Washington State
Liquor and Cannabis Board

Washington State Liquor and Cannabis Board Cannabinoid Science Work Group Meeting

Thursday, December 7th from 10:00 a.m. to 11:30 a.m.
The meeting was convened via Teams

Meeting Minutes

AGENDA ITEM 1: CALL TO ORDER AND ROLL CALL – 10:05AM
Sarah Okey opened the discussion.

Present: Carter, Taylor (CSWG member)
Douglass, Brad (CSWG member)
Foster, Gregory (Cannabis Observer)
Graversen, Madilyn (LCB)
Hamilton-Steele, Tierney (LCB)
Kildahl, Jeff (LCB)
Laflamme, Denise (LCB)
McLaughlin, Ryan (LCB)
Okey, Sarah (LCB)
Peck, Angela (LCB)
Tonani, Jessica (CSWG member)
Trumball, Kari (LCB)

Absent: Beecher, Chris (CSWG member)
Gang, David (CSWG member)
Klein, Tracy (CSWG member)
Sams, Richard (CSWG member)
Murray, Sarah (CSWG member)
Moody, Holly (CSWG member)

AGENDA ITEM 2: OCTOBER 5, 2023 MINUTES AND ACTIVITY REVIEW
Sarah Okey asked group members to offer changes/concerns regarding the October 5, 2023, meeting minutes. There were no revisions offered by email before the meeting or during the meeting, and the group accepted meeting minutes as drafted.

AGENDA ITEM 3: THC BILL QUESTIONS AND FEEDBACK

Sarah Okey: The next agenda item for today is to look at THC Bill questions and feedback. That was originally going to be facilitated by Cassidy West, our Policy and Rules Manager; however, she is not able to make it today, so I am going to try my best to ask you some of the questions that she is interested in getting feedback on. Now I do know she is drafting a document right now to be able to send to you to get any more feedback from you if you have the ability to do that. She will also be holding stakeholder engagement sessions on the 15th and the 19th to have this topic more publicly discussed. So again, bear with me with facilitating what Cassidy originally wanted to discuss. But in a broader sense, with this THC bill comes with a need for having standardized definitions and understanding how we are defining certain words and how they might go into rulemaking. So part of what Cassidy was hoping to discuss with you all is how we are differentiating between active THC, total THC, THC concentration. So any thoughts about how you might define or differentiate those three items?

Jessica Tonani: I think in statute, generally, we always refer to total THC. So using the essentially, delta 9 plus 0.87 times THCa as essentially the potential of THC.

Sarah Okey: Yes, we are striking the delta 9 to include all other THC components, and so I'm curious, Jessica, how you might revise that given the total THC has originally included delta 9, but now that we are striking that, how might you better word that?

Jessica Tonani: I mean, to be brutally honest, I think that we attempted to not have that language. We attempted to have the specific cannabinoids called out so that labs would know what to test for and have the math around it. Without the math around it, it is difficult to tell essentially the potential for, whatever we want to call it, let's call it impairment, but if, for example, THCa is not equal to THC, there is that decarb. So I know Brad is on the phone, too, and he used to run a testing lab. I don't know if Ryan or Taylor have anything to say, but I would say it is pretty difficult if we are saying any -- if we don't have a definition of what the compounds are to say what the math the lab should have behind it is.

Sarah Okey: Thank you. Other comments from that?

Taylor Carter: I would add. I mean, I guess the question, itself, I can't really answer it, but to like group THCV and delta-9 together is, from a molecular standpoint and scientific and stuff, it is so far apart you could be giving the same total information, but the actual cellular effect, macro effect on the person is so vastly different that you are almost misleading in that statement. So, I can't really add the best way to do it, but just my opinion on it would be to potentially group. I can understand delta-8 and delta-9. I do research with both. Immunologically, they are very

similar dose-dependent response, immunologically similar. I know in the nervous system it is different, but when you are looking at the THCV versus delta-9, to group those two together is difficult to give a good definition or what that would look like.

