



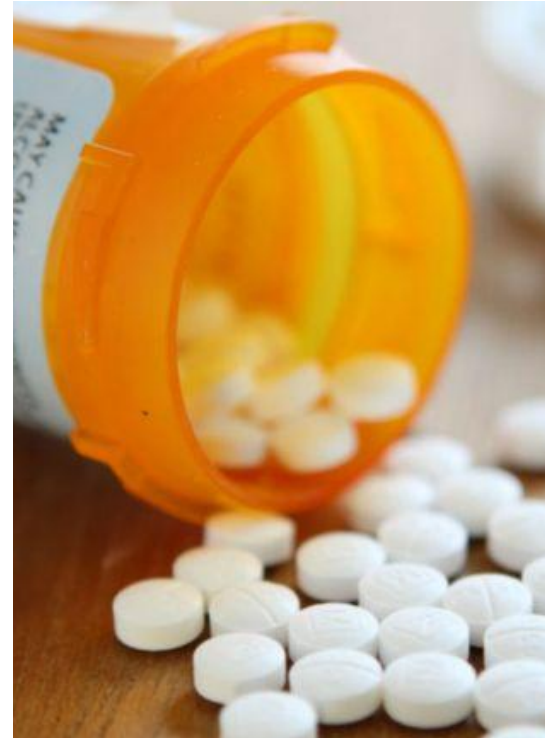
CRABS:

Comparing Really Addicted Brains

By: Frank Bu, Brandon Lim, Frank Miao, and Kavya
Tumkur

Background & Question

- Opioid abuse is a big problem
- **Question:** study effects of opiates on synapses within the hypothalamus of mice, for future implications in humans.
- Hypothesis: Lower synaptic density in brains with drugs



Methods

- Split 800 mice into 5 groups
- Treat groups with OxyContin for varying amounts of time
- Transmission electron microscopy
- VESICLE and automated images-to-graphs pipeline
- Upload data to Amazon AWS S3
- Amounts to slightly less than \$9 bil



Future Work

- Data available to public on cloud
- Analyze regions of human hypothalamus based on results from mouse hypothalamus
- Further understand causes and effects of addiction



Thanks!
