Washington State
Liquor and Cannabis Board

Washington State Liquor and Cannabis Board Cannabinoid Science Work Group Meeting

Wednesday, February 1, 2023, 10:00 a.m.
The meeting was convened via Teams

Meeting Minutes

1. CALL TO ORDER – 1:05PM

Kathy Hoffman opens the discussion. Present are:

List who was present.

2. INTRODUCTION OF MEMBERS PREVIOUSLY UNABLE TO JOIN

Kathy Hoffman invites Gillian Schauer to introduce herself.

Gillian Schauer offers that she has a PhD in Behavioral Science and a Master's in Public Health. She's been in the drug policy realm for a couple of decades working first on tobacco prevention and control and then came into the cannabis space around 2012 and is the Executive Director of the Cannabis Regulators Association and also has an affiliation with the Addictions, Drug, and Alcohol Institute at the University of Washington. She has conducted a great deal of research and policy interests because she works with all of the regulators, and "pretty much anything under the sun on this topic is of interest to me. But on a personal note, I'm very interested in consumer safety issues and continuing to make sure that products that consumers have access to in the regulated marketplace are safe, and they are able to trust that those products are safe for them to use. So that is probably first and foremost for me personally."

3. DECEMBER 1, 2022 MINUTES REVIEW

Kathy Hoffman asks groups members to offer changes or concerns regarding the December 1, 2022, meeting minutes. Group members signaled approval by thumbs up reaction button or on-

camera thumbs up. There were no revisions offered, and the group accepted meeting minutes as written.

4. DEVELOPING A DEFINTION OF "CANNABINOID" AND
5. SCOPING GROUP WORK

Kathy Hoffman opens discussion around developing a working definition of cannabinoid for purposes of discussion. She references the discussion that the group has engaged in by email prior to the meeting. Comments had been culled and attached to a whiteboard, and after some technical difficulty, a screenshot was shared with the group. "What I saw in the discussion was a little bit of should we go with a scientific definition? Should we go with a policy or policy driven definition?"

Chris Beecher: As a chemist, I understand the **chemical definition**. But as a biologist, you need the fact that it binds to a receptor, and that frees you. If you want a legal point of view, you're talking about anything that is going to have that effect, or people are going to be able to step around it. So I think all of these definitions depend entirely on what you want us to do with them. And I think we need the broadest possible definition to start with. And then I think this concept of sub-categorizing them. You know, endorphins are clearly not something anyone is going to legislate into. But endos and synthetic analogues are real problems.

David Gang: I agree with what Chris just said. I think that **we need to know what the purpose of the definition is going to be**. You kind of alluded to that, Kathy. And I think if we and if there is, like you said, what are we going to -- we need this to talk about in this group. So I think we need to define what specific purposes we need the definitions for and then have a definition, the category, that fits each one of those. It goes along with what Chris just said.

Holly Moody: I was going to say that I know some of them are defined by states. For instance, in **Arizona, which is where I used to live, they defined the metabolite** of, for instance, THC, delta-9-THC as only 11-hydroxy. And that was for the purposes of DUI for people who had a medical card. So I mean, there does need to be some sort of regulatory answer as well. And do we count metabolites as cannabinoids? Because they are not necessarily made by the plant. They are made by the human body. So that is a whole other issue that I would like to interject. I don't have an answer for it, but I do have a question.

Gillian Schauer: I think it's helpful to know that the definition is internal for the group, although I'm still struggling with sort of what are we going to use it to talk about? Because I think that does matter. **And I appreciate the reasons to make it a broad definition. But I think it can get so broad that suddenly there is not going to be clarity about**. Are we talking about things that come from

the plant? Are we talking about things that are entirely chemically comprised? Are we talking about things that have nothing to do with this space that may incidentally bind to the endocannabinoid receptors? So it still feels very abstract to me. Yeah, I see some other hands. So I'll stop.

Jessica Tonani: You know, there have been a couple other groups that I've been associated with, and one of the concerns with this is that the CB1 receptor is a little bit loose, I would say. There are a number of compounds that we probably don't need to regulate or think of, like terpenes that bind those receptors, but on the other end, there are also these compounds people are producing and calling cannabinoids that are probably outside of the scope of what we as a group want to look at. So one of the things that we have -- and I'm not sure it's great -- **have decided on is structure and function being required within a definition.** And I don't know how the group feels around something like that. But it is -- I think the word cannabinoid in general, something maybe the space has outgrown, but I do understand that we need to probably live within those bounds still.