Sarah Okey: Okay. So Taylor, you are saying it makes a bit more sense for grouping delta-8 and delta-9, but for THCV it doesn't make sense on a molecular level.

Taylor Carter: Correct.

Sarah Okey: Thank you.

Jessica Tonani: I think that there was -- I could be wrong -- but some different differentiation also between, like, naturally-occurring extracted from the plant versus semi-synthetic or synthetic. I don't remember if that made the bill, but I think that there was some active discussion around. If you differentiate those, I think it becomes a little bit easier.

Sarah Okey: So that does lead us to the next question about defining synthetic and looking at how that might inform the rule. Before we move on to that specific topic, does anybody else have any comments related to differentiating or defining active THC, total THC, THC concentration and as it relates to kind of stripping just the delta-9 from that?

Jessica Tonani: I think the intent -- I think if we step back and say the intent was to prevent some of these compounds being sold without some sort of regulation around the potential for impairment. And so I think that it is important for us to remember what the intent was and try to figure out if we can differentiate the best way to initiate rules around that intent given kind of what Taylor has mentioned as well as the fact that our labs have to have a list of what they are going to test to.

Sarah Okey: Thanks, Jessica. So then moving to synthetic and defining synthetic. Cassidy sent me three different options [definitions] for this. The first one is a dictionary definition of synthetic, which states something resulting from synthesis rather than occurring naturally, especially a product of chemical synthesis. So that is the dictionary definition of synthetic. There is also language of synthetic cannabinoid in RCW 69.50.455, which says synthetic cannabinoid includes any chemical compound identified or by the Pharmacy Quality Assurance Commission under RCW 69.50.201. Or we could create an entire new definition for synthetic cannabinoid or synthetically-derived cannabinoid. So my first question, then, would be, what do you think about the dictionary definition of something resulting from synthesis rather than occurring naturally?

Jessica Tonani: I think the problem with that is people are synthesizing compounds like delta-8 that occur naturally in the plant, and there is no robust mechanism, but that labs can differentiate whether it is synthetic or whether it is naturally occurring from the plant in a product.

Sarah Okey: Okay. Any thoughts related to that? Thank you, Jessica.

Brad Douglass: I'll add to that, Sarah. This is Brad.

Sarah Okey: Okay. Thank you.

Brad Douglass: The dictionary definition is a little tautological in that it defines synthesis by something that is synthetic, and that is I think that is one of the biggest challenges we see is that nobody agrees, or very few people agree what's synthetic means. So, like, we need more meat to the definition to make it testable or enforceable.

Sarah Okey: So what might that look like then?

Brad Douglass: Well, we can move on to, I think, to the second proposed definition. I think the synthetic definition, that synthetic cannabinoid definition that is in statute is too broad because it refers to a broader class of compounds that act on cannabinoid receptors. I think we need something. I think we discussed this on some of our deliberative dialogues a year or two ago. We talked about anything that is been chemically modified as a way of defining synthesis broadly, or a synthetic cannabinoid broadly, and that can include anything beyond synthetic step or beyond decarboxylation, which is common to cannabinoid manufacturing.

Jessica Tonani: And Brad, if I'm remembering right, we approached it slightly by saying the only thing that people could do was heat, light, and pressure. Is that -- am I remembering that right?

Brad Douglass: Yeah, we tried to define what are the type of operations that would occur in food handling, or you would expect to occur that would be a chemical transformation, and that is how we came down on it heat, pressure, and light are the only allowable operations where you could chemically modify any cannabinoid and it not be chemical synthesis or not be synthetic.

Jessica Tonani: And that was because that would allow people to do decarboxylation.

Brad Douglass: Right, exactly.

Jessica Tonani: And there are certain states, I think it was New York, there was a state or two that accidentally banned decarboxylation, so we wanted to make sure that we did not do that because that was, essentially, what everybody in 502 wants to do, so we didn't want to ban that.

Sarah Okey: That makes sense. Any other thoughts surrounding defining synthetic cannabinoid or synthetically-derived cannabinoid?

