WEBVTT

- NOTE duration:"00:58:39.3000000"
- NOTE recognizability:0.780
- NOTE language:en-us
- NOTE Confidence: 0.778104054

00:00:00.000 --> 00:00:01.150 In person and on video.

NOTE Confidence: 0.6485955766666667

 $00:00:02.630 \longrightarrow 00:00:03.698$ Recording his progress.

NOTE Confidence: 0.4673736

 $00{:}00{:}05{.}770 \dashrightarrow 00{:}00{:}08{.}028$ And so we have a treat

NOTE Confidence: 0.835702823333333

 $00{:}00{:}08.030 \dashrightarrow 00{:}00{:}10.795$ today. We're going to hear from both

NOTE Confidence: 0.835702823333333

00:00:10.795 --> 00:00:12.920 Jordan Slusher and Pat spouse Nick.

NOTE Confidence: 0.835702823333333

 $00:00:12.920 \longrightarrow 00:00:14.372$ We're going to tell us about

NOTE Confidence: 0.835702823333333

 $00{:}00{:}14.372 \dashrightarrow 00{:}00{:}15.760$ different aspects of the study

NOTE Confidence: 0.835702823333333

00:00:15.760 -> 00:00:17.995 that they did together with Cyril

NOTE Confidence: 0.835702823333333

00:00:17.995 --> 00:00:19.930 D'souza and others on psilocybin,

NOTE Confidence: 0.835702823333333

 $00{:}00{:}19{.}930 \dashrightarrow 00{:}00{:}21{.}214$ the treatment of depression.

NOTE Confidence: 0.835702823333333

 $00:00:21.214 \rightarrow 00:00:23.513$ This may well have been the first

NOTE Confidence: 0.835702823333333

 $00:00:23.513 \dashrightarrow 00:00:25.088$ silybin study that was started

NOTE Confidence: 0.835702823333333

 $00:00:25.088 \rightarrow 00:00:27.460$ at Yale annuals, Emmanuelle.

- $00:00:27.460 \longrightarrow 00:00:29.100$ Yes, on this one.
- NOTE Confidence: 0.835702823333333
- 00:00:29.100 > 00:00:32.990 That was the the trailblazing. Hey.
- NOTE Confidence: 0.859382772
- $00:00:34.390 \longrightarrow 00:00:35.360$ So we're going to hear
- NOTE Confidence: 0.767899969411765
- $00:00:35.370 \longrightarrow 00:00:36.545$ some some clinical results from
- NOTE Confidence: 0.767899969411765
- $00{:}00{:}36.545 \dashrightarrow 00{:}00{:}37.952$ EEG and some background and it's
- NOTE Confidence: 0.767899969411765
- $00:00:37.952 \longrightarrow 00:00:39.080$ great to have you guys here.
- NOTE Confidence: 0.823559532
- $00:00:39.760 \dashrightarrow 00:00:42.130$ Thanks Chris for inviting us.
- NOTE Confidence: 0.823559532
- $00{:}00{:}42.130 \dashrightarrow 00{:}00{:}43.522$ Great to be here and thank
- NOTE Confidence: 0.823559532
- $00{:}00{:}43.522 \dashrightarrow 00{:}00{:}44.770$ you all for being here.
- NOTE Confidence: 0.823559532
- $00:00:44.770 \longrightarrow 00:00:48.502$ It's really fun to be finally
- NOTE Confidence: 0.823559532
- 00:00:48.502 --> 00:00:50.606 presenting this work. Doctor,
- NOTE Confidence: 0.823559532
- $00{:}00{:}50{.}606 \dashrightarrow 00{:}00{:}52{.}730$ this is a smiling it's been a long road
- NOTE Confidence: 0.823559532
- $00:00:52.788 \longrightarrow 00:00:57.250$ to get here 7 about seven years or so.
- NOTE Confidence: 0.823559532
- $00:00:57.250 \rightarrow 00:00:59.578$ And so just great to finally be at
- NOTE Confidence: 0.823559532
- $00:00:59.578 \rightarrow 00:01:02.039$ a place of presenting the results,
- NOTE Confidence: 0.823559532
- $00:01:02.040 \longrightarrow 00:01:05.435$ having had at least one of our

- NOTE Confidence: 0.823559532
- $00:01:05.435 \dashrightarrow 00:01:07.978$ papers accepted for publication.

00:01:07.978 --> 00:01:11.408 So let's dive in here.

NOTE Confidence: 0.690985494

 $00{:}01{:}11{.}600 \dashrightarrow 00{:}01{:}14{.}000$ And I should, I should thank Jordan and

NOTE Confidence: 0.690985494

 $00:01:14.000 \rightarrow 00:01:17.096$ Cyril too, because they did the hard work.

NOTE Confidence: 0.690985494

00:01:17.100 --> 00:01:19.487 I just put EEG electrodes on people.

NOTE Confidence: 0.780839607857143

00:01:21.660 $\operatorname{-->}$ 00:01:23.580 Definitely A-Team science approach and

NOTE Confidence: 0.780839607857143

 $00{:}01{:}23.580 \dashrightarrow 00{:}01{:}26.717$ was a been a labor of love for sure.

NOTE Confidence: 0.79799104

 $00{:}01{:}29{.}060 \dashrightarrow 00{:}01{:}34{.}317$ So Steve in this study was called suicide

NOTE Confidence: 0.79799104

 $00:01:34.317 \longrightarrow 00:01:36.662$ and induced neuroplasticity and the

NOTE Confidence: 0.79799104

 $00:01:36.662 \rightarrow 00:01:38.957$ treatment of major depressive disorder.

NOTE Confidence: 0.79799104

 $00:01:38.960 \rightarrow 00:01:42.570$ And happy representing Patrick today.

NOTE Confidence: 0.79799104

 $00{:}01{:}42.570 \dashrightarrow 00{:}01{:}44.970$ As far as disclosures for myself,

NOTE Confidence: 0.79799104

 $00:01:44.970 \dashrightarrow 00:01:46.578$ really nothing relevant to the talk.

NOTE Confidence: 0.79799104

 $00{:}01{:}46{.}580 \dashrightarrow 00{:}01{:}49{.}590$ The research we're presenting was funded by NOTE Confidence: 0.79799104

 $00{:}01{:}49.590 \dashrightarrow 00{:}01{:}52.581$ the Hefter Research Institute and I serve

 $00:01:52.581 \rightarrow 00:01:55.470$ as a consultant with you Sona and ZYBAN,

NOTE Confidence: 0.79799104

 $00:01:55.470 \longrightarrow 00:01:56.798$ which both are involved

NOTE Confidence: 0.79799104

 $00:01:56.798 \longrightarrow 00:01:58.126$ in solar sybian research,

NOTE Confidence: 0.79799104

 $00:01:58.130 \longrightarrow 00:02:00.400$ but not with this study.

NOTE Confidence: 0.79799104

 $00:02:00.400 \longrightarrow 00:02:02.320$ And as far as where we're going to go today,

NOTE Confidence: 0.79799104

 $00:02:02.320 \rightarrow 00:02:04.189$ I'm going to just give a lightning

NOTE Confidence: 0.79799104

 $00:02:04.189 \longrightarrow 00:02:05.470$ fast overview of suicide.

NOTE Confidence: 0.79799104

 $00:02:05.470 \rightarrow 00:02:07.810$ Ben Pression talked about the study

NOTE Confidence: 0.79799104

00:02:07.810 --> 00:02:10.620 design and methods of this study and

NOTE Confidence: 0.79799104

 $00{:}02{:}10.620 \dashrightarrow 00{:}02{:}13.122$ I'll share the clinical results of the

NOTE Confidence: 0.79799104

 $00{:}02{:}13.122 \dashrightarrow 00{:}02{:}15.630$ study and then I'll pass it to Patrick to

NOTE Confidence: 0.79799104

 $00{:}02{:}15.630 \dashrightarrow 00{:}02{:}17.807$ talk about the EEG methods and results.

NOTE Confidence: 0.79799104

 $00:02:17.810 \longrightarrow 00:02:19.376$ If there's time at the end,

NOTE Confidence: 0.79799104

00:02:19.380 --> 00:02:21.995 I'll touch briefly on psychological

NOTE Confidence: 0.79799104

 $00:02:21.995 \longrightarrow 00:02:24.610$ flexibility and we'll have a

NOTE Confidence: 0.79799104

 $00:02:24.693 \rightarrow 00:02:26.897$ little time for discussion.

- NOTE Confidence: 0.79799104
- 00:02:26.900 --> 00:02:28.252 So just real quick,

00:02:28.252 --> 00:02:30.280 have you guys had talked specifically

NOTE Confidence: 0.79799104

 $00:02:30.341 \longrightarrow 00:02:31.289$ on suicide then?

NOTE Confidence: 0.670069492

 $00:02:31.660 \rightarrow 00:02:33.380$ Yeah, but the attendance varies.

NOTE Confidence: 0.670069492

 $00:02:33.380 \dashrightarrow 00:02:34.927$ Yeah, fluctuates. I think it's worth the

NOTE Confidence: 0.679274317583333

00:02:35.260 --> 00:02:37.850 really briefly, Sivan is a member

NOTE Confidence: 0.679274317583333

 $00:02:37.850 \rightarrow 00:02:40.359$ of the classical psychedelic family.

NOTE Confidence: 0.679274317583333

 $00{:}02{:}40{.}360 \dashrightarrow 00{:}02{:}44{.}070$ It's a seroton in 2A agonist.

NOTE Confidence: 0.679274317583333

00:02:44.070 --> 00:02:47.608 Particular. Chemical occurs naturally

NOTE Confidence: 0.679274317583333

 $00:02:47.608 \rightarrow 00:02:49.388$ in silicide mushroom species which

NOTE Confidence: 0.679274317583333

 $00:02:49.388 \rightarrow 00:02:50.959$ are widespread around the globe,

NOTE Confidence: 0.679274317583333

00:02:50.960 --> 00:02:53.340 and psilocybin mushrooms have

NOTE Confidence: 0.679274317583333

 $00{:}02{:}53{.}340 \dashrightarrow 00{:}02{:}55{.}720$ been used for millennia.

NOTE Confidence: 0.679274317583333

 $00{:}02{:}55{.}720 \dashrightarrow 00{:}02{:}58{.}352$ Actually, at the bottom right you can

NOTE Confidence: 0.679274317583333

 $00:02:58.352 \dashrightarrow 00:03:00.718$ see mushroom statues from Meso America,

00:03:00.720 --> 00:03:02.900 Middle America, Guatemala specifically

NOTE Confidence: 0.679274317583333

 $00:03:02.900 \longrightarrow 00:03:05.910$ that date back about 2500 years.

NOTE Confidence: 0.679274317583333

00:03:05.910 --> 00:03:08.400 As far As for Western science,

NOTE Confidence: 0.679274317583333

 $00:03:08.400 \longrightarrow 00:03:10.782$ it is first isolated from the

NOTE Confidence: 0.679274317583333

00:03:10.782 $\operatorname{-->}$ 00:03:12.580 mu
shrooms by Albert Hoffman in

NOTE Confidence: 0.679274317583333

 $00{:}03{:}12.580 \dashrightarrow 00{:}03{:}16.486$ 1957 and there was research with.

NOTE Confidence: 0.679274317583333

 $00:03:16.490 \longrightarrow 00:03:19.269$ The side then back in the early

NOTE Confidence: 0.679274317583333

 $00:03:19.269 \rightarrow 00:03:20.875$ phase of psychedelic research

NOTE Confidence: 0.679274317583333

 $00:03:20.875 \longrightarrow 00:03:23.587$ in the West in the 50s and 60s.

NOTE Confidence: 0.679274317583333

 $00:03:23.590 \longrightarrow 00:03:25.780$ Not going to talk about that.

NOTE Confidence: 0.679274317583333

 $00:03:25.780 \longrightarrow 00:03:28.706$ More recently it has been the preferred

NOTE Confidence: 0.679274317583333

 $00:03:28.706 \rightarrow 00:03:31.708$ psychedelic for most of the clinical studies,

NOTE Confidence: 0.679274317583333

00:03:31.710 -> 00:03:35.046 of which there is increasing many

NOTE Confidence: 0.679274317583333

 $00:03:35.046 \rightarrow 00:03:37.270$ increasing numbers across different

NOTE Confidence: 0.679274317583333

 $00:03:37.351 \rightarrow 00:03:40.380$ mental disorders as well as neurological

NOTE Confidence: 0.679274317583333

00:03:40.380 --> 00:03:42.120 disorders and increasing risk,

 $00:03:42.120 \rightarrow 00:03:45.220$ potentially psychosomatic illness for sure.

NOTE Confidence: 0.679274317583333

00:03:45.220 --> 00:03:47.868 Depression, addictions,

NOTE Confidence: 0.679274317583333

 $00:03:47.868 \rightarrow 00:03:51.840$ OCD increasingly and.

NOTE Confidence: 0.679274317583333

00:03:51.840 --> 00:03:53.193 Was headache disorders,

NOTE Confidence: 0.679274317583333

00:03:53.193 --> 00:03:55.448 you're Yale are getting more

NOTE Confidence: 0.679274317583333

 $00:03:55.448 \rightarrow 00:03:57.628$ attention with the Sobin, please,

NOTE Confidence: 0.679274317583333

 $00:03:57.628 \rightarrow 00:04:01.852$ as far As for the mental health conditions?

NOTE Confidence: 0.679274317583333

00:04:01.860 - 00:04:03.940 The studies with suicide, then?

NOTE Confidence: 0.679274317583333

 $00{:}04{:}03{.}940 \dashrightarrow 00{:}04{:}05{.}692$ Have used some sort of inside

NOTE Confidence: 0.679274317583333

 $00:04:05.692 \rightarrow 00:04:07.276$ that assisted therapy model,

NOTE Confidence: 0.679274317583333

 $00:04:07.280 \longrightarrow 00:04:08.273$ which is which.

NOTE Confidence: 0.679274317583333

 $00{:}04{:}08{.}273 \dashrightarrow 00{:}04{:}09{.}597$ There are many flavors,

NOTE Confidence: 0.679274317583333

 $00:04:09.600 \rightarrow 00:04:12.552$ but the common elements generally include

NOTE Confidence: 0.679274317583333

 $00{:}04{:}12.552 \dashrightarrow 00{:}04{:}15.540$ some attention to set and setting,

NOTE Confidence: 0.679274317583333

 $00{:}04{:}15{.}540 \dashrightarrow 00{:}04{:}17{.}430$ meaning that minds et of the

 $00:04:17.430 \rightarrow 00:04:19.876$ individual going in setting in which

NOTE Confidence: 0.679274317583333

 $00{:}04{:}19.876$ --> $00{:}04{:}21.808$ the medication is administered.

NOTE Confidence: 0.679274317583333

 $00:04:21.810 \longrightarrow 00:04:22.914$ And then the drug.

NOTE Confidence: 0.679274317583333

 $00:04:22.914 \rightarrow 00:04:25.080$ So seeing that those are all important

NOTE Confidence: 0.679274317583333

 $00{:}04{:}25{.}080 \dashrightarrow 00{:}04{:}27{.}966$ elements in determining the outcome and

NOTE Confidence: 0.679274317583333

 $00:04:27.966 \rightarrow 00:04:31.346$ they followed essentially this three,

NOTE Confidence: 0.679274317583333

 $00:04:31.350 \rightarrow 00:04:33.807$ three stage kind of model of using

NOTE Confidence: 0.679274317583333

 $00:04:33.807 \rightarrow 00:04:35.650$ preparation support and integration,

NOTE Confidence: 0.679274317583333

 $00:04:35.650 \rightarrow 00:04:37.610$ meaning preparation sessions leading

NOTE Confidence: 0.679274317583333

 $00:04:37.610 \longrightarrow 00:04:40.060$ up to the medication session,

NOTE Confidence: 0.679274317583333

 $00{:}04{:}40{.}060 \dashrightarrow 00{:}04{:}42{.}610$ a supportive approach during medication

NOTE Confidence: 0.679274317583333

 $00:04:42.610 \rightarrow 00:04:45.160$ administration and then follow up

NOTE Confidence: 0.679274317583333

 $00:04:45.230 \longrightarrow 00:04:48.020$ appointments sometimes called we call

NOTE Confidence: 0.679274317583333

 $00:04:48.020 \rightarrow 00:04:50.252$ debriefing or integration sessions

NOTE Confidence: 0.679274317583333

 $00:04:50.260 \rightarrow 00:04:52.404$ and of course there's been a lot of.