Kathy Hoffman: **It sounds like what our definition for cannabinoid in this space is going to depend on how we sculpt the work that we are doing**. Correct? And the things that we are going to talk about in the next piece, and that was taking all of your research interests. And it seemed like they fell into three separate categories. I think the next step for the group is to decide a couple of different things. The first is, which of these research interests or which of these concerns are long-term, which are short term, how we might approach them, and which we are going to start with. And there are several different ways we can do that.

We can look at the first bucket where it seemed that there were the most folks interested in the interaction with cannabinoids in the body, and then cannabinoids as they are related to DUI, and then cannabinoids in the regulatory space. I know there is crossover between all of these, but when we started analyzing all of the different research interests, these three buckets became very obvious.

Gillian Schauer: It would be helpful for me to understand how can this group best support LCB? And if you already talked about that, I imagine this group isn't going to exist in perpetuity. So if we are meeting for a year or something, **what is the most meaningful thing that we can do to support LCB?** Because in looking at the notes, it looks like there are a lot of great research ideas and research areas, some of which will take many, many years to look through. And so, I'm trying to figure out what's going to have the most impact for you all at LCB.

Kathy Hoffman: That is a wonderful question, and I'm really glad you asked it because I think that is going to help us sort of decide what direction to take here. From a policy and rules perspective, the regulatory pieces are the most important to us at the Agency, and they may be for others within

the state of Washington, as well. But I want to weigh in with the rest of the group on that. Is that a good place for us to start? (Show of thumbs up from group).

Okay. So just reading this subsection, Cannabinoids in Regulation. So there was interest in the regulatory effects of cannabinoids, regulating components of the plants, and rapidly changing environment to protect public health and safety while supporting industry. Regulation of diverse compounds with different risks and rewards and creating a simple way or scale to express physiologically active and non-physiologically active cannabinoids in end-product testing. Keeping that in mind and knowing what we just talked about with respect to defining cannabinoid, what are thoughts in terms of how we might define for a working definition.

Holly Moody: I was going to say, it's going to depend on which way because you say regulation. **There are several different ways that these compounds can be regulated. You can either regulate them for tax purposes to pay by the unit of cannabinoid in the substance for tax collection, or it can be like a dosage of metabolites in someone's bodily fluids**. And those are where the regulation comes in. And since you're a regulatory -- or working in a regulatory frame, that probably sounds to me like the best way to look at it, as what regulations do we need to work within and make the definition fit that better.

Jessica Tonani: You know, one of the things I think that might be helpful is to define **what we want to regulate,** and what we think is maybe outside of the scope of regulation. This is a rapidly emerging field, and there is a lot of chemistry that is going on that at some point this is no longer cannabinoids. And we may have to say, these are what we are interested in, and these other things people are calling cannabinoids are maybe outside of the scope of what we are looking at, would be a suggestion.

Amber Wise: I mean, if we are going down this route, **I think it might be helpful for us to see current language and regulatory structure regarding this word**. I know there is some obviously reference to it in various WAC codes. And then also, I believe there is some potential legislation that are active that are trying to redefine some of this, as well. So getting some examples of how we are thinking about it might be helpful as we move forward, as well.

Nick Poolman: I just wanted to share, I've looked up cannabinoids in a lot of the other states that at least had definitions and legal markets, so Oregon, California, Colorado. **Most of them essentially defined phytocannabinoid. They essentially said, cannabinoid is something that comes from the cannabis plant. I think we have talked about a lot of that that is not the only cannabinoid that there can be**. So I think a lot of other agencies, a lot of states have put cannabinoid in just that phytocannabinoid box, but I don't know if that is necessarily where we want to be.

Kathy Hoffman: All right, thanks for that, Nick. Thoughts on that comment. I have seen phytocannabinoid used as part of the definition for cannabinoid. I think it's in New York if I'm not mistaken.

Holly Moody: You can't define a term with its own definition.

Jessica Tonani: I think **one of the biggest issues that we have as far as youth access, in my opinion -- and people can disagree with this -- is actually from access to compounds that don't naturally -- are produced outside of the plant**. And so, things like delta-8 that the plant can naturally make but that actually people are synthesizing outside of the plant. That is my personal opinion. Other people could disagree.