Jessica Tonani: I personally think it is easier to define what people can do versus what is not allowed, but that is my personal so people can do these types of reactions, and anything else is not allowed versus the inverse because the bucket of what people will get creative on is huge, but that is my personal opinion.

Sarah Okey: Right. Thank you. Anyone else?

Brad Douglass: This is Brad again. I absolutely agree with Jessica. I think it is easier to define that allowed list of transformations or what can be done, particularly heat, light, and pressure. We had originally ended some of our discussions proposed having changes in pH. Like, you might think that a cannabinoid acid you could turn it into a salt by changing the pH, but one of the objections to that was, well, you can pass compounds through acidic media and create, you can -- I summarize compounds from delta-9 THC to delta-8 or things like that. So that was one objection to having that type of transformation be kept or to still be prohibited.

Sarah Okey: Thank you, Brad. Anyone else …..related to this idea of defining THC, active THC, synthetic? I know that within this THC bill that is being proposed with rule changes and these different stakeholder engagement sessions that Cassidy is going to follow up with you more is related to this. I know there are also some questions related to the recommendation doc that was recently finalized, and that is something that she will provide more specific questions on. Denise and Jeff, is there anything further that you think would be important to ask related to this discussion before we move on?

Denise Laflamme: I don't have anything beyond what you covered. And without some other specific direction, too, from Cassidy.

Sarah Okey: Okay.

Denise Laflamme: So, thank you.

Sarah Okey: All right, sounds good. Thanks so much for your feedback on that. And like I said, just the very initial discussion before we are able to get a little bit more specific details about feedback that Cassidy is also looking for. And she did tell me that she was going to get that document with questions for you all soon for your review, and then to put it on GovDelivery as well.

AGENDA ITEM 4: IDENTIFY NEXT TOPIC AREA

Sarah Okey: Now I want to transition the conversation over to what this work group will look like moving forward. And to start off this conversation, I want to reiterate the purpose and objective of this work group as identified in the original Charter that you put together a year ago.

So the purpose of the Cannabinoid Science Work Group is to provide an environment for scientific and data-driven discussion about cannabinoids with the objective to collaboratively and transparently explore and build a foundational understanding of cannabis as well of its synthetic equivalents. In addition, this work group is headed by the research unit. As I said, it is a newly-formed and quickly-developing unit, and our mission is to conduct and analyze and report internal and external research that is evidence-based, objective, and nonpartisan, so free from bias. And with that, I do want to discuss the structure of this research unit, especially given the transition from Kathy, who started this work group within policy and rules team and then transitioned into the research program. And I want to acknowledge and emphasize that with the advent of this new research team is that they are researchers.

We are not policy makers. We review research and we conduct nonpartisan research, and then we will have individuals who are like our policy and rules team, Cassidy West, Denise, Jeff and other team members to come in and share their areas of expertise. And so, the Liquor and Cannabis Board has really emphasized the importance of having a research unit to bring more research and scientific knowledge and empirical evidence to LCB. And as a researcher, it is really important -- and I know that we have shared this in this group as well, that we can speak and be transparent about what we do know as well as what we don't know about the products and services that LCB regulates. I really want to structure the group to make sure that we are able to create more clarity about that, we do know and what we don't know. And then I also think it is important to acknowledge meeting in the middle with policy, where we understand that the scientific knowledge may not be fully fleshed out, but figuring out how we can use what we do know to help create more empirical recommendations that are grounded in literature.

So moving forward. As I mentioned, the research team will be more so interested in topics that are deemed important in the scientific field, and then we will have regular participation from policy and rules team and perhaps other areas of LCB to have those meet-in-the-middle discussions create those recommendations. So thinking about moving forward, I'm really interested in having this work group, which meets once every two months, be an expert panel on different topics and really being the springboard for creating documents that are shared within the community and within the agency about current and really prominent scientific knowledge on specific topics and then how we can use science to embed that within policy and rule making. And then because this is the research team, we also want to figure out how we can utilize your expertise to jump into what might be longer-term research projects and topics as well. So I just want to stop. Any thoughts or comments related to anything I just said?