NOTE Confidence: 0.679274317583333

 $00:04:52.410 \longrightarrow 00:04:54.495$ Variety in what those sessions

- NOTE Confidence: 0.679274317583333
- 00:04:54.495 --> 00:04:55.746 would look like,
- NOTE Confidence: 0.679274317583333
- $00:04:55.750 \longrightarrow 00:04:58.022$ but have generally followed
- NOTE Confidence: 0.679274317583333
- $00{:}04{:}58.022 \dashrightarrow 00{:}04{:}59.726$ that three-part structure.
- NOTE Confidence: 0.679274317583333
- $00:04:59.730 \dashrightarrow 00:05:02.845$ As far as philosophy studies for depression,
- NOTE Confidence: 0.679274317583333
- $00:05:02.850 \rightarrow 00:05:05.890$ only going to mention do this very briefly,
- NOTE Confidence: 0.679274317583333
- 00:05:05.890 > 00:05:08.018 but this was really the state of
- NOTE Confidence: 0.679274317583333
- $00:05:08.018 \rightarrow 00:05:09.986$ the research when we were designing
- NOTE Confidence: 0.679274317583333
- $00:05:09.986 \longrightarrow 00:05:12.289$ this study like 6-6 seven years ago.
- NOTE Confidence: 0.679274317583333
- $00{:}05{:}12.290 \dashrightarrow 00{:}05{:}14.642$ There was two trials that were
- NOTE Confidence: 0.679274317583333
- $00:05:14.642 \rightarrow 00:05:17.129$ published in 2016 looking at suicide
- NOTE Confidence: 0.679274317583333
- $00:05:17.129 \rightarrow 00:05:19.229$ and therapy in cancer patients
- NOTE Confidence: 0.679274317583333
- $00{:}05{:}19{.}229 \dashrightarrow 00{:}05{:}21{.}410$ who had depression and anxiety.
- NOTE Confidence: 0.679274317583333
- $00:05:21.410 \longrightarrow 00:05:23.858$ And those were medium sized studies,
- NOTE Confidence: 0.679274317583333
- $00{:}05{:}23.860 \dashrightarrow 00{:}05{:}27.150$ about 100 participants and there was a
- NOTE Confidence: 0.679274317583333
- $00:05:27.150 \longrightarrow 00:05:30.439$ lot of publicity generated from those.
- NOTE Confidence: 0.679274317583333

 $00{:}05{:}30{.}440 \dashrightarrow 00{:}05{:}32{.}939$ That is because the main finding sort

NOTE Confidence: 0.679274317583333

 $00{:}05{:}32{.}939 \dashrightarrow 00{:}05{:}35{.}157$ of indicated these rapid acting and

NOTE Confidence: 0.679274317583333

 $00{:}05{:}35{.}157 \dashrightarrow 00{:}05{:}37{.}663$ long lasting results from a single dose

NOTE Confidence: 0.679274317583333

 $00:05:37.727 \rightarrow 00:05:39.547$ of psilocybin that were persisting

NOTE Confidence: 0.679274317583333

 $00{:}05{:}39{.}547 \dashrightarrow 00{:}05{:}42{.}402$ up to about six months out and then

NOTE Confidence: 0.679274317583333

 $00:05:42.402 \longrightarrow 00:05:44.466$ later in follow up even longer.

NOTE Confidence: 0.679274317583333

 $00{:}05{:}44{.}470 \dashrightarrow 00{:}05{:}46{.}125$ And so kind of generated

NOTE Confidence: 0.679274317583333

 $00:05:46.125 \longrightarrow 00:05:47.449$ this narrative around wow,

NOTE Confidence: 0.679274317583333

00:05:47.450 --> 00:05:48.546 you know,

NOTE Confidence: 0.679274317583333

 $00:05:48.546 \dashrightarrow 00:05:50.738$ lasting effects from single

NOTE Confidence: 0.679274317583333

 $00{:}05{:}50{.}738 \dashrightarrow 00{:}05{:}52{.}930$ doses of solar cylin.

NOTE Confidence: 0.679274317583333

 $00{:}05{:}52{.}930 \dashrightarrow 00{:}05{:}54{.}010$ We talked about how the

NOTE Confidence: 0.679274317583333

 $00{:}05{:}54.010 \dashrightarrow 00{:}05{:}55.090$ media picked up on that,

NOTE Confidence: 0.679274317583333

 $00{:}05{:}55{.}090 \dashrightarrow 00{:}05{:}58{.}700$ but that was sort of the state of of that.

NOTE Confidence: 0.679274317583333

 $00:05:58.700 \longrightarrow 00:06:00.470$ And then right as we were

NOTE Confidence: 0.679274317583333

 $00:06:00.470 \longrightarrow 00:06:01.750$ really submitting this study,

00:06:01.750 --> 00:06:04.126 Robin card Harris published in 2016,

NOTE Confidence: 0.679274317583333

 $00{:}06{:}04{.}130 \dashrightarrow 00{:}06{:}06{.}851$ this first Open label study of

NOTE Confidence: 0.679274317583333

00:06:06.851 --> 00:06:09.677 suicide then therapy in TRD or

NOTE Confidence: 0.679274317583333

 $00:06:09.677 \rightarrow 00:06:11.090$ treatment refractory depression,

NOTE Confidence: 0.679274317583333

 $00:06:11.090 \rightarrow 00:06:13.780$ very small open label study.

NOTE Confidence: 0.679274317583333

 $00:06:13.780 \longrightarrow 00:06:15.365$ And those were the individual

NOTE Confidence: 0.679274317583333

 $00{:}06{:}15.365 \dashrightarrow 00{:}06{:}16.950$ patient results in the graph

NOTE Confidence: 0.86142712

00:06:17.011 -> 00:06:19.264 below. But just briefly you

NOTE Confidence: 0.86142712

 $00{:}06{:}19{.}264 \dashrightarrow 00{:}06{:}21{.}669$ know showed robust effect that

NOTE Confidence: 0.86142712

 $00{:}06{:}21.669 \dashrightarrow 00{:}06{:}23.996$ one week and that persisted to

NOTE Confidence: 0.86142712

 $00:06:23.996 \rightarrow 00:06:26.108$ some degree for about 3 months.

NOTE Confidence: 0.86142712

 $00:06:26.110 \longrightarrow 00:06:28.006$ So again kind of.

NOTE Confidence: 0.86142712

 $00:06:28.006 \rightarrow 00:06:29.902$ Providing some preliminary excitement

NOTE Confidence: 0.86142712

 $00{:}06{:}29{.}902 \dashrightarrow 00{:}06{:}32{.}790$ around the potential of this the rapy.

NOTE Confidence: 0.86142712

 $00{:}06{:}32.790 \dashrightarrow 00{:}06{:}35.275$ Since then there's been a number of

00:06:35.275 --> 00:06:37.650 better studies that have gone on

NOTE Confidence: 0.86142712

 $00:06:37.650 \longrightarrow 00:06:41.080$ at Hopkins in back in London and

NOTE Confidence: 0.86142712

 $00:06:41.080 \dashrightarrow 00:06:43.976$ increasingly now we have phase two NOTE Confidence: 0.86142712

 $00:06:43.976 \longrightarrow 00:06:46.866$ level studies from Zona that will

NOTE Confidence: 0.86142712

 $00{:}06{:}46.866 \dashrightarrow 00{:}06{:}49.582$ be published soon and one that was

NOTE Confidence: 0.86142712

 $00{:}06{:}49{.}582 \dashrightarrow 00{:}06{:}50{.}902$ published from Compass Pathways in

NOTE Confidence: 0.86142712

 $00{:}06{:}50{.}902 \dashrightarrow 00{:}06{:}52{.}470$ New England Journal just recently.

NOTE Confidence: 0.86142712

 $00{:}06{:}52{.}470 \dashrightarrow 00{:}06{:}54{.}358$ I don't have time to dive into those

NOTE Confidence: 0.86142712

 $00{:}06{:}54.358 \dashrightarrow 00{:}06{:}56.530$ because I want to spend time on our study,

NOTE Confidence: 0.86142712

 $00:06:56.530 \longrightarrow 00:06:57.649$ but you know.

NOTE Confidence: 0.86142712

 $00{:}06{:}57{.}649 \dashrightarrow 00{:}06{:}58{.}768$ One of the.

NOTE Confidence: 0.86142712

 $00{:}06{:}58{.}770 \dashrightarrow 00{:}07{:}00{.}402$ The brief summary that led into

NOTE Confidence: 0.86142712

 $00{:}07{:}00{.}402 \dashrightarrow 00{:}07{:}02{.}066$ the design of this study was

NOTE Confidence: 0.86142712

00:07:02.066 - 00:07:03.738 that there was intriguing data

NOTE Confidence: 0.86142712

 $00{:}07{:}03.738 \dashrightarrow 00{:}07{:}05.958$ supporting suicidal therapy as a

NOTE Confidence: 0.86142712

 $00:07:05.958 \rightarrow 00:07:08.050$ promising approach for depression,

- NOTE Confidence: 0.86142712
- $00{:}07{:}08.050 \dashrightarrow 00{:}07{:}10.040$ rapid acting, and sustained effects
- NOTE Confidence: 0.86142712
- $00:07:10.040 \dashrightarrow 00:07:12.650$ from limited numbers of doses of doses.
- NOTE Confidence: 0.86142712
- 00:07:12.650 --> 00:07:13.918 There were very significant
- NOTE Confidence: 0.86142712
- $00:07:13.918 \longrightarrow 00:07:15.186$ limitations to those studies,
- NOTE Confidence: 0.86142712
- $00:07:15.190 \rightarrow 00:07:16.950$ including small sample sizes,
- NOTE Confidence: 0.86142712
- 00:07:16.950 --> 00:07:18.710 lack of place bo controls,
- NOTE Confidence: 0.86142712
- 00:07:18.710 --> 00:07:21.094 or for blinding, functional,
- NOTE Confidence: 0.86142712
- 00:07:21.094 --> 00:07:21.690 unblinding,
- NOTE Confidence: 0.86142712
- 00:07:21.690 --> 00:07:23.974 suspected and significant expectancy
- NOTE Confidence: 0.86142712
- $00:07:23.974 \longrightarrow 00:07:26.258$ effects increasingly as the
- NOTE Confidence: 0.86142712
- $00:07:26.258 \longrightarrow 00:07:28.850$ media also continued to hide.
- NOTE Confidence: 0.86142712
- $00{:}07{:}28.850 \dashrightarrow 00{:}07{:}32.330$ Couples the rapy and the big one,
- NOTE Confidence: 0.86142712
- $00:07:32.330 \longrightarrow 00:07:32.796$ you know,
- NOTE Confidence: 0.86142712
- $00{:}07{:}32.796 \dashrightarrow 00{:}07{:}34.660$ the big question is also if we're seeing
- NOTE Confidence: 0.86142712
- $00:07:34.710 \dashrightarrow 00:07:36.810$ these long lasting effects from single doses,
- NOTE Confidence: 0.86142712

- $00:07:36.810 \longrightarrow 00:07:38.042$ how is this working?
- NOTE Confidence: 0.86142712
- $00:07:38.042 \rightarrow 00:07:40.519$ What are the mechanisms of action those are?
- NOTE Confidence: 0.86142712
- 00:07:40.520 00:07:42.560 Were and still are to a large degree,
- NOTE Confidence: 0.86142712
- $00:07:42.560 \longrightarrow 00:07:44.860$ still unclear.
- NOTE Confidence: 0.86142712
- $00:07:44.860 \longrightarrow 00:07:46.888$ So that led into US cooking
- NOTE Confidence: 0.86142712
- $00:07:46.888 \longrightarrow 00:07:48.240$ up this this study.
- NOTE Confidence: 0.86142712
- 00:07:48.240 --> 00:07:51.188 So Sabin induced neuroplasticity.
- NOTE Confidence: 0.86142712
- $00:07:51.190 \rightarrow 00:07:55.026$ And just to introduce the study aims,
- NOTE Confidence: 0.86142712
- $00{:}07{:}55{.}030 \dashrightarrow 00{:}07{:}56{.}908$ it was primarily a mechanistic study.
- NOTE Confidence: 0.86142712
- $00:07:56.910 \longrightarrow 00:07:59.310$ This is a exploratory and
- NOTE Confidence: 0.86142712
- $00:07:59.310 \longrightarrow 00:08:00.750$ relatively small study.
- NOTE Confidence: 0.86142712
- $00{:}08{:}00.750 \dashrightarrow 00{:}08{:}02.615$ The things we were interested
- NOTE Confidence: 0.86142712
- 00:08:02.615 --> 00:08:04.608 in looking at were neuropathy,
- NOTE Confidence: 0.86142712
- $00:08:04.608 \rightarrow 00:08:07.098$ effects of could neuroplasticity be
- NOTE Confidence: 0.86142712
- $00:08:07.098 \longrightarrow 00:08:09.517$ an explanatory mechanism and Patrick
- NOTE Confidence: 0.86142712
- $00:08:09.517 \rightarrow 00:08:11.641$ will share about the EEG paradigm

- NOTE Confidence: 0.86142712
- $00:08:11.641 \rightarrow 00:08:14.608$ that we used to look at that possibility.

00:08:14.610 --> 00:08:17.396 And I was interested in this idea

NOTE Confidence: 0.86142712

00:08:17.396 --> 00:08:18.590 about psychological flexibility,

NOTE Confidence: 0.86142712

 $00:08:18.590 \longrightarrow 00:08:20.380$ which is baked into acceptance

NOTE Confidence: 0.86142712

 $00:08:20.380 \longrightarrow 00:08:21.096$ and commitment.

NOTE Confidence: 0.86142712

 $00:08:21.100 \rightarrow 00:08:23.240$ RP as another more psychological

NOTE Confidence: 0.86142712

 $00:08:23.240 \longrightarrow 00:08:25.380$ mechanism of action and we

NOTE Confidence: 0.86142712

 $00{:}08{:}25{.}457 \dashrightarrow 00{:}08{:}27{.}487$ collected some data on that.

NOTE Confidence: 0.86142712

 $00:08:27.490 \longrightarrow 00:08:29.812$ And of course as secondary measures

NOTE Confidence: 0.86142712

 $00:08:29.812 \rightarrow 00:08:31.867$ we did collect efficacy measures

NOTE Confidence: 0.86142712

 $00:08:31.867 \rightarrow 00:08:34.501$ for depression and being quite so

NOTE Confidence: 0.86142712

00:08:34.501 --> 00:08:36.612 a clinician administered and self

NOTE Confidence: 0.86142712

00:08:36.612 --> 00:08:38.417 rated measure looked at anxiety

NOTE Confidence: 0.86142712

 $00{:}08{:}38{.}417 \dashrightarrow 00{:}08{:}42{.}060$ and quality of life as well as well

NOTE Confidence: 0.86142712

 $00{:}08{:}42.060 \dashrightarrow 00{:}08{:}44.620$ as some basic safety outcomes.

 $00:08:44.620 \longrightarrow 00:08:45.880$ As far as our methods,

NOTE Confidence: 0.86142712

 $00{:}08{:}45{.}880 \dashrightarrow 00{:}08{:}48{.}142$ this was we recruited adults with

NOTE Confidence: 0.86142712

 $00{:}08{:}48.142 \dashrightarrow 00{:}08{:}49.650$ moderate to severe depression

NOTE Confidence: 0.86142712

 $00:08:49.650 \rightarrow 00:08:51.530$ and they had to have had one or

NOTE Confidence: 0.86142712

 $00:08:51.530 \longrightarrow 00:08:52.520$ more treatment failures,

NOTE Confidence: 0.86142712

 $00:08:52.520 \longrightarrow 00:08:54.368$ so not technically TRD,

NOTE Confidence: 0.86142712

 $00:08:54.368 \longrightarrow 00:08:56.678$ although most of them had

NOTE Confidence: 0.86142712

00:08:56.678 --> 00:08:58.897 probably met criteria for TRD,

NOTE Confidence: 0.86142712

 $00{:}08{:}58{.}900 \dashrightarrow 00{:}09{:}01{.}138$ they had to be offered antidepressants

NOTE Confidence: 0.86142712

 $00{:}09{:}01{.}138 \dashrightarrow 00{:}09{:}04{.}075$ at the time of inclusion and

NOTE Confidence: 0.86142712

00:09:04.075 --> 00:09:06.495 study and major exclusion.

NOTE Confidence: 0.86142712

 $00:09:06.500 \longrightarrow 00:09:07.890$ Pretty typical for most of

NOTE Confidence: 0.86142712

 $00:09:07.890 \longrightarrow 00:09:09.280$ the studies in the field.

NOTE Confidence: 0.86142712

00:09:09.280 --> 00:09:11.320 Personal family history of psychotic

NOTE Confidence: 0.86142712

 $00:09:11.320 \longrightarrow 00:09:13.360$ or bipolar disorders or uncontrolled

NOTE Confidence: 0.86142712

 $00:09:13.417 \dashrightarrow 00:09:15.147$ medical issues and we excluded.

- NOTE Confidence: 0.86142712
- 00:09:15.150 00:09:17.880 Anyone who had a past year use

 $00:09:17.880 \longrightarrow 00:09:18.660$ of psychedelics.

NOTE Confidence: 0.86142712

 $00:09:18.660 \longrightarrow 00:09:23.817$ And we aim to enroll 18 subjects or targets.