Taylor Carter: Just to throw in from the immunological standpoint. So I work with THC in a lot of its other receptors as well as endocannabinoids. Some of the stuff behaves differently in the immune system compared to psychoactive. So like, THC, the way that it enters into the active side can either be an agonist or antagonist in the periphery. So sometimes CB1 antagonists mirror what I'm seeing with THC [indistinct] agonism that you would obviously expect in the brain and in the nervous system. **So I think one thing to keep in mind with natural and non-natural, all this stuff, is the way that it behaves in the immune system sometimes is slightly different than how it behaves.** And the impact that can have developmentally from all aspects, just to keep in mind. And there may be different behaviors of it. **At what point are we focusing more on the psychoactive that we are looking at, since that is more of the regulatory but also to know there is this up and coming immunological standpoint that the impact it can have can be rather large**.

Ryan McLaughlin: I guess just to throw in from a behavioral pharmacology perspective, when we are studying novel compounds that we think have cannabinergic activity or whatever we would call it, cannabimimetic effects, then we test for four things with the cannabinoid tetrahydro test. Its ability to reduce locomotor activity to produce hypothermia, to produce catalepsy, and what's the other one? Analgesia, I guess, if I didn't say that one. And typically, when we are screening new chemical compounds, those are the tests from a behavioral standpoint that we want to look at in order to classify it as a cannabinoid compound, and usually that is through binding to CB1 or CB2 receptors.

So thinking about sort of function and structure, I think that was a really good point from Jessica. I think function and structure are both important to consider in the context of the conversation. I think the sticky point is like when you talk about things like CBD, which really doesn't act through CB1 or CB2 receptors, but yet, I don't think anyone would take the side that cannabidiol is not a

cannabinoid. Right? Do we want -- so that is where I find there is a sticking point there in some of **these minor cannabinoids that actually behave more like CB1 receptor antagonists as opposed to agonists.** So yeah, it's really tough to answer, actually. It's a really tough question to answer.

Kathy Hoffman: Chair Vollendroff, anything to add?

Member Vollendroff: No, I don't have anything specific to add to this part of the conversation. Although going back to earlier, when Gillian was asking about the intentions of this group, one other additional item I would like for this group to consider. So I don't know if this is time limited or what the duration of this is, but **I'm really interested in long-term things**. So maybe we can be thinking bucketing, **what are some of the immediate things**? And you have mentioned licensing, our excuse me, policy. I'm interested also in potentially starting within the LCB our own research group. And so, if we do some long-term research, I would love for this group to help us be thinking about **what are things we should be focusing on in the future as well as the immediate things that would be helpful to the LCB.**

Gillian Schauer: That is helpful to hear. I was going to chime in and just say I continue to feel like I need a better understanding of what's the charge of this group. Like, is this going to be the place where the discussion about how to regulate hemp-derived products happens? Is this a place where we are just sort of making a bucket list of these are regulatory areas with science underpinning that need to be discussed and maybe we sort of chunk those into discussions? Or is this the place where we are talking about what long-term research could LCB support that would be valuable to influence policy, consumer safety, markets, etc.?

Kathy Hoffman: Going back to our first meeting the basis of this group was really off a Bill that did not advance last year from Senator Keiser that would have established a group similar to this with sort of a similar charge that was a little bit ambiguous. And so, what we are trying to do in bringing everybody together and asking for research interests was trying to narrow that down to the extent we could and then have the second meeting and even narrow those interests down even further. **And it sounds like we are going to go on the cannabinoids and regulation side, and then how the group can move forward on that to inform some of the Agency direction and perhaps beyond that, as well.** But I think the parameters in the group are pretty pliable, actually, so that we can take a couple of different directions if we wish and even create subgroups if we wish. So I hope that helps a little bit.

Chris Beecher: I think everybody on the committee wants to help. And the question, I think, that really is, **what does the Board need**? And you know what -- I think we are all perfectly willing to help, and I think the number of the aspects that we can cover within the Board is really quite

formidable. But the Board really has to say, "We need help understanding how to deal with delta-8." "We need help understanding on what level could we or should we be dealing with CBD?" I mean, these are the things that people have touched on in the last 10 minutes. But it's not a matter of -- you're never going to want – you know, I don't – I'd be happy to do -- offer research projects, but I don't see why you should care about my research projects. We need to help you. What do you need? Can the Board be very specific?

