CB1R in mediating energy metabolism, both in vivo and in vitro, following chronic exposure to THC or whole cannabis extract.

Monday, September 11th, 2023

1:00PM (PST)

Multidisciplinary Research Building (MRB), Rm. 1110 (first floor)

Join via Zoom: <https://ucr-edu-hipaa.zoom.us/j/91598847897>