NOTE Confidence: 0.86142712

 $00:09:23.820 \rightarrow 00:09:25.110$ And as far as the design,

NOTE Confidence: 0.86142712

 $00:09:25.110 \longrightarrow 00:09:26.534$ which I'll show you on the next slide,

NOTE Confidence: 0.86142712

 $00:09:26.540 \dashrightarrow 00:09:29.192$ this was a place bo control within

NOTE Confidence: 0.86142712

 $00{:}09{:}29{.}192 \dashrightarrow 00{:}09{:}32{.}032$ subject fixed order design with enhanced

NOTE Confidence: 0.86142712

 $00:09:32.032 \rightarrow 00:09:35.014$ blinding procedures and it's a mouthful,

NOTE Confidence: 0.86142712

 $00:09:35.020 \rightarrow 00:09:37.456$ I'll show you what that looked like.

NOTE Confidence: 0.807343185714286

 $00:09:37.460 \longrightarrow 00:09:38.906$ So our participants

NOTE Confidence: 0.807343185714286

 $00:09:38.906 \longrightarrow 00:09:41.573$ enrolled in the study here.

NOTE Confidence: 0.807343185714286

 $00{:}09{:}41.573 \dashrightarrow 00{:}09{:}44.426$ At screening, they underwent an

NOTE Confidence: 0.807343185714286

 $00:09:44.426 \rightarrow 00:09:46.274$ initial psychotherapy session and

NOTE Confidence: 0.807343185714286

 $00{:}09{:}46{.}274 \dashrightarrow 00{:}09{:}48{.}918$ then all the participants received

NOTE Confidence: 0.807343185714286

 $00:09:48.918 \longrightarrow 00:09:51.278$ an initial placebo session.

 $00:09:51.280 \rightarrow 00:09:52.540$ And then four weeks later,

NOTE Confidence: 0.807343185714286

 $00:09:52.540 \longrightarrow 00:09:54.676$ was there still a cybin session.

NOTE Confidence: 0.807343185714286

 $00:09:54.680 \rightarrow 00:09:56.656$ However, they were not aware of the fact

NOTE Confidence: 0.807343185714286

 $00:09:56.656 \rightarrow 00:09:58.699$ that it would be in that fixed order.

NOTE Confidence: 0.807343185714286

00:09:58.700 -> 00:10:01.214 They were told that there were

NOTE Confidence: 0.807343185714286

 $00:10:01.214 \rightarrow 00:10:02.890$ three possible study conditions.

NOTE Confidence: 0.807343185714286

00:10:02.890 --> 00:10:05.669 A placebo in lower dose of Zoloft,

NOTE Confidence: 0.807343185714286

 $00{:}10{:}05{.}670 \dashrightarrow 00{:}10{:}08{.}838$ cybin at .1 milligrams per kilogram and a

NOTE Confidence: 0.807343185714286

00:10:08.838 --> 00:10:11.959 higher dose of .3 milligrams per kilogram.

NOTE Confidence: 0.807343185714286

 $00:10:11.960 \longrightarrow 00:10:13.280$ And so the middle,

NOTE Confidence: 0.807343185714286

 $00{:}10{:}13.280 \dashrightarrow 00{:}10{:}15.786$ the low dose was actually never administered

NOTE Confidence: 0.807343185714286

00:10:15.786 --> 00:10:17.479 although participants received the placebo.

NOTE Confidence: 0.807343185714286

 $00{:}10{:}17{.}480 \dashrightarrow 00{:}10{:}20{.}525$ And then the higher .3 milligram dose

NOTE Confidence: 0.807343185714286

 $00:10:20.525 \rightarrow 00:10:23.480$ of soliciting 4 weeks later and the

NOTE Confidence: 0.807343185714286

 $00:10:23.480 \longrightarrow 00:10:25.790$ blue heads there indicate where we did

NOTE Confidence: 0.807343185714286

00:10:25.790 --> 00:10:28.620 EG which is was one day and two weeks

- NOTE Confidence: 0.807343185714286
- $00:10:28.620 \longrightarrow 00:10:31.087$ after each of the dosing sessions and
- NOTE Confidence: 0.807343185714286
- $00:10:31.087 \rightarrow 00:10:33.966$ then the yellow and yellow you can see.
- NOTE Confidence: 0.807343185714286
- $00{:}10{:}33{.}966 \dashrightarrow 00{:}10{:}35{.}414$ We collected our depression
- NOTE Confidence: 0.807343185714286
- $00:10:35.414 \longrightarrow 00:10:37.898$ measures all the way out to 16
- NOTE Confidence: 0.807343185714286
- $00{:}10{:}37.898 \dashrightarrow 00{:}10{:}39.558$ weeks after that initial session,
- NOTE Confidence: 0.807343185714286
- $00{:}10{:}39{.}560 \dashrightarrow 00{:}10{:}42{.}956$ or three-week three months after Silybin.
- NOTE Confidence: 0.807343185714286
- $00:10:42.960 \rightarrow 00:10:45.540$ And there was psychotherapy
- NOTE Confidence: 0.807343185714286
- $00:10:45.540 \rightarrow 00:10:48.765$ throughout the intervention as well.
- NOTE Confidence: 0.807343185714286
- 00:10:48.770 --> 00:10:49.540 All right.
- NOTE Confidence: 0.834338039090909
- $00:10:51.760 \rightarrow 00:10:53.992$ Keep on moving unless there's any
- NOTE Confidence: 0.834338039090909
- $00{:}10{:}53{.}992 \dashrightarrow 00{:}10{:}55{.}970$ burning questions about the design.
- NOTE Confidence: 0.92365517
- 00:10:59.290 --> 00:11:02.215 So I'm going to jump in and share some
- NOTE Confidence: 0.92365517
- $00{:}11{:}02{.}215 \dashrightarrow 00{:}11{:}05{.}569$ of the clinical study results first here
- NOTE Confidence: 0.92365517
- $00{:}11{:}05{.}570 \dashrightarrow 00{:}11{:}08{.}174$ and just really briefly show you our
- NOTE Confidence: 0.92365517
- $00{:}11{:}08{.}174$ --> $00{:}11{:}10{.}498$ consort diagram and just make the point NOTE Confidence: 0.92365517

 $00{:}11{:}10{.}498 \dashrightarrow 00{:}11{:}12{.}714$ that we assess a lot of individuals

NOTE Confidence: 0.92365517

00:11:12.714 --> 00:11:15.694 for this study recruitment is a big

NOTE Confidence: 0.92365517

 $00{:}11{:}15{.}694 \dashrightarrow 00{:}11{:}18{.}662$ deal and these studies assessed in NOTE Confidence: 0.92365517

 $00{:}11{:}18.662 \dashrightarrow 00{:}11{:}23.500$ a 949 patients to enroll 22 and had

NOTE Confidence: 0.92365517

00:11:23.500 --> 00:11:26.470 fifteen complete two both test days,

NOTE Confidence: 0.92365517

 $00:11:26.470 \longrightarrow 00:11:29.878$ 19 completed the first Test day and so. NOTE Confidence: 0.92365517

 $00:11:29.880 \longrightarrow 00:11:32.043$ For the purposes of our EEG and

NOTE Confidence: 0.92365517

00:11:32.043 --> 00:11:32.970 primary depression outcomes,

NOTE Confidence: 0.92365517

 $00{:}11{:}32{.}970 \dashrightarrow 00{:}11{:}35{.}207$ we analyze all every one who completed

NOTE Confidence: 0.92365517

 $00:11:35.207 \longrightarrow 00:11:36.936$ at least one of the tests says.

NOTE Confidence: 0.834063004545454

00:11:39.570 --> 00:11:41.484 Alright, I'm just going to share

NOTE Confidence: 0.834063004545454

 $00:11:41.484 \rightarrow 00:11:43.210$ initially actually the blinding success.

NOTE Confidence: 0.834063004545454

 $00:11:43.210 \longrightarrow 00:11:44.848$ And I'm going to present this in

NOTE Confidence: 0.834063004545454

 $00{:}11{:}44.848 \dashrightarrow 00{:}11{:}46.570$ part because I think it's really

NOTE Confidence: 0.834063004545454

 $00:11:46.570 \longrightarrow 00:11:48.185$ important when thinking about actually

NOTE Confidence: 0.834063004545454

 $00{:}11{:}48{.}185 \dashrightarrow 00{:}11{:}49{.}946$ the rest of the efficacy results

- NOTE Confidence: 0.834063004545454
- $00{:}11{:}49{.}946 \dashrightarrow 00{:}11{:}51{.}984$ and also because this is just a
- NOTE Confidence: 0.834063004545454
- $00{:}11{:}51{.}984 \dashrightarrow 00{:}11{:}54{.}708$ glaring blind spot in the literature,
- NOTE Confidence: 0.834063004545454
- $00:11:54.710 \longrightarrow 00:11:56.574$ not only the psychedelics,
- NOTE Confidence: 0.834063004545454
- $00:11:56.574 \rightarrow 00:11:59.310$ but really been looking even more
- NOTE Confidence: 0.834063004545454
- $00:11:59.310 \longrightarrow 00:12:01.560$ recently just across amical trials
- NOTE Confidence: 0.834063004545454
- $00:12:01.560 \longrightarrow 00:12:04.117$ that say they're blinded but actually
- NOTE Confidence: 0.834063004545454
- $00{:}12{:}04{.}117 \dashrightarrow 00{:}12{:}07{.}609$ do not present any data related to how
- NOTE Confidence: 0.834063004545454
- $00:12:07.609 \longrightarrow 00:12:09.755$ successive the blinding and this is.
- NOTE Confidence: 0.834063004545454
- 00:12:09.755 --> 00:12:11.285 Even more of a heightened issue
- NOTE Confidence: 0.834063004545454
- $00:12:11.285 \longrightarrow 00:12:12.559$ and psychedelic arena.
- NOTE Confidence: 0.834063004545454
- $00:12:12.560 \rightarrow 00:12:16.662$ So actually proud to show the data
- NOTE Confidence: 0.834063004545454
- $00{:}12{:}16.662 \dashrightarrow 00{:}12{:}19.538$ that we collected at least on that.
- NOTE Confidence: 0.834063004545454
- 00:12:19.540 --> 00:12:21.046 So as far as you know,
- NOTE Confidence: 0.834063004545454
- $00{:}12{:}21.050 \dashrightarrow 00{:}12{:}23.178$ and we we asked the only the participants.
- NOTE Confidence: 0.834063004545454
- $00:12:23.180 \longrightarrow 00:12:24.360$ We didn't ask the therapist,
- NOTE Confidence: 0.834063004545454

 $00:12:24.360 \longrightarrow 00:12:25.925$ which would have been even

NOTE Confidence: 0.834063004545454

 $00:12:25.925 \longrightarrow 00:12:27.840$ another layer we could have done.

NOTE Confidence: 0.834063004545454

00:12:27.840 --> 00:12:30.000 But during the placebo session,

NOTE Confidence: 0.834063004545454

 $00{:}12{:}30{.}000 \dashrightarrow 00{:}12{:}32{.}280$ about 80% of our participants

NOTE Confidence: 0.834063004545454

 $00:12:32.280 \longrightarrow 00:12:34.560$ correctly identified the placebo and

NOTE Confidence: 0.834063004545454

 $00{:}12{:}34.637 \dashrightarrow 00{:}12{:}37.059$ the other four guests the low dose,

NOTE Confidence: 0.834063004545454

00:12:37.060 - 00:12:39.270 there was some confusion there,

NOTE Confidence: 0.834063004545454

 $00:12:39.270 \rightarrow 00:12:42.238$ but no one mistook the placebo for the

NOTE Confidence: 0.834063004545454

 $00{:}12{:}42.238 \dashrightarrow 00{:}12{:}45.440$ higher dose and that was also true in

NOTE Confidence: 0.834063004545454

 $00:12:45.440 \rightarrow 00:12:48.479$ the subsequent high dose silvbin session.

NOTE Confidence: 0.834063004545454

 $00:12:48.480 \longrightarrow 00:12:50.580 \ 80\%$ correctly guessed they had

NOTE Confidence: 0.834063004545454

 $00{:}12{:}50{.}580 \dashrightarrow 00{:}12{:}51{.}840$ received that intervention.

NOTE Confidence: 0.834063004545454

 $00:12:51.840 \longrightarrow 00:12:53.778$ A few guests that they had

NOTE Confidence: 0.834063004545454

 $00:12:53.778 \rightarrow 00:12:55.660$ received the lower dose silvbin,

NOTE Confidence: 0.834063004545454

 $00:12:55.660 \longrightarrow 00:12:57.730$ but no one confused again but.

NOTE Confidence: 0.834063004545454

 $00:12:57.730 \longrightarrow 00:13:01.270$ Suicide, then for the placebo.

- NOTE Confidence: 0.834063004545454
- 00:13:01.270 --> 00:13:03.776 So while it was not 100% failure,
- NOTE Confidence: 0.834063004545454
- $00{:}13{:}03.776 \dashrightarrow 00{:}13{:}07.227$ it also was not an overwhelming success
- NOTE Confidence: 0.834063004545454
- $00{:}13{:}07{.}230 \dashrightarrow 00{:}13{:}10{.}170$ as far as maintaining the blind.
- NOTE Confidence: 0.834063004545454
- $00:13:10.170 \longrightarrow 00:13:12.690$ And so share a few thoughts of
- NOTE Confidence: 0.834063004545454
- 00:13:12.690 00:13:15.160 how that relates when you're yeah,
- NOTE Confidence: 0.834063004545454
- 00:13:15.160 --> 00:13:16.854 I've just forgot about my question was
- NOTE Confidence: 0.594650338
- $00:13:17.850 \rightarrow 00:13:19.960$ were these subjects psychedelic, naive?
- NOTE Confidence: 0.697269775
- 00:13:20.630 --> 00:13:23.786 No, actually about I have this
- NOTE Confidence: 0.697269775
- 00:13:23.790 --> 00:13:26.303 at least over half were OK,
- NOTE Confidence: 0.697269775
- $00:13:26.303 \rightarrow 00:13:28.468$ but the criteria was passed.
- NOTE Confidence: 0.697269775
- $00:13:28.470 \longrightarrow 00:13:31.186$ The year was an exclusion past year.
- NOTE Confidence: 0.697269775
- $00{:}13{:}31{.}190 \dashrightarrow 00{:}13{:}34{.}378$ Is there any suicide?
- NOTE Confidence: 0.697269775
- $00{:}13{:}34{.}380 \dashrightarrow 00{:}13{:}37{.}205$ Conclusion. Correct.
- NOTE Confidence: 0.697269775
- $00{:}13{:}37{.}205 \dashrightarrow 00{:}13{:}40{.}250$ And about half were naive and about
- NOTE Confidence: 0.697269775
- $00{:}13{:}40.250 \dashrightarrow 00{:}13{:}42.783$ the other half had a limited exposure,
- NOTE Confidence: 0.697269775

 $00:13:42.783 \longrightarrow 00:13:45.156$ so it wasn't, we didn't need any

NOTE Confidence: 0.697269775

00:13:45.156 --> 00:13:48.390 one who I'd say was a psychonaut.

NOTE Confidence: 0.697269775

00:13:48.390 --> 00:13:50.022 But I think no one had

NOTE Confidence: 0.697269775

 $00:13:50.022 \rightarrow 00:13:52.760$ more than seven lifetime,

NOTE Confidence: 0.8458816666666667

 $00:13:52.830 \longrightarrow 00:13:54.168$ because whether or not they have,

NOTE Confidence: 0.8458816666666667

 $00{:}13{:}54{.}170 \dashrightarrow 00{:}13{:}55{.}904$ whether or not people have previous

NOTE Confidence: 0.8458816666666667

 $00{:}13{:}55{.}904 \dashrightarrow 00{:}13{:}57{.}060$ experience can influence their

NOTE Confidence: 0.8458816666666667

 $00:13:57.109 \rightarrow 00:13:58.819$ expectation and can influence blinding.

NOTE Confidence: 0.8458816666666667

00:13:58.820 --> 00:14:00.200 And it's not going to make

NOTE Confidence: 0.8458816666666667

 $00:14:00.200 \rightarrow 00:14:01.300$ people think that saline is.

