



# Cannabis Center

**Interim Joint Committee on Health Services**

**October 23, 2024**

# Highlights: Center Progress

# NIH Grant Funding

## NIH GRANTS AWARDED:

- \$2.8 million NIH grant for an inpatient trial to examine cannabis for opioid use disorder
- \$128,000 NIH grant in collaboration with the Cannabis, Cannabinoids and Addiction Center at Indiana University

## NIH GRANTS SUBMITTED:

- \$2.87 million NIH grant submitted – will be reviewed October 30



# Collaboration: Johns Hopkins University

 College of  
Medicine

 Cannabis  
Center



- The Johns Hopkins team is recognized as the international leader in clinical cannabis research
- We held a 2-day research collaborative meeting at UK in May 2024
- The UK/JHU team designed and planned a collaborative NIH R01 grant (Feb 2025)
- 5-year project, \$3 million budget
- UK will serve as the lead site/investigator

# DEA Growing License Submitted

- Submitted DEA Schedule I cannabis growing application
  - Established indoor growing facility with full security
  - Collaboration with UK College of Agriculture
  - Awaiting on DEA response, hope to know more by the end of the month
- The final DEA decision on cannabis scheduling anticipated in early December (i.e., remain Schedule I or become less restrictive Schedule III)



# Clinical Trials: Cancer, Metabolic Health

- We are conducting two clinical trials – one with cancer patients and one with patient who have metabolic disease (type 2 diabetes, high BMI, insulin resistance)
- All federal, state and local research permissions received (approx. 15-20 regulatory approvals required per study)
- We had long delays due to federally-regulated Schedule I drug supply shortage (affected nearly all cannabis researchers)
- Drug manufacturing is now complete
- We are only waiting on DEA approval – hope to hear by the end of the month
- Planning for enrollment in November
- First studies of their kind, first studies to explore controlled daily dosing for 4+ months
- Several NIH grants planned, including with Markey Cancer Center



# Completed 10+ Cannabis Projects

- **Human laboratory trial:** interaction of inhaled cannabis and intranasal opioids
- **Human laboratory trial:** cannabis impact on simulated driving performance
- **IU collaboration:** endocannabinoid expression in substance use disorder
- **Granted 5 UK Faculty Seed Grants:** all completed, manuscripts in development
  - one NIH proposal submitted, several in development
- **Analytical chemistry projects:** all completed
- In addition, we have held symposia and webinar series on cutting-edge cannabis science, open to the public



# Top Line Data: Two Exemplar Studies



# Cannabis: Fetal and Maternal Health

# CANNABIS: MATERNAL AND CHILD HEALTH



**Rationale:** In states that allow cannabis use, use during pregnancy has increased

UK researchers conducted a UK HealthCare chart review:

- examined data from live birth pregnancies over the past 5 years ( $n = 24,281$  infants)
- 7.8% of pregnant patients screened positive for THC
- plan to continue to track and monitor to determine how changes in cannabis policy impact rates of maternal use

# CANNABIS: MATERNAL AND CHILD HEALTH

- Enrolled 57 pregnant women who reported recently using cannabis
- 60% continued to use cannabis during pregnancy
- Most common reported motivations:
  - nausea/morning sickness
  - sleep aid
  - fear/anxiety
  - stress
  - physical pain
  - emotional pain



# CANNABIS: MATERNAL AND CHILD HEALTH

Of those who continued to use during pregnancy:

- **85% used at least 15/30 days of the month**
- **54% used daily or multiple times per day**
- **50% smoked cigarettes, 58% vaped nicotine**
- **76% rated cannabis as safer than rx antiemetics**
- **most reported never hearing any cannabis information from their physician**
- **most did not understand current KY cannabis legislation**

**Next Steps:** NIH grant applications, continue to monitor cannabis policy impact, series of studies exploring cannabis impact on maternal and infant health outcomes



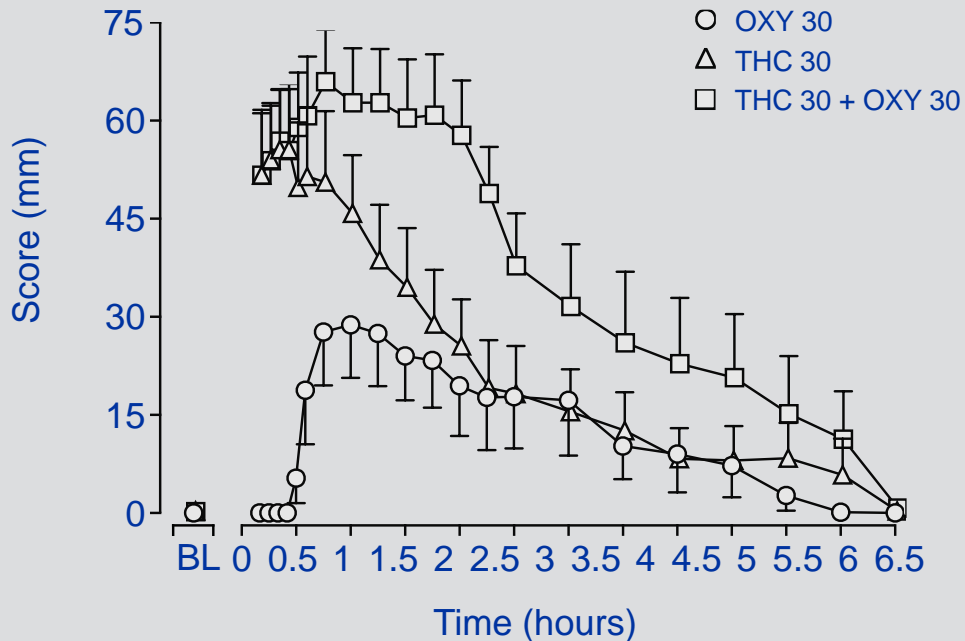
# Drug Misuse: Opioid and Cannabis Trial

