

GROWING CANNABIS RESEARCH IN WASHINGTON STATE:

2020 Update

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Collaborative for Cannabis Policy, Research and Outreach (CCPRO)

The CCPRO is to be the nexus for cannabis scholarship, policy, outreach and community engagement in Washington State.

Goals

1. Coordinate and support cannabis research at WSU.
2. Develop cannabis related policy to assure compliance with federal and state laws.
3. Serve as the primary point of contact for interactions with government, industry, and other cannabis stakeholders.



Priority Areas



Improving Health and Well-Being



Public Policy and Safety



Economics



Agricultural Research

Awarded I502 Pilot Grants:

- 25 projects funded between FY16–FY21 using I502 funding
- Total awards for FY16-FY19: \$661,308

Awarded External Funding:

- 48 externally funded projects
- Total external funding: >\$3.5 million and growing

Research
Funding



We Are Better Together

- Close partnerships with
 - *LCB*
 - *WSDA*
 - *HCA/DBHR (prevention)*
 - *Intercollegiate*
 - *UW- CRC*
 - *COGR*
 - *Tribal- Qwibil Consultation and Research Center*

Outreach
and
Engagement



Opportunities and Challenges

■ Cannabis

- *THC Potency and the effect of high potency on health*
 - Collaboration with UW
- *Federal regulations continue to inhibit research*
- *Creative solutions to federal regulations*
 - Importing cannabis with DEA approval

■ Hemp

- *Currently growing hemp*
- *Expand CBD research*



Thank You

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CCPRO Website: <https://research.wsu.edu/cannabis/>



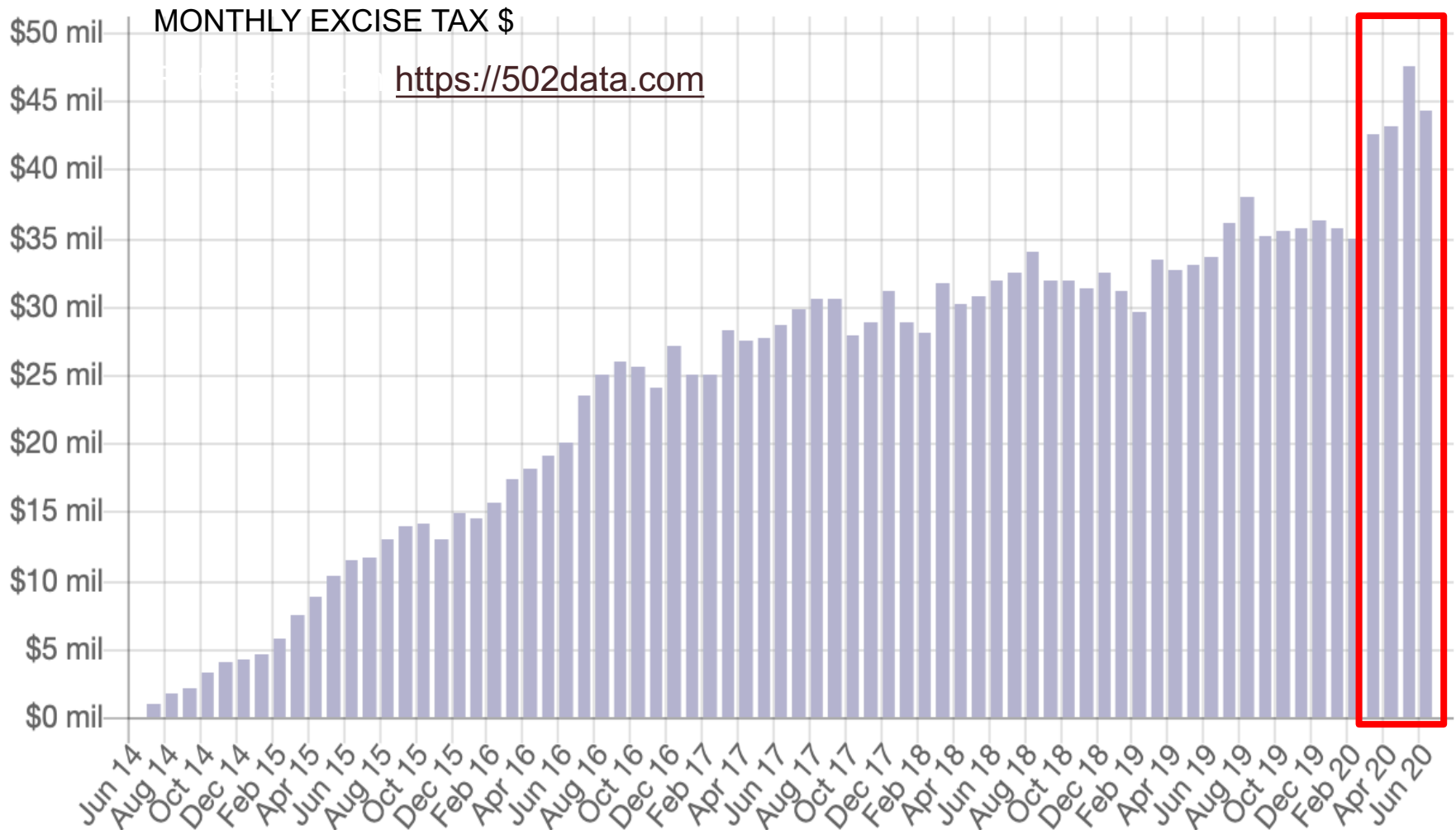
Toward A More Translationally Relevant Model of Cannabis Use