NOTE Confidence: 0.71908289

00:14:02.070 --> 00:14:03.318 You know a robust

NOTE Confidence: 0.861781182

 $00{:}14{:}03{.}330 \dashrightarrow 00{:}14{:}04{.}800$ trip. And then my other question

NOTE Confidence: 0.861781182

 $00:14:04.800 \longrightarrow 00:14:06.800$ was do you can you speak for the

NOTE Confidence: 0.861781182

 $00:14:06.800 \longrightarrow 00:14:08.240$ Group A little bit about the

NOTE Confidence: 0.861781182

00:14:08.297 --> 00:14:09.967 dose .3 milligrams per kilogram,

NOTE Confidence: 0.861781182

00:14:09.970 --> 00:14:12.796 why weight dose instead of fixed

- NOTE Confidence: 0.861781182
- $00:14:12.796 \longrightarrow 00:14:14.950$ and what is that dose mean?
- NOTE Confidence: 0.861781182
- $00{:}14{:}14{.}950 \dashrightarrow 00{:}14{:}16{.}018$ How do you like what is
- NOTE Confidence: 0.861781182
- $00:14:16.018 \rightarrow 00:14:17.219$ that a high dose of medium?
- NOTE Confidence: 0.667546590285714
- 00:14:17.830 --> 00:14:21.662 Thanks. So .3 is I guess can often
- NOTE Confidence: 0.667546590285714
- $00:14:21.662 \rightarrow 00:14:24.758$ considered a medium to high dose?
- NOTE Confidence: 0.667546590285714
- $00:14:24.760 \longrightarrow 00:14:28.432$ Um, so definitely a dose that is will
- NOTE Confidence: 0.667546590285714
- 00:14:28.432 --> 00:14:31.148 produce generally pronounced subjective
- NOTE Confidence: 0.667546590285714
- 00:14:31.148 --> 00:14:34.960 psychedelic effects .1 being a lower
- NOTE Confidence: 0.667546590285714
- $00:14:34.960 \longrightarrow 00:14:37.311$ threshold dose like where maybe
- NOTE Confidence: 0.667546590285714
- $00:14:37.311 \rightarrow 00:14:38.817$ not quite a microdose where there,
- NOTE Confidence: 0.667546590285714
- $00:14:38.820 \rightarrow 00:14:41.442$ but definitely not like robust psychedelic
- NOTE Confidence: 0.667546590285714
- $00{:}14{:}41{.}442 \dashrightarrow 00{:}14{:}44{.}150$ effects .3 and weight based dosing.
- NOTE Confidence: 0.667546590285714
- 00:14:44.150 --> 00:14:46.342 At the time we designed this was kind
- NOTE Confidence: 0.667546590285714
- $00{:}14{:}46{.}342 \dashrightarrow 00{:}14{:}48{.}636$ of the standard and there's been a
- NOTE Confidence: 0.667546590285714
- $00:14:48.636 \rightarrow 00:14:51.010$ shift more recently to use fixed dose
- NOTE Confidence: 0.7308617

- $00{:}14{:}51{.}120 \dashrightarrow 00{:}14{:}52{.}405$ wait. Those dosing is a
- NOTE Confidence: 0.7308617
- $00:14:52.405 \longrightarrow 00:14:53.880$ pain in the **** it is,
- NOTE Confidence: 0.849464075
- 00:14:53.890 --> 00:14:54.703 it requires compounding.
- NOTE Confidence: 0.849464075
- 00:14:54.703 00:14:56.600 So I think probably as these drugs
- NOTE Confidence: 0.849464075
- $00:14:56.649 \rightarrow 00:14:58.119$ are getting closer to phase two,
- NOTE Confidence: 0.849464075
- $00:14:58.120 \longrightarrow 00:14:59.560$ phase three and they're seeing
- NOTE Confidence: 0.849464075
- $00:14:59.560 \longrightarrow 00:15:01.036$ that writing, you know,
- NOTE Confidence: 0.849464075
- $00{:}15{:}01{.}036$ --> $00{:}15{:}03{.}724$ the actual scale of the suit.
- NOTE Confidence: 0.849464075
- $00{:}15{:}03.730 \dashrightarrow 00{:}15{:}04.825$ Towards fixed dosing.
- NOTE Confidence: 0.849464075
- $00{:}15{:}04.825 \dashrightarrow 00{:}15{:}07.380$ And I think there's some data also
- NOTE Confidence: 0.849464075
- $00{:}15{:}07{.}447 \dashrightarrow 00{:}15{:}10{.}240$ that perhaps body size is not a
- NOTE Confidence: 0.849464075
- $00:15:10.240 \rightarrow 00:15:12.250$ huge predictor of the robustness
- NOTE Confidence: 0.849464075
- $00:15:12.333 \longrightarrow 00:15:14.873$ of the psychedelic effects as
- NOTE Confidence: 0.849464075
- $00:15:14.873 \longrightarrow 00:15:16.905$ much as other idiosyncratic,
- NOTE Confidence: 0.849464075
- 00:15:16.910 --> 00:15:21.160 you know, brain chemistry factors.
- NOTE Confidence: 0.849464075
- $00:15:21.160 \longrightarrow 00:15:23.256$ But that was .3 was the dose also

- NOTE Confidence: 0.849464075
- $00:15:23.256 \rightarrow 00:15:25.410$ generally the dose used in those cancer
- NOTE Confidence: 0.849464075
- $00{:}15{:}25{.}410 \dashrightarrow 00{:}15{:}27{.}480$ trials that showed those early effects.
- NOTE Confidence: 0.849464075
- $00:15:27.480 \longrightarrow 00:15:29.454$ So we just kind of adopted that.
- NOTE Confidence: 0.855824623333333
- 00:15:31.450 --> 00:15:32.320 I'm just curious,
- NOTE Confidence: 0.792869614
- 00:15:32.330 --> 00:15:35.940 during screening it was like 900 out of the
- NOTE Confidence: 0.792869614
- $00:15:35.940 \rightarrow 00:15:39.550$ 949 were ineligible for in person screening.
- NOTE Confidence: 0.792869614
- $00:15:39.550 \rightarrow 00:15:41.358$ Was that was there like a common reason?
- NOTE Confidence: 0.80276241875
- $00{:}15{:}42.840 \dashrightarrow 00{:}15{:}44.840$ There was so many reasons that we did
- NOTE Confidence: 0.51899023
- $00:15:45.540 \longrightarrow 00:15:48.108$ have it all in the paper,
- NOTE Confidence: 0.76091924111111
- $00:15:48.120 \longrightarrow 00:15:50.368$ but so many you know speaks to the
- NOTE Confidence: 0.76091924111111
- $00:15:50.368 \rightarrow 00:15:52.165$ difficulty of recruitment and and
- NOTE Confidence: 0.76091924111111
- $00:15:52.165 \dashrightarrow 00:15:54.110$ also how restrictive the product.
- NOTE Confidence: 0.76091924111111
- $00:15:54.110 \rightarrow 00:15:56.550$ Most of these protocols actually
- NOTE Confidence: 0.76091924111111
- 00:15:56.550 --> 00:15:58.636 are as far as you know having to
- NOTE Confidence: 0.76091924111111
- $00{:}15{:}58.636 \dashrightarrow 00{:}16{:}00.888$ have had one fit like at least one
- NOTE Confidence: 0.76091924111111

 $00:16:00.888 \longrightarrow 00:16:02.393$ failed medication trial and then

NOTE Confidence: 0.76091924111111

 $00{:}16{:}02{.}451 \dashrightarrow 00{:}16{:}04{.}180$ being able to come off of that.

NOTE Confidence: 0.76091924111111

00:16:04.180 --> 00:16:06.812 And we require people to be in active

NOTE Confidence: 0.76091924111111

 $00{:}16{:}06{.}812 \dashrightarrow 00{:}16{:}08{.}464$ treatment at the time of enrollment

NOTE Confidence: 0.76091924111111

 $00{:}16{:}08{.}464 \dashrightarrow 00{:}16{:}10{.}570$ and they have to be in the area and be

NOTE Confidence: 0.76091924111111

 $00{:}16{:}10.570 \dashrightarrow 00{:}16{:}12.089$ able to come for all these sessions.

NOTE Confidence: 0.76091924111111

 $00{:}16{:}12.090 \dashrightarrow 00{:}16{:}14.790$ So it's. So many logistical and

NOTE Confidence: 0.76091924111111

00:16:14.790 - 00:16:17.410 just factors why people couldn't.

NOTE Confidence: 0.76091924111111

 $00{:}16{:}17{.}410 \dashrightarrow 00{:}16{:}18{.}510$ Participate.

NOTE Confidence: 0.76091924111111

 $00:16:18.510 \rightarrow 00:16:20.214$ I'm going to be able to come off of,

NOTE Confidence: 0.76091924111111

 $00:16:20.220 \longrightarrow 00:16:21.480$ especially having to be able

NOTE Confidence: 0.76091924111111

 $00:16:21.480 \longrightarrow 00:16:22.740$ to come off of antidepressants,

NOTE Confidence: 0.76091924111111

 $00:16:22.740 \longrightarrow 00:16:24.908$ but having to have had a recent trial

NOTE Confidence: 0.76091924111111

 $00:16:24.908 \rightarrow 00:16:27.189$ in the current depressive episode?

NOTE Confidence: 0.76091924111111

 $00:16:27.190 \longrightarrow 00:16:29.280$ Very tricky.

NOTE Confidence: 0.76091924111111

 $00:16:29.280 \longrightarrow 00:16:31.356$ So it's a lot of factors.

 $00:16:33.590 \longrightarrow 00:16:35.732$ So let me having shared those binding

NOTE Confidence: 0.7428451175

00:16:35.732 --> 00:16:37.720 results, I'll show you the results

NOTE Confidence: 0.7428451175

 $00:16:37.720 \longrightarrow 00:16:40.963$ from the handy which is our is our

NOTE Confidence: 0.7428451175

00:16:40.963 --> 00:16:42.943 primary depression outcome widely

NOTE Confidence: 0.7428451175

 $00{:}16{:}42.943 \dashrightarrow 00{:}16{:}44.910$ used clinician administered scale.

NOTE Confidence: 0.7428451175

 $00{:}16{:}44{.}910 \dashrightarrow 00{:}16{:}46{.}870$ So just let me just walk you through it here.

NOTE Confidence: 0.7428451175

 $00:16:46.870 \longrightarrow 00:16:49.418$ So from the left, people came in

NOTE Confidence: 0.7428451175

 $00:16:49.418 \longrightarrow 00:16:52.049$ with about a handy of about 23.

NOTE Confidence: 0.7428451175

00:16:52.050 --> 00:16:54.306 Are you upper moderate depression and

NOTE Confidence: 0.7428451175

 $00{:}16{:}54{.}306 \dashrightarrow 00{:}16{:}57{.}601$ after the place bo they had a notable and

NOTE Confidence: 0.7428451175

 $00:16:57.601 \rightarrow 00:16:58.897$ significant statistically significant

NOTE Confidence: 0.7428451175

 $00{:}16{:}58.897 \dashrightarrow 00{:}17{:}01.388$ drop in their depression which actually

NOTE Confidence: 0.7428451175

 $00{:}17{:}01{.}388 \dashrightarrow 00{:}17{:}05{.}580$ persisted all the way out for four weeks.

NOTE Confidence: 0.7428451175

 $00{:}17{:}05{.}580 \dashrightarrow 00{:}17{:}08{.}916$ Drop was around five points on the handy

NOTE Confidence: 0.7428451175

 $00{:}17{:}08{.}920 \dashrightarrow 00{:}17{:}11{.}686$ and then have their silibin session

- $00{:}17{:}11.686 \dashrightarrow 00{:}17{:}14.515$ and improved again with a significant
- NOTE Confidence: 0.7428451175
- $00:17:14.515 \rightarrow 00:17:17.672$ drop a little bit larger in magnitude,
- NOTE Confidence: 0.7428451175
- $00:17:17.680 \longrightarrow 00:17:20.000$ 6 to 8 points.
- NOTE Confidence: 0.7428451175
- $00:17:20.000 \rightarrow 00:17:22.556$ Roughly the difference however between.
- NOTE Confidence: 0.7428451175
- 00:17:22.556 --> 00:17:25.520 The magnitude of change here pre
- NOTE Confidence: 0.7428451175
- $00{:}17{:}25{.}603 \dashrightarrow 00{:}17{:}28{.}220$ postal cybin and pre post place bo this
- NOTE Confidence: 0.7428451175
- $00{:}17{:}28.220 \dashrightarrow 00{:}17{:}30.396$ it was not a significant difference
- NOTE Confidence: 0.7428451175
- $00:17:30.396 \rightarrow 00:17:32.886$ from this change to this change.
- NOTE Confidence: 0.7428451175
- 00:17:32.890 --> 00:17:33.251 However,
- NOTE Confidence: 0.7428451175
- $00{:}17{:}33{.}251 \dashrightarrow 00{:}17{:}36{.}139$ the effect size in this case would be
- NOTE Confidence: 0.7428451175
- $00:17:36.139 \rightarrow 00:17:39.718$ crime looking at was larger postal cybin.
- NOTE Confidence: 0.7428451175
- 00:17:39.718 --> 00:17:40.330 Anything,
- NOTE Confidence: 0.7428451175
- $00:17:40.330 \longrightarrow 00:17:42.076$ just a couple of things that
- NOTE Confidence: 0.7428451175
- $00:17:42.076 \longrightarrow 00:17:43.240$ are interesting thinking about
- NOTE Confidence: 0.7428451175
- $00:17:43.290 \rightarrow 00:17:44.720$ also the blinding results is,
- NOTE Confidence: 0.7428451175
- $00:17:44.720 \longrightarrow 00:17:46.220$ is that people came in,

 $00:17:46.220 \rightarrow 00:17:48.890$ they had the placebo session most

NOTE Confidence: 0.7428451175

 $00{:}17{:}48.890 \dashrightarrow 00{:}17{:}51.563$ actually realized they got place bo and

NOTE Confidence: 0.7428451175

 $00{:}17{:}51{.}563 \dashrightarrow 00{:}17{:}54{.}165$ instead of you know maybe getting worse

NOTE Confidence: 0.7428451175

 $00:17:54.165 \rightarrow 00:17:56.380$ or having an osebo response actually

NOTE Confidence: 0.7428451175

 $00{:}17{:}56{.}380 \dashrightarrow 00{:}17{:}58{.}879$ continue to improve and so you might

NOTE Confidence: 0.7428451175

 $00{:}17{:}58.879 \dashrightarrow 00{:}18{:}01.196$ think what what was going on there.

NOTE Confidence: 0.7428451175

00:18:01.200 --> 00:18:03.566 At least two ideas are we're one

NOTE Confidence: 0.7428451175

 $00:18:03.566 \rightarrow 00:18:05.401$ they were receiving therapy and

NOTE Confidence: 0.7428451175

 $00{:}18{:}05{.}401 \dashrightarrow 00{:}18{:}07{.}663$ so having some the rapy effects but

NOTE Confidence: 0.7428451175

 $00{:}18{:}07{.}663 \dashrightarrow 00{:}18{:}09{.}979$ another big one I think related to.

NOTE Confidence: 0.7428451175

 $00:18:09.980 \rightarrow 00:18:11.954$ Expectancy was that they knew that

NOTE Confidence: 0.7428451175

00:18:11.954 --> 00:18:14.071 they had this other session coming

NOTE Confidence: 0.7428451175

00:18:14.071 $\operatorname{-->}$ 00:18:16.267 up and we're engaging in the rapy.

NOTE Confidence: 0.7428451175

00:18:16.270 --> 00:18:18.846 So there was and I think we encouraged

NOTE Confidence: 0.7428451175

 $00:18:18.846 \rightarrow 00:18:20.545$ the generally hopeful attitude and

 $00:18:20.545 \rightarrow 00:18:22.859$ thinking of this as one big journey.

NOTE Confidence: 0.7428451175

 $00{:}18{:}22.859 \dashrightarrow 00{:}18{:}25.162$ So I think that's that is interesting

NOTE Confidence: 0.7428451175

 $00{:}18{:}25{.}162 \dashrightarrow 00{:}18{:}27{.}135$ because we'll see probably in a few

NOTE Confidence: 0.7428451175

 $00{:}18{:}27{.}135 \dashrightarrow 00{:}18{:}29{.}110$ weeks the results of the USONA study.

NOTE Confidence: 0.7428451175

 $00:18:29.110 \longrightarrow 00:18:30.910$ That was a single dose study

NOTE Confidence: 0.7428451175

 $00:18:30.910 \longrightarrow 00:18:32.609$ where if you didn't get it,

NOTE Confidence: 0.7428451175

 $00{:}18{:}32.610 \dashrightarrow 00{:}18{:}34.808$ you had no hope of another session.

NOTE Confidence: 0.7428451175

00:18:34.810 --> 00:18:37.642 So you know be quite different

NOTE Confidence: 0.7428451175

00:18:37.642 --> 00:18:40.310 effects from the place bo session.

NOTE Confidence: 0.7428451175

00:18:40.310 --> 00:18:42.872 I would imagine and then just the

NOTE Confidence: 0.7428451175

 $00{:}18{:}42.872 \dashrightarrow 00{:}18{:}45.101$ other caveat here is that there

NOTE Confidence: 0.7428451175

 $00{:}18{:}45{.}101 \dashrightarrow 00{:}18{:}47{.}506$ was a carry over effect that we we

NOTE Confidence: 0.7428451175

 $00{:}18{:}47.506 \dashrightarrow 00{:}18{:}48.986$ had anticipated that four weeks

NOTE Confidence: 0.7428451175

 $00:18:48.986 \longrightarrow 00:18:50.729$ would be enough to wash out,

NOTE Confidence: 0.7428451175

 $00{:}18{:}50{.}730 \dashrightarrow 00{:}18{:}52{.}722$ but we did have carry over effects

NOTE Confidence: 0.7428451175

 $00:18:52.722 \rightarrow 00:18:54.920$ into the second part of the study.

