Alcoholism affects 1 in every 12 adults in the United States, yet not enough is known about the mechanism behind the behaviors underlying preferences to alcohol. Like humans, rats have individual preferences for alcohol and are categorized as low or high drinkers after home-cage exposure. Presently, studies investigating alcohol behavior are limited to alcohol preferring rats because alcohol non-prefering rats lack motivation to actively seek alcohol. Consequently, the difference between neural-circuit function between recreational alcohol use and alcohol use disorders cannot be identified.

To address this gap, we have developed a novel technique to present alcohol in a rat’s mouth and characterize their palatability response as compared to tastants of known valence. We are recording the rats positive or negative responses to alcohol presentation and correlating their responses to their individual home-cage drinking preference. I will discuss the preliminary results of my behavioral study with 6 male Wistar rats using this technique and the work behind designing and applying this method. This technique paves the way for future studies because it will allow us to observe low preferring rats and later distinguish differences between alcohol use and alcohol abuse.