Ryan J. McLaughlin Ph.D.

Department of Integrative Physiology & Neuroscience



High Times in Washington State

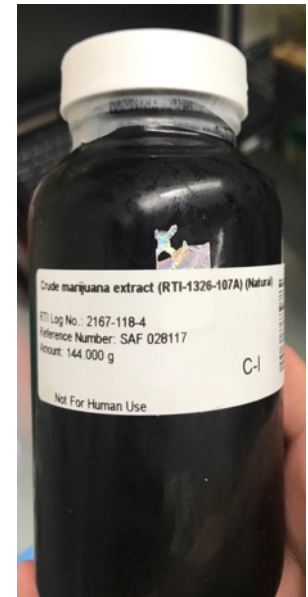




The Translational Gap

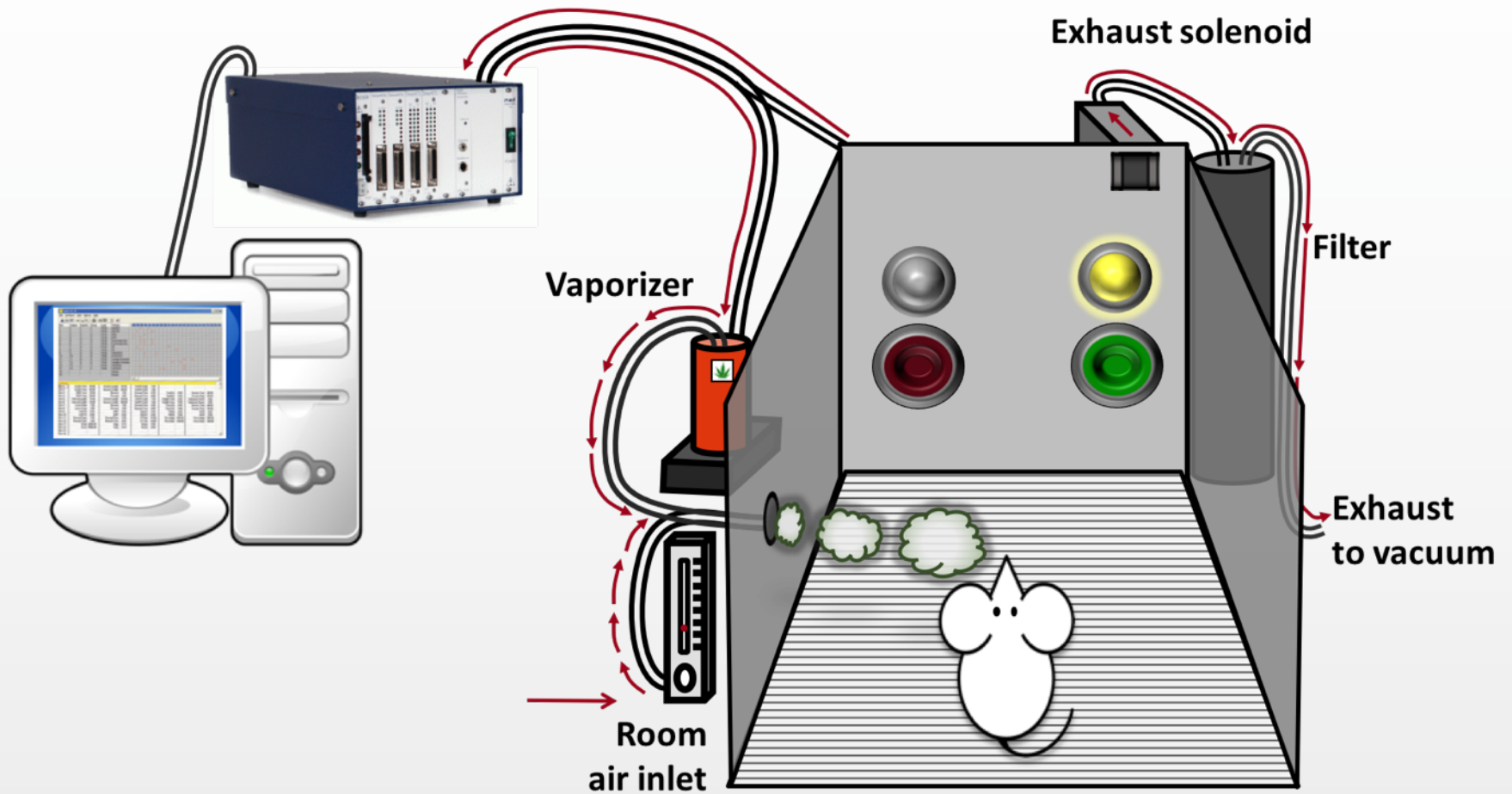
- Cannabis vs. THC vs. Synthetic CB1R agonists
 - Pharmacological profile
 - Different intracellular signaling pathways
 - Entourage effects?
- Route of administration