Ryan McLaughlin: Sounds great.

Sarah Okey: Great. Awesome.

Ryan McLaughlin: Yeah.

Sarah Okey: So what I did for this meeting is I watched past work groups. I got a sense of what areas of interest were identified in the group. I looked at that matrix that Kathy had developed with all of you. I looked at the identified research areas of interest for the research unit, which I will go through in a second, and how the strategic plan and the agency and conversations with board members and management and other research agendas outside this organization to kind of guide where we might go from here. Broadly speaking, the research unit has developed three large research priority areas which involve medical cannabis, broadly-speaking, medical cannabis, increasing education, prevention, harm reduction, and enhancing communication and collaborations within and outside the agency. The research unit in it of itself is not only interested in cannabis, but given the focus of this group, I put together some specific interest that you have previously discussed and how they relate to your areas of expertise and how the research unit areas of focus kind of dovetail within those topics.

With that, I am going to share my screen with you. Oh, I see one comment that says “That is the most realistic goal I have heard.” Okay, thank you. Can people see this? I'm going to, hopefully, if I can figure out the technology, I'm going to be giving you a ranking where we can rank different research areas that we think might be of interest. I pulled these research areas again, kind of dovetailing from what I have heard on the research unit interest, the agencies interests,

and I came up with these, I don't know, six or seven of them. So I'm going to read them out to you.

What types of information about cannabinoids can help people make better decisions about what they consume? What do we know and don't know about synthetic cannabinoids? How do we define and discuss impairing and intoxicating, and particularly in the context of driving? How do we increase consumer safety in the absence of scientific knowledge? What are the best practices in product labeling? What are the paths forward in structure and function claims as it relates to medically-compliant products? And what are the standard definitions for ingredient processing, conversion, and synthetic? I'm curious whether there is a specific topic that I have missed from discussions that you've had because I haven't been involved in all of the work groups so far -- in most of the work groups so far. So I first want to ask -- is there anything glaring that is missing from these research topics?

Jessica Tonani: One of the things we talked quite a bit about in context of the DDT/DDX situation is the evaluation of the pesticide/heavy metal research around that area and how that correlates to product safety. I don't think that we have a very good understanding of, for example, what soil is safe to grow in at this point, and that type of guidance, I think, could be really helpful to producers as well as consumers.

Sarah Okey: Okay, great. Is that question worded correctly, Jessica? Or should I change that? What is the research around pesticides and product safety?

Jessica Tonani: Yeah, pesticide and heavy metals, I would say, and maybe how that correlates to guidance that we give around licensing and things like that in the state.

Sarah Okey: Okay. Thanks, Jessica. I do remember hearing that conversation. Any other areas or topic areas that you feel are missing from this list that you had previously talked about in the work groups?

Angela Peck: I can jump in and give a little bit of an update for you guys. I don't know if it is -- I don't want to go off on too much of a tangent -- but regarding the DDX, we have been working closely with Ecology to actually do some of that research, so it is really exciting. I wish Dr. Gang were here because he has agreed to do the research on the uptake studies, and so I have been helping out and involved in the scope of work for that project. So it is pretty exciting to know that that work has been going on and I think is ongoing. And now that attention has been brought to that area, I think it will open up a lot of doors for more research. So I'll keep you guys posted, too, on how that research is going. I know they have already collected this soil, I

think, just this last week. I have been working closely with Ecology on that. So Ecology has collected soil, and Dr. Gang is going to be growing hemp in contaminated soils so we can get some uptake studies. So I'll keep you guys posted, though, on how that research is going.

Sarah Okey: Very neat. Thanks, Angela. Very exciting. Yes. Please keep us posted on that. And I think when we are also deciding this next topic of interest, I do think that part of our discussions can be creating these kind of alerts or memos of this. We need more research on this topic and have this kind of create this platform of here is what we know, here is what we don't know, and here is where we would support more research.