Kathy Hoffman: The purpose of this group was pretty general. Let me bring up the charter and see if that helps with this conversation a little bit.

Jessica Tonani: Kathy, am I remembering this right? Did this bill come out of kind of the discussions last year around impairing? Is that? Am I remembering that right?

Kathy Hoffman: (sharing screen and group charter) the objective was to collaboratively and transparently explore and build foundational understanding of the plant. And the group responsibilities may include reviewing and discussing available research data and regulations related to cannabinoids and providing recommendations on potential guidelines for safe methods of manufacturing, extracting, and synthesizing cannabinoids. So the Board did review this charter. If you would like additional clarification, **I can certainly return to the Board and ask for something more specific.**

So with that as a backdrop, looking and revisiting the charter, and turning back to the Agenda where one of our goals today was to scope this work and talk about long-term, short-term. Things we can tackle long-term towards the end of our sessions. And we are going to meet every other month for a year on things that we could work on more short-term. And looking at that third bucket in people's minds what might be short-term projects and what might be longer-term projects?

Gillian Schauer: The discussion about **hemp-derived cannabinoid products**. It's very short-term, and there are any number of definitional issues that this group could talk about. But there was already the Hemp and Food Taskforce. There is already draft legislation. So I am not sure where to plug in to be helpful and not sort of roll the cart backwards down the hill. [cross-talk] discussions are going to be valuable for our state and also, frankly, nationally. Right? This is the year when the Farm Bill Reauthorization is going to happen, and to some degree that could override whatever states have done anyway. So I could see that being a very valuable exercise. But I'm curious what others think because there has already been some discussion. I think they are likely to be areas where in a very civil way we won't all agree on definitions, and I don't know that that is necessarily productive to continue to highlight where there are differences if there is already been a consensus

building effort underway in the state. But that strikes me as the most urgent sort of short-term objective here.

Jessica Tonani: I think maybe possibly having an overview of what the different -- and Nick touched on this a little bit, Gillian touched on this a little bit -- that there has been the Hemp and Safety Food Task Force. There has been some regulation proposed. There is already some statue on definitions. And maybe **getting like a little summary for the group to review. And maybe trying to understand what we believe should be included and not included in a definition to start with may be a good starting point.** But I don't know. That would be a proposal I would toss out.

Nick Poolman: The quotations you have in the charter is almost the definition that we can use for cannabinoids. Right? It focuses in. And if we are saying, the cannabinoids are created by cannabis and their synthetic equivalents, then we kind of know which ones we want to talk about are the "cannabinoids" for this group.

Ryan McLauglin: I don't know. I find it hard to have a conversation about regulation of diverse compounds when we just don't have any research to base any regulatory changes on. We are pretty confident and have been for quite a while, but delta-9 THC is the primary psychoactive constituent. It's the one with the abuse liability. It's the one that is the problem that everyone thinks is the problem. Right? All of the other minor phytocannabinoids apart from CBD, which has been shown to be relatively innocuous, have really not been shown to have much in terms of abuse liability in part because the research just hasn't been done. But **it feels difficult, from my perspective, to offer regulatory advice on compounds that don't have any evidence to support them being regulated.**

Gillian Schauer: I agree that we are lacking the science, but I think we are in a reality where policy is already happening. And so, we have to do the best we can to discuss the science we have and to use the science we have to make extrapolations. And the research on a lot of the minor cannabinoids has been done with the levels at which they exist in the plant. It has not been done at the levels with which they are being extracted and put into products. So I still think we need to do our best to bring science to policy. If we waited until we had sufficient science to make policy, none of this would be happening. And that is not the reality. Policies are happening federally on hemp. So I would argue that **we need to get around the table and use the science we have to have some thoughtful discussion, even if it's woefully inadequate science at best**.

Amber Wise: I just want to kind of add on to what Gillian said. These minor cannabinoids are now being either converted or being extracted and isolated and added at higher concentrations in legal products. And so, understanding we don't have a great understanding of the science of people

being exposed to them at higher levels at this point, but they are being added to products that people are buying. I'm not necessarily terrified in that regard, but **I think we should be aware of what is out there and be conscious of it at the very least.**

Ryan McLaughlin: I would totally agree with that. I think we need to be aware of it. I just still have a problem. I mean, people have been adding -- there have been additives to E-cigarettes and all of these sorts of things that have been far more insidious and shown direct health effects that need clear legislation and regulatory action immediately. I just don't know how we regulate a compound like CBD, for instance, when there is literally no research that is been done on it just because it comes from a cannabis plant. I mean, several terpenes are also naturally produced by a cannabis plant, but we are not talking about regulating terpenes right now. Are we?