Crude Cannabis Extract



- Forced vs. Volitional Exposure

Modeling Cannabis Use in Rodents





Modeling Adolescent Cannabis Use in Rodents



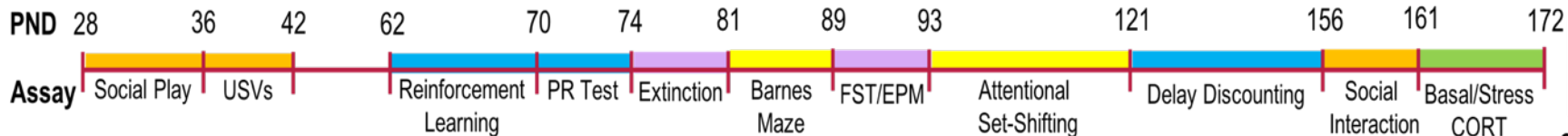
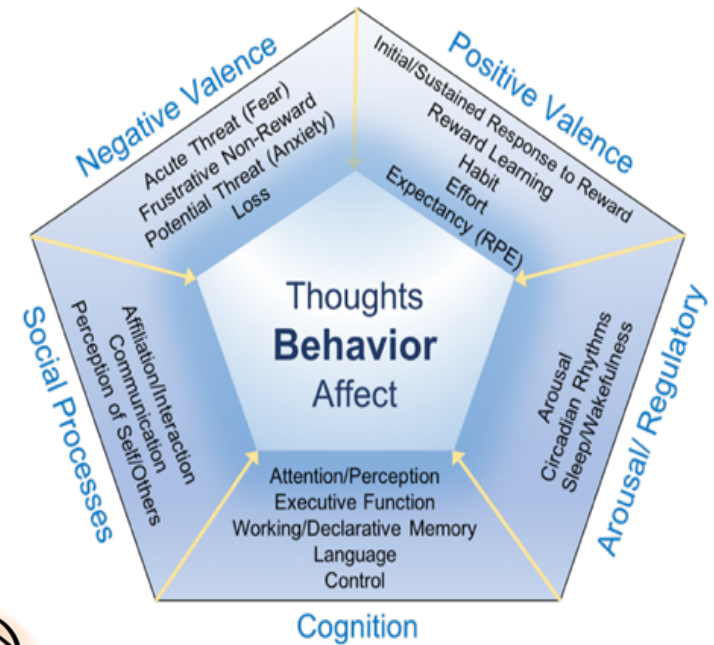


Cognitive and Emotional Effects of Maternal Cannabis Use on Offspring





Behavioral and Biological Predictors of Problematic Cannabis Use





Cannabis Use and the Stress Response

Psychopharmacology (2017) 234:2299–2309
DOI 10.1007/s00213-017-4648-z

ORIGINAL INVESTIGATION

Blunted stress reactivity in chronic cannabis users

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John M. Hinson¹ · Ryan J. McLaughlin^{1,2,3}





Acknowledgements

Former Postdoctoral Fellow

- Timothy Freels, PhD

Former Lab Technician

- Janelle Lugo

Current Graduate Students

- Hayden Wright (Neuroscience)
- Halle Weimar (Neuroscience)
- Nicholas Glodosky (Psychology)
- Darren Ginder (Psychology)

Undergraduate Students

- Amanda Richards
- Max Melville
- Abigail Rossi
- Alexandra Malena
- Emma Tumbleson



ADARP
Alcohol and Drug Abuse
Research Program

ADARP Dedicated Marijuana Account Fund



Cannabis use by pregnant and parenting women

Celestina Barbosa-Leiker, PhD

Vice Chancellor for Research

Washington State University Health Sciences Spokane

Funding provided by Washington State University Alcohol and Drug Abuse Research Program (PI Barbosa-Leiker)



Cannabis use during pregnancy

- Past-month cannabis use among pregnant women increased from 3.4% to 7.0% from 2002 to 2017
- Critically, 70% of pregnant and non-pregnant women believe there is slight or no risk of harm of using cannabis 1-2/week while pregnant
- Overall perception of harm resulting from cannabis use has decreased since legalization



Cannabis use by pregnant and parenting women

- Cannabis use during pregnancy has been associated with health outcomes
 - Low birth weight, stillbirth, decreased IQ scores, attention problems, decreased cognitive function, and decreased academic ability
- $\Delta 9$ tetrahydrocannabinol (THC) can cross the placenta during pregnancy and is also passed to the baby during breastfeeding

NEED *to* KNOW

for Baby and You





WSU research studies

- **Women's perceptions of risks and benefits of cannabis use during pregnancy and postpartum as it relates to breastfeeding and parenting, in a state that has legalized recreational cannabis, N=19**
 - **Barbosa-Leiker, C., Burduli, E., Smith, C.L., Brooks, O., Orr, M., & Gartstein, M. (2020). Daily Marijuana Use During Pregnancy in a State with Legalized Recreational Marijuana. *Journal of Addiction Medicine*.**
- Healthcare providers' perceptions of risks and benefits of cannabis use during pregnancy and postpartum, N=10
- Cannabis retailers' (cannabis store owners or employees) perceptions of risks and benefits of cannabis use during pregnancy and postpartum, etc. N=10