# DRUG INTERACTION TRIAL: OPIOIDS & CANNABIS

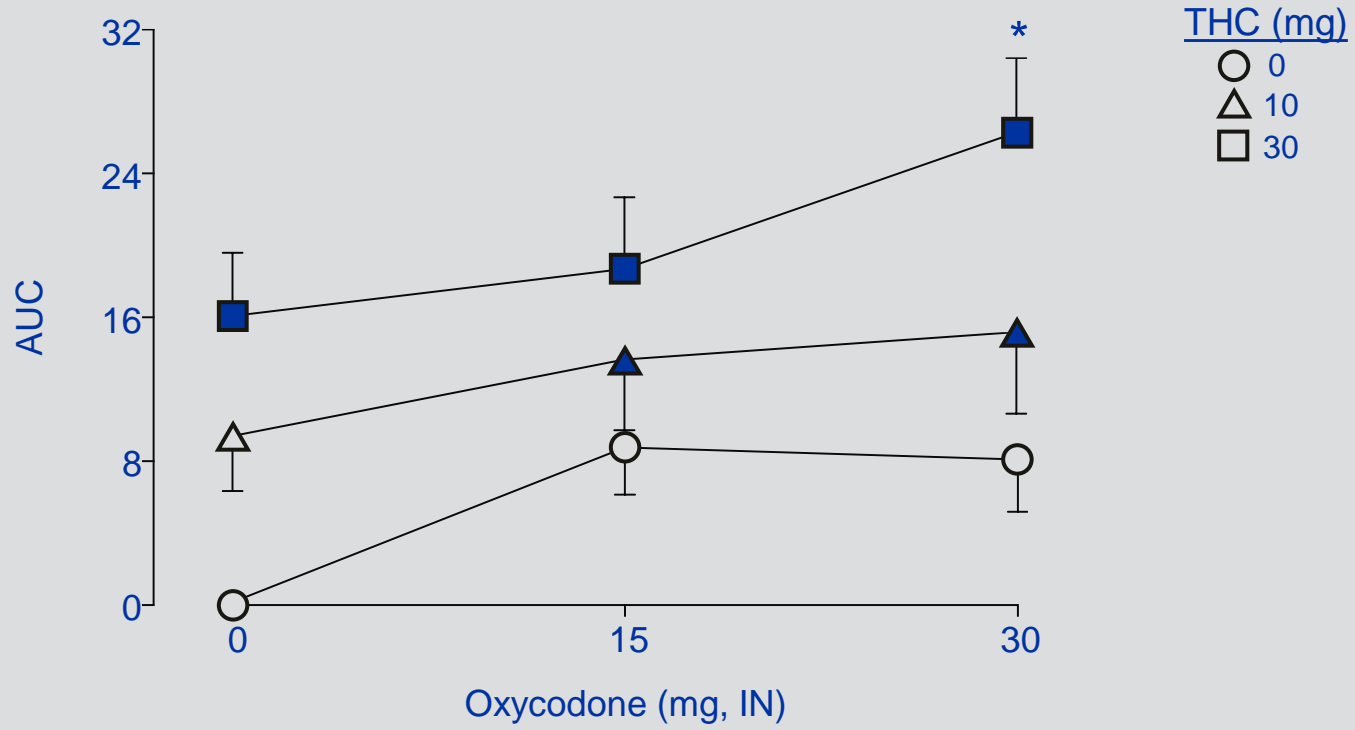
- **Rationale:** Animal studies have indicated cannabinoids enhance opioid analgesia and either decrease or do not alter opioid rewarding effects
- 5-week inpatient study ( $n=9$ ) examining the effects of opioids, cannabis and their combination in a human trial
- Double-blind, placebo-controlled, randomized study
- Participants with a history of opioid misuse received a wide dose range of inhaled cannabis and intranasal opioids



# “How much do you LIKE the drug effects?”



# “How HIGH are you?”



Filled = sig. from placebo \* sig. from OXY alone ( $p < .05$ )



# KEY TAKEAWAYS

- Cannabis did not alter the physiological safety of opioids – did not increase opioid-induced respiratory depression, miosis
- Cannabis did not produce analgesia alone and did not increase opioid analgesia
- **Cannabis increased the abuse potential of opioids** – increased the peak effects and duration of the euphoric-like effects of opioids - particularly with high dose combinations
- Next steps: Now enrolling those with severe OUD to determine the effects of cannabis on opioid withdrawal and safety and abuse potential of higher doses of opioids



# Future Directions

- 1) **Clinical trials:** areas of interest: autism, substance use disorder, lung inflammation, multiple sclerosis, lupus and other autoimmune diseases, palliative care
- 2) **NIH grants:** continue to apply and conduct our federally-funded studies; next submission Feb 2025
- 3) **Pediatric cannabis poisonings:** accidental ingestion of THC-edibles (gummy bears, cookies)
  - Delta-8 THC poisonings in children are increasing (some requiring intubation, ICU) – reports from UK Emergency Dept; will need to brace for further spikes when KY dispensaries open
- 4) **Public health impact of KY Medical Cannabis:** opioid overdose, cannabis impaired driving crashes, cannabis hyperemesis syndrome, rx drug use and misuse, workplace impairment
- 5) **Characterizing the KY Medical Cannabis Program:** population-level data on reasons for patient use, number of refills, quantity rx and dispensed, types of products used, concomitant opioid use



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