Amber Wise: I mean, I don't know if anybody's talking about regulating or banning these types of substances. **I think we are having a conversation about what we know about these in the plant and in products that are available.**

Tracy Klein: Sure. I guess I would just say also that **regulating doesn't necessarily mean prohibiting something. And I think that is pretty important to talk about at some point. I mean, it can mean providing for appropriate testing and labeling that actually lets the public know what they are getting, but they still couldn't get it.**

Kathy Hoffman: If I can follow-up with that. Maybe one of the things that we think about when we are talking about short-term goals, long-term goals in terms of what we approach here, let's define what regulation means. And to your point, Ryan and Tracy, maybe we need to scope the parameters of regulation.

Jessica Tonani: So just a quick comment. I think the other thing that is part of the charter is the **manufacturing** in these. So we have to also step back and say, like, we know delta-8 is a pretty benign compound based upon the pediatric studies. We don't know that -- I mean, it can make you high, but it's not like -- it's like delta-9. But we don't know that when you manufacture delta-8, synthetically if it's safe. And so, we have to look at the compound and then also how people are making that compound is, I guess, the point I would say.

Holly Moody: Okay. So I was thinking about something, at least in my own experience from a toxicology point of view. When we test people or used to test people for cannabis use when it was completely illegal everywhere. What they said was chronic use was two to three times a week. Now I'm aware of people who are medical cannabis users that use it two to three times an hour. So **how do we determine when people such as that are impaired beyond whatever is legit to drive a**

car, for instance, or to operate machinery? We don't have anything defined that way nowadays in that perspective of the new reality of legal cannabis.

David Gang: Yeah. Holly just got me thinking of some other things. Really good points there and something to really think about. Mine was back to actually what Jessica said, and that is that **how the compound is generated is something that really is critical in this understanding.** You know, we got several chemists here. We all understand what happens when you chemically transform something as is commonly used in the vernacular here. There are lots of things that can happen. You get side reactions. None of that is being looked at. We all know the recent letter, again, by the FDA saying they are not going to touch this again. They said that again. Right? They're hands off. They are just not going to be regulating this at this point. **So if any state like ours are going to allow these products to be available to people, it's incumbent upon the state to determine what is safe and what types of processes that occur are allowable with the generation of these products. All of that needs to be looked at.**

And I think -- to go back to what Ryan said -- very, very little research has been done in those areas, so we really don't know the answers to a lot of these questions that people have. When you talk to legislators, they want a short three sentence answer to things so they can "understand it." And I understand that perspective, **but there is no such thing as that kind of an answer.** And it's really difficult in being able to talk to people that are making these policy decisions, based on no information. **How do we generate the information that can actually help them make better decisions that are really going to be helpful for everybody? That is something that I think we need to really think about how we can do that. That is a big challenge, though. It's a real challenge to figure out how to do that.**

Gillian Schauer: But I was just going to chime in and say I think that **the production and manufacture of the products is really important. And if we are lacking the science to say what we think is safe, I think one of the things this group could do is discuss other ways to assure consumer safety in the absence of science.** What does that mean? Is it taking a precautionary approach? Is it having some thresholds? I mean, I think that would be a valuable discussion. I'll try to figure out how to lower my hand now.

Tracy Klein: Just really briefly. I mean, most of the points have been said. But just to, again, re-emphasize that the lack of information is at all levels. And I mean, I think we have to also **figure out who the audience is. I mean, typically, regulations are there to protect the public. And so, we can assume that our audience is perhaps the public that doesn't have much background or education at all. But we also have to at least provide some support for people who do**. And perhaps there will be some ancillary documents that will come out of this taskforce.

Kathy Hoffman: Yes. Agreed. If I may, I would like to read something that Richard put into the chat. It says, Not only are minor cannabinoids being synthesized and sold to consumers, but **the synthetic side products that are present in new synthetic substances are new chemical entities that have not been previously reported. We are testing consumer products that contain new chemical entities in higher abundance than the target substances named on the product label.** We are also seeing mixtures of THC. I might be wrong -- but homologues, and their acetates.

