



# Summer Research Project: Effects of MCAM on Drinking-in-the-dark B6 Mice

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Intellectual Achievement & Research

## SUMMARY

**What:** Summer Undergraduate Research Fellowship (SURF)  
**When:** June-August 2019  
**Where:** University of Texas Health Science Center at San Antonio  
**Personal goal:** Learn about neuroscience  
**Intellectual goal:** Broaden the research experience portfolio via cross-disciplinary research; acquire *in vivo* techniques  
**Scope of activity:** Conduct research under the mentorship of a faculty. My research project characterizes a novel drug that has longer duration of antagonism than the current FDA-approved drug for alcohol use disorder (naltrexone)  
**Responsibility:** Conduct experiments and data analysis; written formal report and oral presentation at the end of the project.



## SPICES

The research experience embodies the "I" in SPICES via the intellectual achievement, which is obtained through conducting a research project with an established hypothesis, along with presentation to an audience

## HERBS

**Honorable:** Characterize an unknown effect of a novel drug  
**Resilience:** The experience helps me build my resilience for all things that work and don't work

## LEARNING OUTCOMES

**Research project:** Data from the project indicate that the mu-opioid receptors are not solely responsible for the mechanism of action of alcohol use disorder, suggesting the role of multiple types of opioid receptors  
**Personal goal:** Along with the research project, the program provided introductory lectures surrounding neuroscience techniques taught by various faculty from the department

## IMPACT

**Self-development:** Being able to design and conduct your own experiment enables the creative courage I need as a scientist. Going out of my chemistry discipline also help me think medicinal chemistry and prescription drugs on another perspective.  
**Impact on others:** The project has given some insights into the mechanism of alcohol use disorder, suggesting potential alternative treatments whose effects could last longer, thus requiring patients to take the medicine less frequently.

## ADVICE

**Be proactive!** Look for summer research opportunities both online and on campus – there are a lot of funded research programs (Most deadlines are January/February)