Jessica Tonani: And I think some of the agricultural studies like these DDT studies are feasible within the scope of what we can do in the State of Washington and have fairly significant impact to our market.

Sarah Okey: Any last thoughts related to any additional topics that were previously identified that are not up here? All right. So now let's see if I can get this technology to work. In order for us to have this conversation I would love to do a little ranking exercise. So let's see if this works. If you can either go on this QR code. And maybe I can also bring this into chat. And take some time to rank order what you think is most important for this work group to work on from highest to lowest priority and then, hopefully, fingers crossed that this technology works. We can see in real time where these responses are being submitted, and then we can have further discussion about that. So I'm just going to pause for a second for people to bring this up. Let me know if you cannot see this or are unable to submit your responses.

Jessica Tonani: Is there any -- should we give any context to like what's actually feasible in a shorter period of time or logistics or just what we --

Sarah Okey: Just what you think is the most, and then we can derive kind of what the feasibility is moving forward because that is the next topic area that I want to talk with you. Okay, so I'm going to -- I know there are lot of long questions on this, so I'm going to wait for two or three more minutes, so maybe until 10:45. So we will resume then just to make sure everyone has time to put in their rank orders.

Okay, we have three responses. If you are still filling it out, that is totally fine, and I really wanted to use this activity or exercise as a way to structure the conversation. It seems like we have, What types of information about cannabinoids can help people make better decisions about their use? and what is the research around pesticides and heavy metals and how does that correlates with guidance and product safety as kind of the top two. And then the third one

is, What are our paths forward and structure and function claims as it relates to medically-compliant cannabis? So Jessica, I'm going to go back to you, and you were asking about feasibility versus priority. Can you speak a little bit more about what you were thinking?

Jessica Tonani: Well, my thought is, for example, impairing and driving is an issue that people have been trying to tackle, and there have been tens of millions of dollars put into that. And we, as a group probably can report back the latest science but not really move the ball would be my take on that. But if you look at, like, the pesticide heavy metal situation with, for example, the work that Angela was talking to, we could actually design and implement experiments here. Some of the things around structure, function, claims, and medical we could probably borrow from states like Minnesota and Pennsylvania and just kind of revamp the medical system, so there are certain things that we may be able to actually accomplish with a lower bar versus other things that may be significantly higher bars. And it is not that they are not a priority, it is just realistically meeting every other month as a group of volunteers in Washington. But that, I guess I appreciate other people's feedback on that.

Sarah Okey: Sure, yes. I am interested in hearing other feedback, and I do want to acknowledge that, yes, you are completely right that meeting once every other month within a group of volunteers needs to be taken into account. And I also want to acknowledge that the research unit is interested and is invested in pursuing these longer-term projects moving forward. So potentially, for example, with the impairing of driving. Yes there is a lot to that. It is very complicated, and I agree that as of right now, this work group [indistinct] the extent of it might be kind of creating that literature review and saying, here, this is why we are struggling. What are the specific areas of inability to create those definitions and be very transparent and clear about how that is a really difficult thing to put out there to define.

And if we have a meeting or two surrounding that, then the research team can put together a document that really explains that in a clear way or LCB for Washington and figure out what avenues we may be looking towards within that very complex matter for longer-term projects. I'm not sure if that makes sense or if that answers kind of what you were thinking about, Jessica.

Jessica Tonani: It does. I think that some of these questions other states, like California, have put significant resources, $20 million, $30 million in grant money behind, and we, as a state, haven't been as willing to do that. And so I guess the question that I have is, is our goal in the state to figure out how we help consumers and products here or, like, what are the resources, and what does that look like? And I think if the resources are what they are today, then those first two or three things are probably within scope, but then some of these other things, I just

don't even know if they are realistic in any sort of scope with the resources that they have been given. But I [cross-talk] other people's feedback on that. I don't want to be Debbie Downer.