Results

Overarching theme: **Taking care of mom and baby**

- Themes
 - Continued use for medicinal purposes
 - Moderation
 - Mixed messages
 - Wanting more info
 - Individuality





Theme 1: Continued Use for Medicinal Purposes

- Using for morning sickness/nausea
 - Using to gain appropriate amount of weight
- Using to manage pain
- Using for anxiety and stress
- Using for better sleep



“[...] I want to be able to get past the pain so that I can actually be present of who I really am– cause when I’m hurting, it just distracts me from everything.”

“I wouldn't trade anything in the world to be able to eat for my child.”



Theme 2: Moderation

- Using in moderation during pregnancy
 - Informed consumption/decisions
- Cutting back
- Safer methods of use (no butane, etc.)
- Safer alternative to opioids, NSAIDs, anti-nausea meds, etc.
- Comparison:
 - Cigarettes, alcohol
 - Fast food, caffeine





“[...] Before cannabis I was taking eight to ten ibuprofen per day, and that was not good for me. But I didn’t really know any different.”

“I feel like if I could stop, I’d prefer not to be smoking, but since I can’t, I’m glad it’s there instead of taking like hard prescription [...] ‘Cause they had me on hydros after the event and stuff, I wanted to not be on those.”

“Alcohol, on the other hand, I will throw that away.”



Theme 3: Mixed messages



- Healthcare providers' mixed messages
 - Spectrum of information: It's harmful and you should stop----cut back (harm reduction)-----I also used it while pregnant
- Healthcare provider's information vs. own personal experiences
- Stigma from healthcare providers
- Legal fears (Child Protective Services) driving pattern of use



“She got me kinda really scared, talking about CPS and how I need to stop and how it’s not good for the baby, that CPS will come in after I have her to talk to me. And I got really scared, and I talked to my actual doctor. And she said that there were no studies saying it was bad or good. [...] They- CPS- won’t really do anything about it. It’s legal here, so you’ll be fine.”



Theme 4: Wanting more information

- Frustration over lack of research
- Doing their own lit searches
- Relying on budtenders for scientific and medical information
 - Staff members who work within a dispensary or store where cannabis is sold



“[...] I think it’s very important that more research on the subject is pursued, because there just isn’t enough information for people to make informed decisions. We’re missing that information as a society.”



Theme 5: Individuality



- Spectrum of cannabis use while pregnant and postpartum
- Histories of trauma
- Homelessness--- middle class
- Comorbid conditions (depression, bipolar, fibromyalgia)
- Individual decisions



“He was really abusive, and I ended up in the hospital. [...] And so they were like, ‘Well, you might lose the baby anyway.’ So they decided to let me go home and smoke. And so I did, and I was able to eat and I was able to go to sleep. And my hCG level started rising again.”

“My husband and I make six figures. We have a reasonable living. We own a home. We both own vehicles. [...] We’re normal people. We’re middle class.”



Healthcare Providers' Perspectives

- Providers may have a difficult time communicating with their patients about health risks due to perceived lack of definitive research
- Many providers noted an increase in patient disclosure of use after legalization
 - This may present an opportunity to apply best practices for patient education
- There is an urgent need to conduct research that will enable us to offer healthcare providers more information to share with their patients



Cannabis retailers' perspectives

- Cannabis use during pregnancy is a personal decision
 - Assumed woman's OB approved of cannabis use
- Harm reduction approach
 - Offered low-THC products, recommended CBD
- Wanted more information to better serve customers
 - None received training that was specific to cannabis and pregnancy or breastfeeding
 - Some were familiar with literature produced by WA State through medical certification or brochures



Conclusion

- We need to work with patients, healthcare providers, and cannabis retailers to better serve pregnant and postpartum women
- We need more research
- We need to rethink patient education
 - Harm reduction, not stigmatization





Thank you!

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