Rat Edibles Capstone Critique

I thoroughly enjoyed the labor of love that was required to bring my capstone project to fruition; though I'm not sure I'll miss taking 56 rectal temperatures on experiment days, the other aspects of being part of this research lab and team will stay with me. Being on the ground floor of this project was a challenging and rewarding experience, exposing me to the nitty gritty world of research – experiencing the failures and triumphs that make a project. Little to no literature exists on oral consumption of CP55,940, our synthetic cannabinoid, which, to me, was an alluring aspect of this project from the start. It excited me to go in with no expectations as to what we would find; an interesting result we yielded (that I hope helps other researchers) is how much more CP must be consumed orally to induce hypothermia as compared to injections – about 7x the amount! While other literature suggests there is not a dosing difference in the injection versus oral consumption of THC, we found a difference there with the synthetic cannabinoid - it takes a lot of expensive CP55,940 to see effects! Dr. Eckard referred to our project as 'high risk, high reward' countless times, something I think I truly understand now that I'm seeing the entire capstone process in the rearview mirror. In the throes of it, I was more focused on the potential reward of things: being able to see this voluntary model of consumption in action, hopeful to take it further, seeing and understanding how it influences behavior in a dependence model. An optimistic attitude is an essential to being a part of this project, but I feel a more cautious approach would have aided me in taking a stronger, active role in this project and have sought out what realistically could have been accomplished. While listening to another student's capstone presentation, they shared a piece of advice from Dr. Christensen that made me reflect on my own experience: take your idea and cut it in half, then cut it in half again. I could have benefited from taking a step back and asking how can we make our study different in our methodology? What novelty method can we try that may encourage voluntary consumption? Having further dived into previous literature and internalizing the limitations of those articles to consider out-of-the-box methods would likely have kept my enthusiasm and curiosity consistently high. I tended to followed suit of my mentor and where his vision for the project without stopping to ask myself where I wanted to take it and what was of interest to me. If I could do it again, I'd explore the possibility of offering several different edible formulations to the rats; where on experiment days they are given an extremely small dose in one of several different food/liquid options, something I think would help them in not associating only one

vehicle (i.e. sweetened condensed milk) with drug. This is something that needs to be pushed far in advance of the experiment, as getting approved to give rats different foods is a timely process. In an ideal world though, coupling this approach with incrementally increasing the doses day after day in a tolerance attempt would be a valuable and more accurate model to compare human cannabinoid consumption/addiction with. That initial experience of high dose drug may create aversion in the rats, the intoxication being too overstimulating and therefore unenjoyable. While the rats may not have wanted to consume drug very frequently, they were absolute troopers when it came to repeated body temperature days. My four-pawed friends taught me quite a bit about putting others and commitments before/alongside self, while our research team has taught me the importance of truly pulling your own weight and easing the load of others'. I have felt real community within our little lab family; these lessons and memories are an invaluable part of my Radford experience; I am happy to have concluded my capstone project and sincerely hope it can go on to be continued within another student's research and/or for their capstone.