00:18:55.150 --> 00:18:57.340 They're getting weekly therapy throughout,

NOTE Confidence: 0.789768468571428

 $00:18:57.450 \rightarrow 00:18:59.907$ not exactly weekly, but it was two.

NOTE Confidence: 0.789768468571428

 $00:18:59.910 \longrightarrow 00:19:01.812$ They would get therapy the day

NOTE Confidence: 0.789768468571428

 $00{:}19{:}01{.}812 \dashrightarrow 00{:}19{:}04{.}145$ after and a week after the each

NOTE Confidence: 0.789768468571428

 $00{:}19{:}04.145 \dashrightarrow 00{:}19{:}06.131$ of the sessions and then there

NOTE Confidence: 0.789768468571428

 $00{:}19{:}06{.}131 \dashrightarrow 00{:}19{:}08{.}455$ was a few follow-up sessions after

NOTE Confidence: 0.789768468571428

00:19:08.455 --> 00:19:10.690 week six after that final. That

NOTE Confidence: 0.810139407777778

 $00:19:10.700 \longrightarrow 00:19:11.755$ may have helped may have

NOTE Confidence: 0.81013940777778

 $00:19:11.755 \longrightarrow 00:19:12.599$ contributed to carry over.

NOTE Confidence: 0.810139407777778

 $00:19:12.600 \longrightarrow 00:19:15.897$ But as you point out the anticipation

NOTE Confidence: 0.810139407777778

 $00{:}19{:}15{.}897 \dashrightarrow 00{:}19{:}18{.}677$ of males that combination of and

NOTE Confidence: 0.810139407777778

 $00{:}19{:}18.677 \dashrightarrow 00{:}19{:}20.459$ there's no therapy between the day

NOTE Confidence: 0.81013940777778

 $00:19:20.459 \rightarrow 00:19:22.462$ before the W zero day before dosing

NOTE Confidence: 0.810139407777778

00:19:22.462 --> 00:19:24.316 and W 0 day after dose correct.

NOTE Confidence: 0.810139407777778

 $00{:}19{:}24{.}316 \dashrightarrow 00{:}19{:}25{.}944$ The only thing that happens

- $00{:}19{:}25{.}944 \dashrightarrow 00{:}19{:}27{.}370$ there is that correct
- NOTE Confidence: 0.6839231714
- $00{:}19{:}27.740 \dashrightarrow 00{:}19{:}30.266$ session with two with the therapists
- NOTE Confidence: 0.6839231714
- $00{:}19{:}30{.}266 \dashrightarrow 00{:}19{:}31{.}950$ anesthesiologists in the room
- NOTE Confidence: 0.650365727272727
- $00:19:32.120 \rightarrow 00:19:33.765$ that the therapy that happened to concurrent
- NOTE Confidence: 0.650365727272727
- $00:19:33.765 \rightarrow 00:19:37.980$ with the dosing session. Yes exactly.
- NOTE Confidence: 0.896122124
- 00:19:37.980 --> 00:19:40.640 So, you know, I think someone's
- NOTE Confidence: 0.896122124
- $00:19:40.640 \rightarrow 00:19:41.820$ trying to say something.
- NOTE Confidence: 0.7995501466666667
- $00{:}19{:}44{.}270 \dashrightarrow 00{:}19{:}46{.}729$ Was there some one? And it's just.
- NOTE Confidence: 0.644932135714286
- $00:19:49.690 \longrightarrow 00:19:51.566$ Just said a lot of that contact,
- NOTE Confidence: 0.644932135714286
- $00:19:51.570 \rightarrow 00:19:53.400$ probably more than standard of character.
- NOTE Confidence: 0.644932135714286
- 00:19:53.400 --> 00:19:55.829 Yeah. So, you know, I think it's,
- NOTE Confidence: 0.644932135714286
- $00:19:55.830 \longrightarrow 00:19:58.310$ it's one thing I've.
- NOTE Confidence: 0.644932135714286
- $00{:}19{:}58{.}310 \dashrightarrow 00{:}20{:}00{.}172$ So of course suicide then at least
- NOTE Confidence: 0.644932135714286
- $00:20:00.172 \rightarrow 00:20:02.640$ for this primary outcome not not a
- NOTE Confidence: 0.644932135714286
- $00:20:02.640 \rightarrow 00:20:03.849$ statistically significant difference
- NOTE Confidence: 0.644932135714286
- 00:20:03.850 --> 00:20:06.279 though if you look from a clinical

 $00:20:06.279 \rightarrow 00:20:08.485$ standpoint from the beginning to end

NOTE Confidence: 0.644932135714286

 $00:20:08.485 \longrightarrow 00:20:10.340$ pretty significant drops with the

NOTE Confidence: 0.644932135714286

 $00{:}20{:}10.412 \dashrightarrow 00{:}20{:}13.100$ combined the effect sizes as well as

NOTE Confidence: 0.644932135714286

 $00:20:13.100 \rightarrow 00:20:15.139$ the overall intervention pretty large.

NOTE Confidence: 0.644932135714286

 $00{:}20{:}15{.}140 \dashrightarrow 00{:}20{:}18{.}124$ And again this was not designed as an

NOTE Confidence: 0.644932135714286

 $00{:}20{:}18.124 \dashrightarrow 00{:}20{:}20{.}911$ efficacy study with such a small and but

NOTE Confidence: 0.644932135714286

 $00:20:20.911 \rightarrow 00:20:23.920$ just another piece on the clinical results.

NOTE Confidence: 0.644932135714286

 $00:20:23.920 \longrightarrow 00:20:26.020$ You know we also look at rates

NOTE Confidence: 0.644932135714286

 $00:20:26.020 \longrightarrow 00:20:27.834$ of response and remission for

NOTE Confidence: 0.644932135714286

 $00:20:27.834 \rightarrow 00:20:29.749$ those who completed both sessions.

NOTE Confidence: 0.644932135714286

 $00{:}20{:}29{.}750 \dashrightarrow 00{:}20{:}32{.}094$ And just also show here that after place bo

NOTE Confidence: 0.644932135714286

 $00{:}20{:}32.094 \dashrightarrow 00{:}20{:}34.177$ you know a little bit of response,

NOTE Confidence: 0.644932135714286

 $00:20:34.180 \longrightarrow 00:20:37.060$ but 20% response rate which really

NOTE Confidence: 0.644932135714286

 $00{:}20{:}37.060 \dashrightarrow 00{:}20{:}40.850$ jumps up after this whole sibin sessions

NOTE Confidence: 0.644932135714286

 $00{:}20{:}40.850 \dashrightarrow 00{:}20{:}44.090$ with responses lasting up to that.

00:20:44.090 --> 00:20:46.310 This was our primary MDM point

NOTE Confidence: 0.644932135714286

 $00{:}20{:}46{.}310 \dashrightarrow 00{:}20{:}47{.}790$ endpoint at Week 6.

NOTE Confidence: 0.6533123634

 $00{:}20{:}48.610 \dashrightarrow 00{:}20{:}51.400$ Was the response to that response rate is a

NOTE Confidence: 0.6533123634

 $00:20:51.400 \longrightarrow 00:20:54.378 50\%$ improvement relative to what baseline?

NOTE Confidence: 0.902700276

 $00:20:55.680 \longrightarrow 00:20:58.030$ Actually, for this is actually

NOTE Confidence: 0.902700276

 $00{:}20{:}58.030 \dashrightarrow 00{:}21{:}01.230$ relative to the day before. Each dose.

NOTE Confidence: 0.780790006923077

00:21:01.300 --> 00:21:02.880 OK. So the psilocybin response

NOTE Confidence: 0.780790006923077

 $00{:}21{:}02{.}880 \dashrightarrow 00{:}21{:}05{.}402$ there is relative to a day before

NOTE Confidence: 0.780790006923077

 $00{:}21{:}05{.}402 \dashrightarrow 00{:}21{:}07{.}649$ psilocybin, not three weeks a week.

NOTE Confidence: 0.47373462

00:21:08.660 --> 00:21:11.258 Yeah. Jordan, I know the

NOTE Confidence: 0.47373462

00:21:11.258 --> 00:21:12.286 numbers are really small,

NOTE Confidence: 0.919873453333333

 $00:21:12.290 \longrightarrow 00:21:16.526$ but the people that did not

NOTE Confidence: 0.919873453333333

 $00{:}21{:}16.526 \dashrightarrow 00{:}21{:}18.980$ accurately guess their. Assignment.

NOTE Confidence: 0.919873453333333

 $00:21:18.980 \longrightarrow 00:21:20.630$ Was there any difference there?

NOTE Confidence: 0.919873453333333

 $00:21:20.630 \longrightarrow 00:21:24.598$ Were they? Were they the big

NOTE Confidence: 0.919873453333333

 $00:21:24.598 \rightarrow 00:21:26.866$ responders and non responders?
- NOTE Confidence: 0.919873453333333
- 00:21:26.870 --> 00:21:28.550 So we have numbers are so small,
- NOTE Confidence: 0.919873453333333
- $00:21:28.550 \longrightarrow 00:21:29.894$ we just have to be a
- NOTE Confidence: 0.919873453333333
- $00:21:29.894 \longrightarrow 00:21:31.060$ qualitative look at it. But
- NOTE Confidence: 0.82963327277778
- $00:21:31.130 \longrightarrow 00:21:33.450$ yeah, the the one that was the
- NOTE Confidence: 0.82963327277778
- $00{:}21{:}33{.}450 \dashrightarrow 00{:}21{:}35{.}114$ biggest outlier was actually it
- NOTE Confidence: 0.82963327277778
- $00{:}21{:}35{.}114 \dashrightarrow 00{:}21{:}36{.}819$ was our very first participant.
- NOTE Confidence: 0.829633272777778
- $00:21:36.820 \longrightarrow 00:21:40.800$ He had a very robust he detected
- NOTE Confidence: 0.82963327277778
- $00:21:40.800 \rightarrow 00:21:44.028$ effects from the placebo session and
- NOTE Confidence: 0.82963327277778
- 00:21:44.028 --> 00:21:46.180 had very significant antidepressant
- NOTE Confidence: 0.82963327277778
- $00:21:46.261 \rightarrow 00:21:48.764$ response from the placebo session
- NOTE Confidence: 0.82963327277778
- $00:21:48.764 \longrightarrow 00:21:51.620$ as far as the other ones.
- NOTE Confidence: 0.82963327277778
- $00:21:51.620 \longrightarrow 00:21:52.872$ Sort of less memorable.
- NOTE Confidence: 0.82963327277778
- $00:21:52.872 \rightarrow 00:21:54.750$ I think they were just unsure,
- NOTE Confidence: 0.82963327277778
- $00{:}21{:}54{.}750 \dashrightarrow 00{:}21{:}57{.}270$ you know, which.
- NOTE Confidence: 0.829633272777778
- $00{:}21{:}57{.}270 \dashrightarrow 00{:}21{:}58{.}705$ Because that was the participant
- NOTE Confidence: 0.82963327277778

 $00:21:58.705 \longrightarrow 00:22:00.750$ that sticks out the most in my mind.

NOTE Confidence: 0.7812621

00:22:07.330 --> 00:22:08.060 All right.

NOTE Confidence: 0.83955294944444

00:22:11.340 --> 00:22:13.560 So as far as just you know the other thing

NOTE Confidence: 0.83955294944444

 $00:22:13.620 \rightarrow 00:22:15.900$ that I mentioned at the beginning was this,

NOTE Confidence: 0.83955294944444

 $00{:}22{:}15{.}900 \dashrightarrow 00{:}22{:}17{.}778$ this whole narrative around the duration

NOTE Confidence: 0.83955294944444

 $00{:}22{:}17.778 \dashrightarrow 00{:}22{:}19.719$ of response from a single dose.

NOTE Confidence: 0.83955294944444

 $00{:}22{:}19.720 \dashrightarrow 00{:}22{:}21.498$ And so that was something we were

NOTE Confidence: 0.83955294944444

 $00:22:21.498 \rightarrow 00:22:22.999$ interested in looking at and we look,

NOTE Confidence: 0.83955294944444

 $00:22:23.000 \rightarrow 00:22:25.367$ we look at that best looking at the quiz,

NOTE Confidence: 0.83955294944444

 $00{:}22{:}25{.}370 \dashrightarrow 00{:}22{:}27{.}356$ the self rated measure of depression

NOTE Confidence: 0.83955294944444

 $00{:}22{:}27.356 \dashrightarrow 00{:}22{:}29.194$ that we collected because unlike the

NOTE Confidence: 0.83955294944444

00:22:29.194 --> 00:22:31.085 hand D which was just out to week six,

NOTE Confidence: 0.83955294944444

 $00:22:31.090 \longrightarrow 00:22:32.842$ we did collect this all the way out

NOTE Confidence: 0.839552949444444

 $00{:}22{:}32{.}842 \dashrightarrow 00{:}22{:}34{.}845$ to week sixteen or three months after

NOTE Confidence: 0.839552949444444

 $00:22:34.845 \rightarrow 00:22:36.805$ the suicide then dosing session.

NOTE Confidence: 0.83955294944444

00:22:36.805 --> 00:22:38.800 And So what I'm just highlighting

 $00{:}22{:}38{.}800 \dashrightarrow 00{:}22{:}41{.}986$ in this box here is that relative to

NOTE Confidence: 0.83955294944444

 $00{:}22{:}41{.}986 \dashrightarrow 00{:}22{:}46{.}359$ the pre sobin baseline from one one

NOTE Confidence: 0.83955294944444

 $00:22:46.359 \longrightarrow 00:22:48.690$ day after the dose there was that

NOTE Confidence: 0.83955294944444

 $00:22:48.769 \longrightarrow 00:22:51.157$ a significant drop similar to what

NOTE Confidence: 0.839552949444444

 $00:22:51.157 \rightarrow 00:22:54.608$ the Hamdy and that response remains

NOTE Confidence: 0.83955294944444

 $00:22:54.608 \rightarrow 00:22:57.256$ statistically significant for two

NOTE Confidence: 0.83955294944444

 $00{:}22{:}57{.}256 \dashrightarrow 00{:}23{:}00{.}512$ months and then at three months that

NOTE Confidence: 0.83955294944444

 $00{:}23{:}00{.}512 \dashrightarrow 00{:}23{:}03{.}280$ difference was no longer significant.

NOTE Confidence: 0.83955294944444

 $00:23:03.280 \rightarrow 00:23:05.387$ However, they were at this point they

NOTE Confidence: 0.83955294944444

 $00:23:05.387 \rightarrow 00:23:07.220$ were still significantly better than their.

NOTE Confidence: 0.83955294944444

00:23:07.220 --> 00:23:09.290 Initial baseline prior to placebo,

NOTE Confidence: 0.83955294944444

00:23:09.290 --> 00:23:11.408 but you know again small numbers,

NOTE Confidence: 0.83955294944444

 $00{:}23{:}11.410 \dashrightarrow 00{:}23{:}14.480$ but I to me this was both.

NOTE Confidence: 0.83955294944444

00:23:14.480 --> 00:23:15.500 And encouraging,

NOTE Confidence: 0.83955294944444

 $00:23:15.500 \rightarrow 00:23:19.070$ but also maybe perhaps more realistic result

 $00:23:19.152 \rightarrow 00:23:22.197$ of seeing a two-month about a two-month.

NOTE Confidence: 0.83955294944444

 $00{:}23{:}22{.}200 \dashrightarrow 00{:}23{:}24{.}444$ Response and duration from the single

NOTE Confidence: 0.83955294944444

 $00{:}23{:}24{.}444 \dashrightarrow 00{:}23{:}27{.}134$ dose of suicide then at least the

NOTE Confidence: 0.83955294944444

 $00:23:27.134 \rightarrow 00:23:29.004$ combination of everything that came

NOTE Confidence: 0.83955294944444

 $00:23:29.004 \rightarrow 00:23:31.398$ before it and then the solar sybian does.

NOTE Confidence: 0.83955294944444

 $00{:}23{:}31{.}400 \dashrightarrow 00{:}23{:}34{.}104$ So perhaps that you know I I mentioned NOTE Confidence: 0.83955294944444

 $00{:}23{:}34{.}104 \dashrightarrow 00{:}23{:}36{.}090$ that because I'm a bit skeptical

NOTE Confidence: 0.83955294944444

 $00:23:36.090 \rightarrow 00:23:38.160$ of the single dose is going to

NOTE Confidence: 0.83955294944444

 $00:23:38.160 \longrightarrow 00:23:41.303$ cure people who've had 20 years of

NOTE Confidence: 0.83955294944444

 $00:23:41.303 \rightarrow 00:23:43.092$ depression narrative and perhaps

NOTE Confidence: 0.83955294944444

 $00{:}23{:}43.092 \dashrightarrow 00{:}23{:}45.956$ this is what we might see a little

NOTE Confidence: 0.83955294944444

 $00{:}23{:}45{.}956 \dashrightarrow 00{:}23{:}48{.}299$ more realistic moving forward.