So we have only got two minutes left before we wrap up. I want to switch gears. And we have talked about short-term things, short-term items in a cannabinoid regulation bucket. Long-term things -- and I know we have got just a very short period of time to do that -- but I wanted to weigh in with folks on what might be long-term goals that we want to think about or long-term issues that we want to think about.

Jessica Tonani: I would like **funding** on there. Thinking about how we fund future research.

Amber Wise: I was going to say **harmonizing testing standards and harmonizing regulations across states is direly important**, as the feds are not going to move on this for quite some time.

Kathy Hoffman: All right. Gillian, do you -- is it real [cross-talk] okay [cross-talk] --

Gillian Schauer: I was going to echo what Amber said. On my mind is the sort of **future of interstate commerce**. And I think there are any number of areas that Washington should be talking about to prepare for that. But on the science side, harmonizing the lab testing, the product safety standards, figuring out what that looks like, I think is of critical importance. I would also be curious to hear from the Board. I think the idea of considering how Washington does more to support research is really important. And we have seen a number of other states move in those directions. I would be curious to hear what the Board's thoughts are on that and what, if any, areas the Board is interested in.

Holly Moody: **Across-state labeling, like product labeling**. Because I've gone between Arizona and California, and the disparity between all the different products, even amongst the products in a single state, it's just confusing, and there is no uniformity in that. And especially if it does become a national market, that is got to be something that is probably put into place sooner rather than later.

Gillian Schauer: And I'll just chime in and say that is an issue at the Cannabis Regulators Association that we talk a lot about. And there are a lot of challenges to any one state harmonizing that, and

even to multiple states coming together and saying, "We think this is what good would look like." The packaging and labeling standards come through state legislatures. So you would effectively have to get every state legislature on Board to make changes there. Not that this group couldn't put forward recommendations based on science about what we think would be good to be considered from Washington State's perspective, but the harmonization piece is a very challenging one.

Kathy Hoffman: It definitely is. I want to just take a moment here before we close to check in with a Board Member Vollendroff and perhaps Justin Nordhorn, he is our Director of Policy and External Affairs. Any parting or closing remarks that you'd like to make before we conclude the meeting today?

Member Vollendroff: I just want to thank everybody for the fruitful conversation. I think that there is a number of things to consider. And I want you to think about the desire that we have to use science and research to help with policy decisions. And the lack of information is the problem, and so the lack of good research is the problem. And when we are faced with making policy decisions, we sometimes have to do that with what we have available at the time. And so, I get that there is not adequate research in this area, and that is the value of having this group. And to the degree that this group can again help us shape what that could look like within the LCB in the future would be super helpful. So thank you.

Justin Nordhorn: Yeah, I would add just thanking everybody for your time in the conversation. A really good conversation today. And as you heard earlier, we are looking at setting up a research program within the LCB. And so, hearing the questions that you all are presenting really is going to help also form how we want to develop that program and take a look, and we are kind of at the beginning stages of that. So listening to all the questions that you have is going to be really helpful. We may not have answers yet, but that's okay. And I think that the conversations are going in a very robust manner, and I think that this is going to really have a lot of value added for us, even if we can't identify what that looks like exactly right now. I can tell that this is going to be very beneficial for us. So I really appreciate everybody taking the time to participate in the meeting.

Kathy Hoffman: All right. Thank you very much, Justin. I just wanted everyone to know that Chris Beecher had to leave a little bit early. So that is why he wasn't engaging in the conversation anymore. Sounds like there is a little bit of homework that I will do for the group and get back to everyone on. And then I'm hoping that in between our meeting we can have some more discussion via email on what we can do to have a super productive next meeting in April. So looking forward to seeing everyone. And thank you, again, for your commitment to this work, for joining us for an hour out of your busy schedules to have these really important conversations. I look forward to

seeing you next time. So anything in closing? My co-Chair, Holly, anything you would like to offer before we sign off?

Holly Moody: No, other than the conversations that we have in this group are fantastic, and it takes me so long to soak them in.

Kathy Hoffman: Good to hear. The recording will be up. And thank you for that, Holly. Appreciate it. Recording should be up on our external website probably in a couple of days if you want to revisit it. But in the meantime, looking forward to seeing you in email. And we'll see you next time. Take care everyone.

ADJOURN

Minutes approved by consensus of the Cannabinoid Science Work Group at its regularly scheduled meeting on **April 6, 2023.**

Kathy Hoffman, MPA, PhD
Policy & Rules Manager