Sarah Okey: No, not Debbie Downer. I think that is very realistic that we do have to look at what is feasible and what is -- you know, we don't want to recreate the wheel, and we don't want to start where other states have really put a substantial amount of funding when we can really look towards that and tackle something that is really going to be applicable and make a difference. Other thoughts related to what Jessica said or about these top three topics from these three responses that were submitted. I'm curious about the types of information about cannabinoids that can help people make better decisions. Curious to hear about your thoughts on that specific question or topic area.

Ryan McLaughlin: I feel like that seems somewhat related to best practices and product labeling to an extent. I mean, giving consumers information that is kind of where they need it most.

Jessica Tonani: I think that there is some basic knowledge that not every consumer knows about, like time of onset and things like that, which has a tendency to have people potentially over consume or under consume and just not consume correctly.

Sarah Okey: So I hear it like combining maybe those two. What types of information might be best suited on product labeling that might really reduce that harm and prevent an adverse experience.

Jessica Tonani: Or maybe even enable a good experience. I think we need to look at this in the context that everybody that is consuming it, it is not necessarily a bad situation, especially if we are looking at the context of medical patients help and what products may work and things like how long a patient should wait before they determine whether or not a product has worked.

Sarah Okey: I like that. Yes - I really appreciate that. Thanks Jessica.

Ryan McLaughlin: I agree. That's really nice.

Taylor Carter: I'll add one thing to that that I have really been thinking a lot about in regard to just cannabinoids in general. There is a lot of data out there, like, "This may help with this, it may help with this." But when you look at it from an immunosuppressive standpoint, it may benefit something, but the model or the way that they looked at it at that point in time may be where that immunosuppression didn't have a negative side effect. So it is kind of -- I guess it's just the time for me to bring this up. It is this idea of thinking about when you are telling

someone, "This may help with this." Right? Was there a time component looked at where there may be a risk of harm in a certain window? I don't know how much this has come up overtime as cannabis probably gets moved more around the country and used medically, but it is this idea of there is potentially a window.

Like one thing I'll bring up is, like, I know it is completely kind of off topic, but like a carcinoma model I was looking at, where THC was shown to shrink the tumor, but if it was given during tumor initiation, there was more tumor growth. So it is this idea of this time component, like, when are cannabinoids beneficial? And when is there still a harm window? There are studies looking at, I think it was traumatic brain injury, or it was like spinal cord damage, but there is like a short window of four days where if you block the inflammatory process, you have longer, or I guess long-term consequences. But then if you use THC and there's a couple other compounds they looked at after that window, then it was extremely beneficial. So it is this idea of there definitely is a potential harm window and then in a greatly beneficial window in a lot of diseases. So it is this idea of, again, it is just kind of starting the discussion that this will probably come up more and more because, again, we are seeing it.

I work in translational medicine so mainly with mice. But as a lot of this stuff moves into human models, we will start seeing that there is this short-term window initially after disease onset of things like that where there could be some harm. Let's look at like COVID for example. Papers coming out, like, take CBD. It can block viral replication. Things like that. Well, during the onset of [indistinct], when the virus or the bacteria is actually replicating, that immunosuppressive can be harmful, but once you get to the point where your body has kind of taken control, and you have a huge inflammatory process, that immunosuppression is extremely beneficial. But, again, if you gave that person at the wrong time, we could do the same CBD dose say as in an ARDS model or acute lung injury model before, during, and after, and you are going to have differential benefits. If you start too early, the disease may come on harder because you are suppressing some of that initial thing.

So on that topic, again, it is so far away from where the sciences of showing there is this tough window. You have to go through so many steps and get that out there, but it is just someone has to start the conversation, right, and this is just me starting it up. There is this window that at some point will probably have to be watched, and it is like just keeping that kind of on the back -- just like the heavy metal, where I'm going to be submitting a paper in a month or two about THC's ability to block some of these kind of metal [indistinct] [00:49:33] creation in the body, and it is the same concept of that role of cannabinoids and metal is huge. And there are two or three big papers this year looking at the role of the cannabis plant and cadmium uptake,

copper, nickel based on the soil pH and all of these factors, and these papers are within six months.