NOTE Confidence: 0.83955294944444

 $00:23:48.300 \longrightarrow 00:23:48.806$ All right.

NOTE Confidence: 0.83955294944444

00:23:48.806 --> 00:23:50.324 Before I wrap up this section,

NOTE Confidence: 0.83955294944444

 $00:23:50.330 \longrightarrow 00:23:52.591$ I'll just show you also some interesting

NOTE Confidence: 0.83955294944444

 $00:23:52.591 \rightarrow 00:23:54.990$ results from our quality of life measure,

 $00:23:54.990 \longrightarrow 00:23:58.510$ which was the Rand 36 it had

NOTE Confidence: 0.83955294944444

 $00{:}23{:}58{.}510 \dashrightarrow 00{:}24{:}00{.}860$ contains 8 health related domains.

NOTE Confidence: 0.83955294944444

 $00:24:00.860 \rightarrow 00:24:02.788$ And I think this is important in depression

NOTE Confidence: 0.83955294944444

00:24:02.788 --> 00:24:04.416 studies not just to look at symptoms,

NOTE Confidence: 0.839552949444444

 $00{:}24{:}04{.}420 \dashrightarrow 00{:}24{:}06{.}660$ but also the collect some idea of how

NOTE Confidence: 0.83955294944444

 $00:24:06.660 \rightarrow 00:24:08.980$ people are actually doing in their life.

NOTE Confidence: 0.83955294944444

 $00{:}24{:}08{.}980 \dashrightarrow 00{:}24{:}10{.}684$ And we collected qualitative data as

NOTE Confidence: 0.83955294944444

00:24:10.684 --> 00:24:12.879 well that I'm not going to show here,

NOTE Confidence: 0.83955294944444

00:24:12.880 --> 00:24:14.096 I haven't analyzed yet,

NOTE Confidence: 0.83955294944444

 $00{:}24{:}14.096 \dashrightarrow 00{:}24{:}16.879$ but as far as from these eight domains,

NOTE Confidence: 0.839552949444444

 $00:24:16.880 \longrightarrow 00:24:17.428$ so actually.

NOTE Confidence: 0.83955294944444

 $00:24:17.428 \longrightarrow 00:24:19.402$ Out of seven, out of the eight,

NOTE Confidence: 0.83955294944444

 $00{:}24{:}19{.}402 \dashrightarrow 00{:}24{:}20{.}842$ we saw significant time effect,

NOTE Confidence: 0.83955294944444

 $00:24:20.850 \rightarrow 00:24:22.490$ meaning people significantly improved

NOTE Confidence: 0.83955294944444

 $00{:}24{:}22{.}490 \dashrightarrow 00{:}24{:}24{.}540$ from their initial baseline over

 $00:24:24.540 \longrightarrow 00:24:26.448$ the course of the whole study.

NOTE Confidence: 0.83955294944444

00:24:26.450 --> 00:24:28.390 And in these three, sorry,

NOTE Confidence: 0.83955294944444

00:24:28.390 --> 00:24:31.126 4 domains on the left now in green,

NOTE Confidence: 0.83955294944444

 $00:24:31.130 \longrightarrow 00:24:34.016$ that we actually did see a

NOTE Confidence: 0.83955294944444

00:24:34.016 --> 00:24:35.459 statistically significant improvement

NOTE Confidence: 0.83955294944444

 $00:24:35.459 \rightarrow 00:24:38.106$ post silvbin compared to post SIBO.

NOTE Confidence: 0.83955294944444

 $00:24:38.110 \rightarrow 00:24:40.230$ So unlike the depression measures,

NOTE Confidence: 0.83955294944444

 $00:24:40.230 \rightarrow 00:24:42.310$ this was statistically significant.

NOTE Confidence: 0.83955294944444

 $00:24:42.310 \longrightarrow 00:24:45.430$ Still cybin and these are pretty

NOTE Confidence: 0.83955294944444

 $00{:}24{:}45{.}507 \dashrightarrow 00{:}24{:}48{.}487$ relevant domains that role limitations.

NOTE Confidence: 0.83955294944444

 $00{:}24{:}48{.}490 \dashrightarrow 00{:}24{:}50{.}290$ Due to emotional problems and emotional

NOTE Confidence: 0.83955294944444

 $00{:}24{:}50{.}290 \dashrightarrow 00{:}24{:}51{.}658$ well-being, social functioning.

NOTE Confidence: 0.83955294944444

 $00:24:51.658 \longrightarrow 00:24:53.260$ And general Health,

NOTE Confidence: 0.83955294944444

 $00:24:53.260 \rightarrow 00:24:55.460$ we didn't see it for energy and fatigue.

NOTE Confidence: 0.83955294944444

 $00{:}24{:}55{.}460 \dashrightarrow 00{:}24{:}57{.}300$ And just to show you what those results

NOTE Confidence: 0.83955294944444

 $00:24:57.300 \rightarrow 00:24:59.556$ for us look like with something like this,

 $00:24:59.560 \longrightarrow 00:25:01.145$ this is for role limitations

NOTE Confidence: 0.83955294944444

 $00:25:01.145 \longrightarrow 00:25:02.413$ due to emotional problems,

NOTE Confidence: 0.83955294944444

00:25:02.420 --> 00:25:04.388 increase in scores, improvements.

NOTE Confidence: 0.83955294944444

00:25:04.388 --> 00:25:07.980 And so we we did see pretty

NOTE Confidence: 0.83955294944444

 $00:25:07.980 \longrightarrow 00:25:09.548$ significant jumps after the

NOTE Confidence: 0.83955294944444

 $00:25:09.548 \longrightarrow 00:25:11.900$ suicide and actually and this is

NOTE Confidence: 0.725588814166667

00:25:11.967 --> 00:25:13.818 2 weeks. After the Silybin session

NOTE Confidence: 0.725588814166667

 $00{:}25{:}13.818 \dashrightarrow 00{:}25{:}16.377$ and then we collected it at the end

NOTE Confidence: 0.725588814166667

 $00{:}25{:}16.377 \dashrightarrow 00{:}25{:}18.808$ of study and that improvement was

NOTE Confidence: 0.725588814166667

 $00:25:18.808 \rightarrow 00:25:21.218$ still significant three months later.

NOTE Confidence: 0.725588814166667

 $00{:}25{:}21{.}220 \dashrightarrow 00{:}25{:}23{.}418$ And that was true for these other

NOTE Confidence: 0.725588814166667

 $00:25:23.418 \rightarrow 00:25:25.526$ domains and the emotional well-being

NOTE Confidence: 0.725588814166667

 $00{:}25{:}25{.}526 \dashrightarrow 00{:}25{:}28{.}168$ and social functioning as well.

NOTE Confidence: 0.725588814166667

 $00{:}25{:}28.168 \dashrightarrow 00{:}25{:}30.990$ So that is. And perhaps promising results.

NOTE Confidence: 0.725588814166667

 $00:25:30.990 \longrightarrow 00:25:33.650$ So just to sum up that before I

00:25:33.650 --> 00:25:36.016 pass it over to Patrick from this,

NOTE Confidence: 0.725588814166667

 $00:25:36.016 \longrightarrow 00:25:38.764$ we did see significant improvements in

NOTE Confidence: 0.725588814166667

 $00{:}25{:}38.764 \dashrightarrow 00{:}25{:}40.735$ depression following both the placebo NOTE Confidence: 0.725588814166667

 $00:25:40.735 \rightarrow 00:25:42.800$ and the sobin without a statistically

NOTE Confidence: 0.725588814166667

 $00:25:42.800 \rightarrow 00:25:44.600$ significant difference between the two.

NOTE Confidence: 0.725588814166667

 $00{:}25{:}44.600 \dashrightarrow 00{:}25{:}46.274$ However, we did see larger effect

NOTE Confidence: 0.725588814166667

 $00:25:46.274 \rightarrow 00:25:48.102$ sizes and higher rates of response

NOTE Confidence: 0.725588814166667

 $00:25:48.102 \rightarrow 00:25:49.089$ and remission postal,

NOTE Confidence: 0.725588814166667

 $00:25:49.090 \rightarrow 00:25:52.940$ cybin and after the SILIBIN dosing session,

NOTE Confidence: 0.725588814166667

 $00:25:52.940 \longrightarrow 00:25:55.055$ the decreases in depression remains

NOTE Confidence: 0.725588814166667

 $00:25:55.055 \rightarrow 00:25:58.186$ significant for two months and we saw

NOTE Confidence: 0.725588814166667

 $00:25:58.186 \rightarrow 00:26:00.070$ significant and lasting improvements.

NOTE Confidence: 0.725588814166667

 $00{:}26{:}00{.}070 \dashrightarrow 00{:}26{:}02{.}545$ In several mood related quality

NOTE Confidence: 0.725588814166667

 $00:26:02.545 \longrightarrow 00:26:04.030$ of life domains.

NOTE Confidence: 0.725588814166667

 $00:26:04.030 \rightarrow 00:26:06.322$ Again, the limitations that I touched

NOTE Confidence: 0.725588814166667

 $00:26:06.322 \rightarrow 00:26:08.703$ on for this section against small

 $00:26:08.703 \rightarrow 00:26:11.419$ sample size for for an efficacy study.

NOTE Confidence: 0.725588814166667

00:26:11.420 --> 00:26:13.574 Any study we did have carryover

NOTE Confidence: 0.725588814166667

 $00:26:13.574 \longrightarrow 00:26:15.576$ effects that may have limited

NOTE Confidence: 0.725588814166667

 $00:26:15.576 \longrightarrow 00:26:17.512$ detecting that that difference.

NOTE Confidence: 0.725588814166667

 $00{:}26{:}17.512 \dashrightarrow 00{:}26{:}20.338$ We had limited success with blinding

NOTE Confidence: 0.725588814166667

 $00{:}26{:}20{.}338 \dashrightarrow 00{:}26{:}22{.}360$ and clear expectancy effects

NOTE Confidence: 0.725588814166667

 $00:26:22.360 \longrightarrow 00:26:24.870$ at play and the rapy effects,

NOTE Confidence: 0.725588814166667

 $00:26:24.870 \longrightarrow 00:26:27.236$ and you know we can't separate in

NOTE Confidence: 0.725588814166667

 $00{:}26{:}27{.}236 \dashrightarrow 00{:}26{:}29{.}225$ this model the therapy effects

NOTE Confidence: 0.725588814166667

 $00:26:29.225 \longrightarrow 00:26:31.485$ from the actual drug effects.

NOTE Confidence: 0.725588814166667

 $00{:}26{:}31{.}490 \dashrightarrow 00{:}26{:}33{.}580$ Discuss more in the discussion.

NOTE Confidence: 0.725588814166667

 $00{:}26{:}33{.}580 \dashrightarrow 00{:}26{:}34{.}660$ So with that,

NOTE Confidence: 0.725588814166667

 $00{:}26{:}34.660 \dashrightarrow 00{:}26{:}36.820$ I'm going to stop my share

NOTE Confidence: 0.725588814166667

 $00{:}26{:}36{.}820 \dashrightarrow 00{:}26{:}39{.}230$ and pass it over to Patrick.

NOTE Confidence: 0.899043302

00:26:43.400 --> 00:26:44.850 All right. Thank you, Jordan.

- 00:26:54.920 --> 00:26:56.940 Can everyone see my
- NOTE Confidence: 0.81063434
- 00:26:56.940 --> 00:26:58.850 opening slide? Looks good.
- NOTE Confidence: 0.61868894
- 00:27:00.350 --> 00:27:03.080 Alright. Great pointer.
- NOTE Confidence: 0.917826833333333
- $00{:}27{:}05{.}190 \dashrightarrow 00{:}27{:}06{.}180$ So now we want to talk
- NOTE Confidence: 0.857683730769231
- $00{:}27{:}06{.}190 \dashrightarrow 00{:}27{:}08{.}598$ a little bit what are the potential
- NOTE Confidence: 0.857683730769231
- $00{:}27{:}08.598 \dashrightarrow 00{:}27{:}10.717$ neural mechanisms of the antidepressant
- NOTE Confidence: 0.857683730769231
- $00:27:10.717 \longrightarrow 00:27:14.678$ effect that Jordan just outlined.
- NOTE Confidence: 0.857683730769231
- $00:27:14.680 \longrightarrow 00:27:16.280$ And so we're really in the
- NOTE Confidence: 0.857683730769231
- $00{:}27{:}16.280 \dashrightarrow 00{:}27{:}18.268$ middle of a paradigm shift.
- NOTE Confidence: 0.8055909025
- $00{:}27{:}22.250 \dashrightarrow 00{:}27{:}25.690$ In the sense that there's this idea that
- NOTE Confidence: 0.8055909025
- $00:27:25.690 \rightarrow 00:27:28.060$ psychedelics are psychoplasm begins,
- NOTE Confidence: 0.8055909025
- $00:27:28.060 \rightarrow 00:27:31.420$ so they induced a neuroplastic state,
- NOTE Confidence: 0.8055909025
- $00{:}27{:}31{.}420 \dashrightarrow 00{:}27{:}34{.}680$ which might open a the rapeutic
- NOTE Confidence: 0.8055909025
- $00:27:34.680 \longrightarrow 00:27:36.636$ window for the rapy.
- NOTE Confidence: 0.8055909025
- $00:27:36.640 \rightarrow 00:27:40.840$ And it's a paradigm shift because it
- NOTE Confidence: 0.8055909025
- 00:27:40.840 --> 00:27:44.288 goes beyond the standard, you know,

- NOTE Confidence: 0.8055909025
- $00:27:44.288 \longrightarrow 00:27:46.536$ trying to manipulate neurochemistry

 $00{:}27{:}46.536 \dashrightarrow 00{:}27{:}51.002$ with via mono Amiens, Prozac and Zoloft.

NOTE Confidence: 0.8055909025

 $00:27:51.002 \longrightarrow 00:27:54.018$ And what not and instead.

NOTE Confidence: 0.8055909025

 $00:27:54.020 \rightarrow 00:27:56.618$ Try to selectively modulate and change

NOTE Confidence: 0.8055909025

 $00{:}27{:}56.618 \dashrightarrow 00{:}27{:}58.841$ neural circuits that are implicated

NOTE Confidence: 0.8055909025

 $00{:}27{:}58.841 \dashrightarrow 00{:}28{:}01.774$ in depression and anxiety and OCD and

NOTE Confidence: 0.8055909025

 $00:28:01.774 \rightarrow 00:28:04.130$ other things as well in addiction.

NOTE Confidence: 0.707514135

 $00:28:07.660 \rightarrow 00:28:10.036$ So I'll start with what's neuroplasticity.

NOTE Confidence: 0.707514135

 $00{:}28{:}10.040 \dashrightarrow 00{:}28{:}12.550$ So neuroplasticity refers to the

NOTE Confidence: 0.707514135

00:28:12.550 --> 00:28:14.056 activity dependent modification

NOTE Confidence: 0.707514135

 $00{:}28{:}14.056 \dashrightarrow 00{:}28{:}16.620$ of cement synaptic transmission,

NOTE Confidence: 0.707514135

 $00{:}28{:}16.620 \dashrightarrow 00{:}28{:}19.086$ which is thought to be one of the neural

NOTE Confidence: 0.707514135

 $00{:}28{:}19.086 \dashrightarrow 00{:}28{:}20.657$ substrates of learning and memory.

NOTE Confidence: 0.707514135

00:28:20.660 --> 00:28:21.959 In some sense,

NOTE Confidence: 0.707514135

 $00{:}28{:}21{.}959 \dashrightarrow 00{:}28{:}24{.}124$ I think neuroplasticity plasticity is

 $00:28:24.124 \rightarrow 00:28:26.540$ redundant because the brain is so dynamic.

NOTE Confidence: 0.707514135

 $00{:}28{:}26{.}540 \dashrightarrow 00{:}28{:}28{.}660$ Our environments are constantly

NOTE Confidence: 0.707514135

 $00:28:28.660 \rightarrow 00:28:31.310$ changing and relationships are changing.

NOTE Confidence: 0.707514135

 $00:28:31.310 \longrightarrow 00:28:32.864$ And so the brain is so dynamic,

NOTE Confidence: 0.707514135

 $00:28:32.870 \longrightarrow 00:28:35.038$ so it's always plastic,

NOTE Confidence: 0.707514135

 $00:28:35.038 \rightarrow 00:28:38.290$ but we use the term neuroplasticity.

NOTE Confidence: 0.707514135

 $00{:}28{:}38{.}290 \dashrightarrow 00{:}28{:}40{.}710$ And this idea goes back

NOTE Confidence: 0.707514135

 $00:28:40.710 \longrightarrow 00:28:43.246$ to Donald Hebb from 1949.

NOTE Confidence: 0.707514135

 $00{:}28{:}43{.}246 \dashrightarrow 00{:}28{:}47{.}850$ And this quote of his is is so

NOTE Confidence: 0.707514135

 $00{:}28{:}47.850 \dashrightarrow 00{:}28{:}51.090$ iconic and really I think prophetic.