So a lot of this stuff is just steamrolling out, and it is trying to get in a situation where you realize there may be a risk area and just being alert to it, so you don't get so far ahead and then this comes up and it creates a big debacle. So I know it is kind of a long spiel, but just what I have been reading and just kind of seeing that there are these areas to just be alert to. You may not have to make a big fuss about it now, but just to be alert that there are these areas to be cautious of.

Sarah Okey: I really appreciate that, and I think that is incredibly important. And when looking at and creating information that would be important for the public to know of in a way that is palatable, I think that this work group has such a great potential of being able to figure out what are some things that the public would really benefit from understanding, and I love how that time component is such an important piece. Thank you so much. Any other thoughts related to that? Ryan, I see you are off mute.

Ryan McLaughlin: Yes. I think that was really well said Taylor, and I think to add to that another major issue that is probably something consumers are looking for -- should be looking for, especially as our consumer market starts to evolve, whereby we are getting more and more older individuals using cannabis and drug-drug interactions because there doesn't seem to be very much information at all, at least for the consumer particularly, to guide them with respect to some of the medications they may be taking and their efficacy when they are using cannabis. So I think that is a really important issue that maybe we could shed some light on as well.

Jessica Tonani: I think one of the things that is important for us to realize is that when we rolled recreational under medical roughly 10 years ago, we were out kind of on a limb as far as states go. And so we were really conservative on the information that we wanted to give patients, like overly conservative because we were concerned about federal government infringement. And things have changed, and there are other states that are actually doing this significantly better. If you look at states like Minnesota or Ohio or Pennsylvania, where they are doing things like requiring their research institutions to participate in cannabis research, where in the State of Washington, we don't allow that. And so we are -- I think one of the things that this group can do is look at some of that information and figure out how do we believe we can safely give this to consumers in such a way that isn't based upon rules that were from 10 years ago when it was a very different federal oversight period.

Sarah Okey: Definitely. Thanks, Jessica. Okay. Any other comments or thoughts related about types of information about cannabinoids that can help people make better decisions, and then research around pesticides and heavy metals and how that correlates with guidance? Great.

AGENDA ITEM 5: WRAP UP AND NEXT STEPS

Sarah Okey: So going forward, I'll be reviewing these comments and I'll be getting more feedback from the agency, both within and outside the agency. Additionally because this is this kind of new chapter where the latest recommendations with Kathy were finalized, I am going to reach out to all of you individually and get a better sense of what that looks like going forward, as Jessica mentioned. You all are volunteers, and we want to make sure that your time here is valuable in that we are providing value to you.

And I think as we create the next topics going forward, figuring out whether there are additional experts that we might want to bring in or not, so just having more conversations around that. And then, I'll contact you again about what our next topic area will be for the next meeting, and that will be in February, so I'll give you a contact about that and then also information related to the THC Bill and Cassidy will also be sent out to you. Any final thoughts or questions or comments related to this discussion or related to what this group might look like going forward?

Ryan McLaughlin: I just would say that you've done a wonderful job. This has been a really great and productive meeting, and it has moved very swiftly, and you've done a really great job of guiding the discussion here. I'm excited for the future of what we could accomplish.

Sarah Okey: Thank you, Ryan, and I appreciate that. And I'm really excited to have this work group. We are currently a research unit as a team of two, me included. So as we -- I mean, you know, and I'm preaching to the choir here about there is so much, so many different directions that we could take this and that we could go in, and this is we are climbing up a huge mountain in terms of what information we really need to know and investigate with cannabis. And so I think having this work group is so incredibly important to get more ears in areas of expertise, especially given how all of our research areas of expertise are all very different but can coalesce into a strong force. So thank you so much. Really appreciate it. We will contact you soon to follow up with everything that we discussed, and then figure out how we are going to move forward with this group in the next couple of months. All right. Thank you, everyone.

Ryan McLaughlin: Thanks.

Sarah Okey: Bye.

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