NOTE Confidence: 0.707514135

 $00{:}28{:}51{.}090 \dashrightarrow 00{:}28{:}56{.}054$ So Donald Hebb said in 1949 when an Axon

NOTE Confidence: 0.707514135

 $00:28:56.054 \rightarrow 00:29:00.746$ of cell A is near enough to excite a cell B.

NOTE Confidence: 0.707514135

00:29:00.750 --> 00:29:02.310 And repeatedly or persistently

NOTE Confidence: 0.707514135

00:29:02.310 --> 00:29:03.870 takes part in firing,

NOTE Confidence: 0.707514135

 $00{:}29{:}03.870 \dashrightarrow 00{:}29{:}04.968$ firing it.

NOTE Confidence: 0.707514135

 $00:29:04.968 \rightarrow 00:29:07.713$ Some growth process for metabolic

 $00:29:07.713 \longrightarrow 00:29:11.125$ change takes place in one of both

NOTE Confidence: 0.707514135

00:29:11.125 --> 00:29:13.960 cells such that a efficiency as one

NOTE Confidence: 0.707514135

 $00{:}29{:}13.960 \dashrightarrow 00{:}29{:}16.585$ of the cells firing B is increased.

NOTE Confidence: 0.707514135

 $00:29:16.590 \rightarrow 00:29:19.461$ So a simply simple way to say that is

NOTE Confidence: 0.707514135

 $00:29:19.461 \longrightarrow 00:29:22.169$ sales or networks that fire together,

NOTE Confidence: 0.707514135

 $00:29:22.170 \longrightarrow 00:29:23.282$ wire together,

NOTE Confidence: 0.707514135

 $00:29:23.282 \rightarrow 00:29:26.618$ that's these the essence of neuroplasticity.

NOTE Confidence: 0.707514135

 $00:29:26.620 \longrightarrow 00:29:28.978$ This is really important in the

NOTE Confidence: 0.707514135

 $00{:}29{:}28{.}978 \dashrightarrow 00{:}29{:}30{.}550$ context of depression because

NOTE Confidence: 0.707514135

00:29:30.622 --> 00:29:32.300 enhancing neuroplasticity,

NOTE Confidence: 0.707514135

 $00{:}29{:}32{.}300 \dashrightarrow 00{:}29{:}33{.}972$ for example through psyched elics,

NOTE Confidence: 0.707514135

 $00{:}29{:}33{.}972 \dashrightarrow 00{:}29{:}37{.}003$ could up again open up this the rapeutic

NOTE Confidence: 0.707514135

 $00{:}29{:}37{.}003 \dashrightarrow 00{:}29{:}38{.}787$ window in which traditional

NOTE Confidence: 0.707514135

 $00{:}29{:}38{.}787 \dashrightarrow 00{:}29{:}41{.}582$ the rapies such as CBT and others

NOTE Confidence: 0.707514135

 $00{:}29{:}41.582 \dashrightarrow 00{:}29{:}43.558$ could prove more efficacious,

- $00:29:43.560 \longrightarrow 00:29:46.652$ and indeed deficits and
- NOTE Confidence: 0.707514135
- 00:29:46.652 --> 00:29:47.900 markers of neuroplasticity,
- NOTE Confidence: 0.707514135
- 00:29:47.900 --> 00:29:50.020 for instance a peripheral BDNF,
- NOTE Confidence: 0.707514135
- $00:29:50.020 \rightarrow 00:29:51.990$ have been observed and depression.
- NOTE Confidence: 0.81021771125
- $00:29:54.990 \rightarrow 00:29:59.974$ So this review paper just came out showing.
- NOTE Confidence: 0.81021771125
- 00:29:59.980 --> 00:30:02.780 Some of the work that's been done
- NOTE Confidence: 0.81021771125
- $00{:}30{:}02{.}780 \dashrightarrow 00{:}30{:}06{.}103$ in the context of psyched elics on
- NOTE Confidence: 0.81021771125
- $00:30:06.103 \rightarrow 00:30:08.819$ different measures of neuroplasticity.
- NOTE Confidence: 0.81021771125
- $00{:}30{:}08{.}820 \dashrightarrow 00{:}30{:}12{.}110$ And there's several measures that.
- NOTE Confidence: 0.81021771125
- $00:30:12.110 \longrightarrow 00:30:13.978$ Have been used, including.
- NOTE Confidence: 0.7437170166666667
- 00:30:16.290 --> 00:30:19.188 Immediate early genes,
- NOTE Confidence: 0.7437170166666667
- $00{:}30{:}19.190 \dashrightarrow 00{:}30{:}22.454$ upregulation of other plastic
- NOTE Confidence: 0.7437170166666667
- $00{:}30{:}22{.}454 \dashrightarrow 00{:}30{:}25{.}450$ plasticity genes, spinal genesis,
- NOTE Confidence: 0.7437170166666667
- $00:30:25.450 \rightarrow 00:30:28.170$ neurogenesis, density of synapses.
- NOTE Confidence: 0.7437170166666667
- $00:30:28.170 \longrightarrow 00:30:29.526$ One thing that to note here,
- NOTE Confidence: 0.7437170166666667
- $00:30:29.530 \rightarrow 00:30:31.630$ which may come up in discussion later,

- NOTE Confidence: 0.7437170166666667
- $00:30:31.630 \longrightarrow 00:30:35.890$ is that each of these different
- NOTE Confidence: 0.7437170166666667
- 00:30:35.890 --> 00:30:37.730 measures of neuroplasticity looked
- NOTE Confidence: 0.7437170166666667
- $00{:}30{:}37{.}730 \dashrightarrow 00{:}30{:}40{.}490$ to have a different time course.
- NOTE Confidence: 0.7437170166666667
- $00:30:40.490 \rightarrow 00:30:42.356$ So of course the immediate early
- NOTE Confidence: 0.7437170166666667
- 00:30:42.356 --> 00:30:43.904 genes are early, you know,
- NOTE Confidence: 0.7437170166666667
- $00:30:43.904 \dashrightarrow 00:30:45.746$ within an hour of administration of.
- NOTE Confidence: 0.7437170166666667
- $00:30:45.750 \longrightarrow 00:30:47.366$ Of the second relic,
- NOTE Confidence: 0.7437170166666667
- $00:30:47.366 \longrightarrow 00:30:49.386$ whereas some of the morphological
- NOTE Confidence: 0.7437170166666667
- $00:30:49.386 \longrightarrow 00:30:51.228$ changes tend to happen later.
- NOTE Confidence: 0.733548463333333
- $00:30:54.580 \longrightarrow 00:30:56.988$ You asked in the chat if you
- NOTE Confidence: 0.733548463333333
- $00:30:56.988 \rightarrow 00:30:58.703$ get neuroplastic changes after
- NOTE Confidence: 0.733548463333333
- $00:30:58.703 \dashrightarrow 00:31:01.650$ conventional, like monoaminergic.
- NOTE Confidence: 0.733548463333333
- $00:31:01.650 \rightarrow 00:31:03.780$ Antidepressants, the answer is yes.
- NOTE Confidence: 0.685931305
- $00{:}31{:}06.050 \dashrightarrow 00{:}31{:}08.216$ And with ketamine and with ECT.
- NOTE Confidence: 0.84035224
- $00:31:09.860 \dashrightarrow 00:31:14.454$ Correct. In with TMS I believe as well.
- NOTE Confidence: 0.84035224

00:31:14.460 --> 00:31:16.812 Umm, but you know the the change of

NOTE Confidence: 0.84035224

 $00{:}31{:}16.812 \dashrightarrow 00{:}31{:}18.377$ psychedelics are pretty rapid and

NOTE Confidence: 0.84035224

00:31:18.377 --> 00:31:20.512 they they can be pretty long lasting. NOTE Confidence: 0.84035224

00:31:20.520 --> 00:31:24.214 And for like the typical, you know,

NOTE Confidence: 0.84035224

00:31:24.214 --> 00:31:27.316 SSRI's, it may take months for

NOTE Confidence: 0.84035224

 $00{:}31{:}27{.}316$ --> $00{:}31{:}30{.}439$ these types of changes to occur.

NOTE Confidence: 0.84035224

00:31:30.440 --> 00:31:32.939 In a really elegant study for from

NOTE Confidence: 0.84035224

 $00:31:32.939 \rightarrow 00:31:35.345$ some of our colleagues right here

NOTE Confidence: 0.84035224

 $00{:}31{:}35{.}345 \dashrightarrow 00{:}31{:}38{.}729$ at Yale shall it all showed that a

NOTE Confidence: 0.84035224

 $00:31:38.729 \dashrightarrow 00:31:40.986$ single dose of silvbin increased spine NOTE Confidence: 0.84035224

 $00{:}31{:}40{.}986 \dashrightarrow 00{:}31{:}43{.}614$ density in the media prefrontal cortex.

NOTE Confidence: 0.84035224

00:31:43.614 --> 00:31:46.349 It immediately related stress related

NOTE Confidence: 0.84035224

 $00:31:46.349 \rightarrow 00:31:48.498$ behavioral deficits using learned

NOTE Confidence: 0.84035224

00:31:48.498 --> 00:31:51.102 helplessness paradigm which is a standard

NOTE Confidence: 0.84035224

 $00{:}31{:}51{.}102 \dashrightarrow 00{:}31{:}54{.}275$ animal model of depression and also

NOTE Confidence: 0.84035224

 $00{:}31{:}54{.}275 \dashrightarrow 00{:}31{:}56{.}679$ also promoted excitatory neurotransmission.

- NOTE Confidence: 0.84035224
- $00:31:56.680 \rightarrow 00:31:58.576$ So it was really elegant in
- NOTE Confidence: 0.84035224
- $00{:}31{:}58{.}576 \dashrightarrow 00{:}32{:}00{.}410$ the sense that it showed.
- NOTE Confidence: 0.84035224
- 00:32:00.410 --> 00:32:02.490 Silas Sylvan could induce
- NOTE Confidence: 0.84035224
- $00:32:02.490 \longrightarrow 00:32:03.530$ morphological changes,
- NOTE Confidence: 0.84035224
- $00:32:03.530 \longrightarrow 00:32:04.690$ structural changes,
- NOTE Confidence: 0.84035224
- $00:32:04.690 \rightarrow 00:32:07.590$ behavioral changes related to depression,
- NOTE Confidence: 0.84035224
- $00{:}32{:}07{.}590 \dashrightarrow 00{:}32{:}08{.}720$ and.
- NOTE Confidence: 0.703882562
- 00:32:10.900 --> 00:32:14.050 Excitatory neurotransmission
- NOTE Confidence: 0.703882562
- 00:32:14.050 --> 00:32:17.200 via electrophysiology.
- NOTE Confidence: 0.703882562
- 00:32:17.200 --> 00:32:20.596 So going back to this plot I showed earlier,
- NOTE Confidence: 0.703882562
- 00:32:20.596 --> 00:32:22.984 one thing to note is this, this,
- NOTE Confidence: 0.703882562
- $00{:}32{:}22.984 \dashrightarrow 00{:}32{:}26.536$ this middle row here is it's in yellow.
- NOTE Confidence: 0.703882562
- $00{:}32{:}26{.}540 \dashrightarrow 00{:}32{:}28{.}320$ These are the human studies.
- NOTE Confidence: 0.703882562
- $00{:}32{:}28{.}320 \dashrightarrow 00{:}32{:}30{.}560$ And what you can see is most of
- NOTE Confidence: 0.703882562
- 00:32:30.560 -> 00:32:32.953 the human studies have really just
- NOTE Confidence: 0.703882562

 $00:32:32.953 \rightarrow 00:32:35.153$ looked at peripheral BDNF levels,

NOTE Confidence: 0.703882562

 $00{:}32{:}35{.}160 \dashrightarrow 00{:}32{:}37{.}070$ which are thought to be

NOTE Confidence: 0.703882562

00:32:37.070 --> 00:32:38.216 related to neuroplasticity.

NOTE Confidence: 0.703882562

 $00:32:38.220 \longrightarrow 00:32:39.840$ And there have been several

NOTE Confidence: 0.703882562

 $00:32:39.840 \longrightarrow 00:32:41.136$ negative findings as well.

NOTE Confidence: 0.703882562

 $00:32:41.140 \longrightarrow 00:32:42.460$ But there's a question of,

NOTE Confidence: 0.703882562

00:32:42.460 --> 00:32:44.445 you know, do BDNF levels

NOTE Confidence: 0.703882562

 $00:32:44.445 \rightarrow 00:32:46.430$ peripherally reflect being the be.

NOTE Confidence: 0.703882562

 $00{:}32{:}46{.}430 \dashrightarrow 00{:}32{:}49{.}850$ Enough levels in the brain.

NOTE Confidence: 0.703882562

 $00:32:49.850 \longrightarrow 00:32:50.930$ Which is not highlighted here.

NOTE Confidence: 0.703882562

 $00{:}32{:}50{.}930 \dashrightarrow 00{:}32{:}53{.}023$ There have been some F MRI studies

NOTE Confidence: 0.703882562

00:32:53.023 --> 00:32:54.457 look at functional connectivity

NOTE Confidence: 0.703882562

 $00:32:54.457 \longrightarrow 00:32:56.812$ in the context of psychedelics

NOTE Confidence: 0.703882562

 $00:32:56.812 \rightarrow 00:32:58.225$ showing increased connectivity,

NOTE Confidence: 0.703882562

 $00:32:58.230 \longrightarrow 00:33:00.384$ but what this really does show

NOTE Confidence: 0.703882562

 $00:33:00.384 \longrightarrow 00:33:02.350$ is there's a possibility of data

- NOTE Confidence: 0.703882562
- 00:33:02.350 --> 00:33:04.790 using sort of brain measures,

 $00:33:04.790 \rightarrow 00:33:05.796$ especially electrophysiological,

NOTE Confidence: 0.703882562

 $00:33:05.796 \longrightarrow 00:33:08.311$ in the context of psychedelics

NOTE Confidence: 0.703882562

 $00{:}33{:}08{.}311 \dashrightarrow 00{:}33{:}09{.}317$ and depression.

NOTE Confidence: 0.8438104575

 $00:33:12.690 \longrightarrow 00:33:16.980$ So how can we non invasively

NOTE Confidence: 0.8438104575

 $00:33:16.980 \longrightarrow 00:33:18.410$ assess neuroplasticity?

NOTE Confidence: 0.8438104575

 $00:33:18.410 \dashrightarrow 00:33:21.042$ In humans, and one way we could do

NOTE Confidence: 0.8438104575

 $00:33:21.042 \longrightarrow 00:33:24.099$ it is with long term potentiation.

NOTE Confidence: 0.8438104575

00:33:24.100 --> 00:33:25.876 So one form of synaptic plasticity

NOTE Confidence: 0.8438104575

 $00:33:25.876 \rightarrow 00:33:27.630$ is the ability of synapses,

NOTE Confidence: 0.8438104575

00:33:27.630 --> 00:33:29.494 as I mentioned earlier,

NOTE Confidence: 0.8438104575

 $00:33:29.494 \rightarrow 00:33:32.290$ to strengthen overtime in response to

NOTE Confidence: 0.8438104575

 $00:33:32.373 \rightarrow 00:33:35.505$ increases or decreases in their activity.

NOTE Confidence: 0.8438104575

 $00{:}33{:}35{.}510 \dashrightarrow 00{:}33{:}37{.}380$ The type of synaptic plasticity

NOTE Confidence: 0.8438104575

 $00{:}33{:}37{.}380 \dashrightarrow 00{:}33{:}38{.}876$ that's typically measured is

00:33:38.876 --> 00:33:40.590 called long term potentiation,

NOTE Confidence: 0.8438104575

 $00{:}33{:}40{.}590 \dashrightarrow 00{:}33{:}43{.}416$ which is a persistent increase in

NOTE Confidence: 0.8438104575

00:33:43.416 --> 00:33:45.918 synaptic strength followed flood following

NOTE Confidence: 0.8438104575

 $00:33:45.918 \rightarrow 00:33:48.628$ high frequency pre synaptic tetanic

NOTE Confidence: 0.8438104575

 $00{:}33{:}48.628 \dashrightarrow 00{:}33{:}51.590$ stimulation typically at about 100 Hertz.

NOTE Confidence: 0.8438104575

 $00:33:51.590 \dashrightarrow 00:33:53.380$ And it is really this is to be a neural NOTE Confidence: 0.8438104575

00:33:53.427 --> 00:33:55.360 substrate of learning and memory.

NOTE Confidence: 0.8438104575

 $00:33:55.360 \rightarrow 00:33:57.445$ So high frequency Titanic stimulation

NOTE Confidence: 0.8438104575

 $00{:}33{:}57{.}445 \dashrightarrow 00{:}34{:}00{.}092$ of the presynaptic cell will increase

NOTE Confidence: 0.8438104575

 $00:34:00.092 \rightarrow 00:34:02.567$ excitability in the postsynaptic cell.

NOTE Confidence: 0.8438104575

 $00{:}34{:}02{.}570 \dashrightarrow 00{:}34{:}04{.}509$ This has been one of the quintessential

NOTE Confidence: 0.8438104575

 $00:34:04.509 \rightarrow 00:34:05.860$ models of neuroplasticity going back.

NOTE Confidence: 0.8438104575

00:34:05.860 - 00:34:07.690 Decades,

NOTE Confidence: 0.8438104575

 $00:34:07.690 \rightarrow 00:34:09.715$ and while it's traditionally been

NOTE Confidence: 0.8438104575

 $00:34:09.715 \longrightarrow 00:34:11.335$ studied in slice preparations,

NOTE Confidence: 0.8438104575

 $00{:}34{:}11{.}340 \dashrightarrow 00{:}34{:}14{.}746$ and it has been done in humans using

- NOTE Confidence: 0.8438104575
- $00:34:14.746 \rightarrow 00:34:17.926$ exercise tissue some surgical patients,

 $00{:}34{:}17{.}930 \dashrightarrow 00{:}34{:}20{.}960$ it's now possible to index LTP

NOTE Confidence: 0.8438104575

 $00:34:20.960 \rightarrow 00:34:23.644$ and humans non invasively using

NOTE Confidence: 0.8438104575

 $00:34:23.644 \rightarrow 00:34:25.876$ sensory stimulation and EG.

NOTE Confidence: 0.755103465714286

 $00:34:30.160 \longrightarrow 00:34:33.219$ So this, so this is what the,

NOTE Confidence: 0.755103465714286

 $00:34:33.220 \rightarrow 00:34:35.590$ the, the typical paradigm that I'm

NOTE Confidence: 0.755103465714286

00:34:35.590 --> 00:34:37.696 Speaking of entails. And in fact

NOTE Confidence: 0.755103465714286

00:34:37.696 - 00:34:40.080 this is the very paradigm we used.

NOTE Confidence: 0.755103465714286

 $00{:}34{:}40{.}080 \dashrightarrow 00{:}34{:}42{.}056$ So it's good to pay attention to this.

NOTE Confidence: 0.755103465714286

 $00{:}34{:}42.060 \dashrightarrow 00{:}34{:}45.380$ So, so we chose this paradigm adapted from

NOTE Confidence: 0.755103465714286

 $00:34:45.380 \longrightarrow 00:34:50.480$ clap at all 2005 and it's an auditory.

NOTE Confidence: 0.755103465714286

 $00{:}34{:}50{.}480 \dashrightarrow 00{:}34{:}53{.}699$ Sensory LTP paradigm.

NOTE Confidence: 0.755103465714286

 $00:34:53.700 \longrightarrow 00:34:55.284$ Losing my point here.

NOTE Confidence: 0.755103465714286

 $00{:}34{:}55{.}284 \dashrightarrow 00{:}34{:}58{.}029$ So the way it typically works is

NOTE Confidence: 0.755103465714286

 $00{:}34{:}58.029 \dashrightarrow 00{:}35{:}00{.}935$ you have a pre tetanus period where

 $00:35:00.935 \rightarrow 00:35:03.696$ you present roughly 120 tone pips.

NOTE Confidence: 0.755103465714286

00:35:03.696 --> 00:35:05.956 They're just 1000 Hertz tones,

NOTE Confidence: 0.755103465714286

 $00:35:05.960 \longrightarrow 00:35:08.912$ 50 milliseconds each and what they

NOTE Confidence: 0.755103465714286

 $00:35:08.912 \rightarrow 00:35:11.851$ do is they induce an auditory

NOTE Confidence: 0.755103465714286

 $00:35:11.851 \dashrightarrow 00:35:14.896$ ERP or the way we have analyzed

NOTE Confidence: 0.755103465714286

 $00{:}35{:}14.896 \dashrightarrow 00{:}35{:}18.177$ it an event related oscillation.

NOTE Confidence: 0.755103465714286

 $00{:}35{:}18.180 \dashrightarrow 00{:}35{:}21.438$ So this is standard ERP stuff.

NOTE Confidence: 0.755103465714286

 $00:35:21.440 \longrightarrow 00:35:22.564$ You present a tone,

NOTE Confidence: 0.755103465714286

 $00{:}35{:}22{.}564 \dashrightarrow 00{:}35{:}25{.}222$ you get an ERP or you get an

NOTE Confidence: 0.755103465714286

 $00{:}35{:}25{.}222 \dashrightarrow 00{:}35{:}26{.}578$ event related oscillation.

NOTE Confidence: 0.755103465714286

 $00{:}35{:}26{.}580 \dashrightarrow 00{:}35{:}30{.}094$ And then we do 2 minutes of

NOTE Confidence: 0.755103465714286

 $00:35:30.094 \rightarrow 00:35:32.860$ a tetanus at 13 Hertz,

NOTE Confidence: 0.755103465714286

 $00:35:32.860 \longrightarrow 00:35:34.612$ which has been shown to be

NOTE Confidence: 0.755103465714286

 $00:35:34.612 \rightarrow 00:35:36.240$ optimal for the authority cortex.

NOTE Confidence: 0.755103465714286

 $00:35:36.240 \longrightarrow 00:35:38.690$ And then we redo the the test

NOTE Confidence: 0.755103465714286

 $00:35:38.690 \longrightarrow 00:35:40.918$ phase with the same types of

 $00:35:40.918 \longrightarrow 00:35:43.480$ tone tips as in the pre tetanus.

NOTE Confidence: 0.755103465714286

00:35:43.480 --> 00:35:46.288 And what you can see here is an

NOTE Confidence: 0.755103465714286

 $00:35:46.288 \longrightarrow 00:35:49.199$ increase in event related oscillations

NOTE Confidence: 0.755103465714286

 $00:35:49.200 \longrightarrow 00:35:51.080$ particularly in the Theta range.

NOTE Confidence: 0.755103465714286

 $00:35:51.080 \dashrightarrow 00:35:52.418$ And these are actually our data.

NOTE Confidence: 0.755103465714286

 $00:35:52.420 \longrightarrow 00:35:54.930$ These are about 9 control

NOTE Confidence: 0.755103465714286

 $00:35:54.930 \longrightarrow 00:35:57.440$ subjects that we used to.

NOTE Confidence: 0.755103465714286

 $00:35:57.440 \longrightarrow 00:35:58.142$ Deposit the paradigm.

NOTE Confidence: 0.755103465714286

 $00{:}35{:}58{.}142 \dashrightarrow 00{:}35{:}59{.}780$ So this is what you should see

NOTE Confidence: 0.755103465714286

 $00:35:59.830 \longrightarrow 00:36:01.528$ in a normal individual.

NOTE Confidence: 0.755103465714286

 $00:36:01.530 \longrightarrow 00:36:03.108$ So is there any questions on,

NOTE Confidence: 0.755103465714286

 $00{:}36{:}03{.}110 \dashrightarrow 00{:}36{:}04{.}040$ on the paradigm

NOTE Confidence: 0.71263241

 $00:36:05.130 \dashrightarrow 00:36:06.810$ ERP is event related potential.

NOTE Confidence: 0.71263241

 $00{:}36{:}06{.}810 \dashrightarrow 00{:}36{:}08{.}728$ So that's like the reliable EG squiggle

NOTE Confidence: 0.71263241

 $00:36:08.728 \longrightarrow 00:36:10.678$ that comes after a sense risk stimulus,

00:36:11.030 --> 00:36:13.116 right. And that's what's typically done with

NOTE Confidence: 0.812873504375

 $00:36:13.116 \longrightarrow 00:36:15.197$ with this paradigm and we did that as well.

NOTE Confidence: 0.812873504375

 $00:36:15.200 \longrightarrow 00:36:16.646$ I'm not going to show that,

NOTE Confidence: 0.812873504375

 $00:36:16.650 \rightarrow 00:36:18.744$ but I chose event related oscillations

NOTE Confidence: 0.812873504375

 $00:36:18.744 \dashrightarrow 00:36:20.887$ because you really get the same

NOTE Confidence: 0.812873504375

 $00{:}36{:}20.887 \dashrightarrow 00{:}36{:}22.602$ information but you get added

NOTE Confidence: 0.812873504375

 $00:36:22.602 \dashrightarrow 00:36:24.176$ information about the frequency

NOTE Confidence: 0.812873504375

 $00:36:24.176 \dashrightarrow 00:36:26.100$ characteristics of the response.

NOTE Confidence: 0.812873504375

 $00{:}36{:}26{.}100 \dashrightarrow 00{:}36{:}27{.}932$ Does that make sense? Yeah, yeah.

NOTE Confidence: 0.812873504375

 $00:36:27.932 \rightarrow 00:36:29.180$ When you look at an ERP,

NOTE Confidence: 0.812873504375

 $00{:}36{:}29{.}180 \dashrightarrow 00{:}36{:}31{.}094$ you, you really have no idea

NOTE Confidence: 0.812873504375

 $00:36:31.094 \rightarrow 00:36:32.620$ what frequency that ERP is.

NOTE Confidence: 0.665498465714286

 $00:36:34.090 \rightarrow 00:36:35.630$ Once, but at the time it didn't.

NOTE Confidence: 0.9164628916666667

 $00:36:37.550 \longrightarrow 00:36:38.618$ I'm sorry, I didn't catch that.

NOTE Confidence: 0.76222267

00:36:43.830 --> 00:36:45.162 Someone asking you a question if

NOTE Confidence: 0.76222267

 $00:36:45.162 \dashrightarrow 00:36:46.900$ someone who had need wasn't muted.

- NOTE Confidence: 0.84193569
- $00:36:50.920 \rightarrow 00:36:53.139$ How long does it last this posted?
- NOTE Confidence: 0.84193569
- $00:36:53.140 \longrightarrow 00:36:54.952$ And it's like this increase in
- NOTE Confidence: 0.84193569
- $00:36:54.952 \rightarrow 00:36:57.010$ the data band after the auditory.
- NOTE Confidence: 0.813057208571428
- $00:36:59.360 \dashrightarrow 00:37:02.950$ How long does the entire task take? How how
- NOTE Confidence: 0.88674987
- $00{:}37{:}02{.}960 \dashrightarrow 00{:}37{:}04{.}955$ long do you observe this this effect
- NOTE Confidence: 0.88674987
- $00:37:04.955 \rightarrow 00:37:06.920$ and and when does it come back?
- NOTE Confidence: 0.88674987
- $00{:}37{:}06{.}920 \dashrightarrow 00{:}37{:}09{.}016$ Does it come back to know to the
- NOTE Confidence: 0.88674987
- 00:37:09.016 --> 00:37:10.358 President state after a while?
- NOTE Confidence: 0.88674987
- 00:37:10.360 --> 00:37:12.808 And if yes, after how long?
- NOTE Confidence: 0.687597596
- $00:37:13.380 \longrightarrow 00:37:14.860$ That's a really good question.
- NOTE Confidence: 0.687597596
- $00:37:14.860 \longrightarrow 00:37:16.258$ So we did not test that.
- NOTE Confidence: 0.687597596
- 00:37:16.260 --> 00:37:18.936 But in the original plat study,
- NOTE Confidence: 0.687597596
- $00:37:18.940 \longrightarrow 00:37:21.796$ they observed it up to six
- NOTE Confidence: 0.687597596
- $00{:}37{:}21.796 \dashrightarrow 00{:}37{:}24.600$ hours after after the tetanus.
- NOTE Confidence: 0.687597596
- $00:37:24.600 \dashrightarrow 00:37:27.396$ So they observed this increase in,
- NOTE Confidence: 0.687597596

 $00:37:27.400 \longrightarrow 00:37:29.262$ in their case they did ERP's,

NOTE Confidence: 0.687597596

 $00:37:29.262 \dashrightarrow 00:37:31.236$ but they observed it six hours after.

NOTE Confidence: 0.687597596

 $00:37:31.240 \longrightarrow 00:37:32.890$ They didn't go beyond that.

NOTE Confidence: 0.687597596

00:37:32.890 --> 00:37:35.230 Um, probably just for logistical

NOTE Confidence: 0.687597596

 $00{:}37{:}35{.}230 \dashrightarrow 00{:}37{:}37{.}102$ reasons and subject burden.

NOTE Confidence: 0.687597596

 $00:37:37.110 \longrightarrow 00:37:38.664$ So it could last longer than that.

NOTE Confidence: 0.687597596

 $00:37:38.670 \longrightarrow 00:37:40.404$ But they did observe it six

NOTE Confidence: 0.687597596

 $00:37:40.404 \longrightarrow 00:37:41.560$ hours after the tetanus.

NOTE Confidence: 0.703249597647059

 $00{:}37{:}42.820 \dashrightarrow 00{:}37{:}44.550$ And maybe you can get in Vivo LP in the

NOTE Confidence: 0.703249597647059

 $00:37:44.597 \rightarrow 00:37:46.326$ hippocampus that lasts a month or more.

NOTE Confidence: 0.703249597647059

 $00:37:46.330 \longrightarrow 00:37:48.298$ So in principle it can last a very

NOTE Confidence: 0.703249597647059

 $00:37:48.300 \rightarrow 00:37:50.080$ long time whether that would happen

NOTE Confidence: 0.703249597647059

 $00:37:50.080 \dashrightarrow 00:37:51.940$ in this paradigm, but in principle.

NOTE Confidence: 0.867193963333333

 $00:37:55.660 \longrightarrow 00:37:58.200$ So this is just a

NOTE Confidence: 0.867193963333333

 $00:37:58.200 \rightarrow 00:38:00.232$ reiteration of Jordan slide.

NOTE Confidence: 0.867193963333333

 $00:38:00.240 \longrightarrow 00:38:02.322$ So just to remind everyone that

00:38:02.322 --> 00:38:05.740 we did EG 24 hours after placebo,

NOTE Confidence: 0.867193963333333

 $00:38:05.740 \longrightarrow 00:38:07.232$ the first placebo session.

NOTE Confidence: 0.867193963333333

 $00{:}38{:}07{.}232 \dashrightarrow 00{:}38{:}09{.}470$ We did it two weeks after

NOTE Confidence: 0.867193963333333

 $00:38:09.544 \rightarrow 00:38:10.978$ the placebo session,

NOTE Confidence: 0.867193963333333

 $00{:}38{:}10{.}980 \dashrightarrow 00{:}38{:}12{.}748$ then we did a 24 hours after the

NOTE Confidence: 0.867193963333333

 $00:38:12.748 \dashrightarrow 00:38:14.703$ style of seven session and then two

NOTE Confidence: 0.867193963333333

 $00{:}38{:}14.703 \dashrightarrow 00{:}38{:}16.650$ weeks after the Salah seven session.

NOTE Confidence: 0.624813704

 $00:38:19.140 \rightarrow 00:38:21.440$ General EEG methods pretty standard.

NOTE Confidence: 0.624813704

 $00{:}38{:}21{.}440 \dashrightarrow 00{:}38{:}23{.}696$ We use the Compton medics and M6 to

NOTE Confidence: 0.624813704

 $00{:}38{:}23.696 \dashrightarrow 00{:}38{:}25.617$ four channel nurse scan EEG system.

NOTE Confidence: 0.624813704

 $00{:}38{:}25{.}620 \dashrightarrow 00{:}38{:}28{.}371$ Umm. This good to note that all

NOTE Confidence: 0.624813704

 $00{:}38{:}28{.}371 \dashrightarrow 00{:}38{:}30{.}382$ stimuli presented at 80 decibels

NOTE Confidence: 0.624813704

 $00{:}38{:}30{.}382 \dashrightarrow 00{:}38{:}33{.}028$ SPL which is standard and it's kind

NOTE Confidence: 0.624813704

 $00{:}38{:}33{.}028 \dashrightarrow 00{:}38{:}36{.}061$ of the same decimal level as as

NOTE Confidence: 0.624813704

00:38:36.061 --> 00:38:38.228 you know conversation sample rate

00:38:38.228 --> 00:38:40.418 of 1000 Hertz, bandpass filter,

NOTE Confidence: 0.624813704

 $00{:}38{:}40{.}420 \dashrightarrow 00{:}38{:}42{.}916$ notch filter to get rid of line noise,

NOTE Confidence: 0.624813704

 $00:38:42.920 \longrightarrow 00:38:43.678$ standard preprocessing,

NOTE Confidence: 0.624813704

00:38:43.678 --> 00:38:46.331 getting rid of bad trials and ocular

NOTE Confidence: 0.624813704

 $00:38:46.331 \rightarrow 00:38:48.479$ correction and all data was analyzed using.

NOTE Confidence: 0.624813704

 $00{:}38{:}48{.}480 \dashrightarrow 00{:}38{:}50{.}620$ Brain products and less for 2.0.

NOTE Confidence: 0.961913575

 $00:38:52.940 \longrightarrow 00:38:57.256$ OK. So this is the event related

NOTE Confidence: 0.961913575

 $00:38:57.256 \rightarrow 00:38:59.216$ oscillations across all the conditions.

NOTE Confidence: 0.961913575

 $00{:}38{:}59{.}220 \dashrightarrow 00{:}39{:}00{.}936$ So the first thing to pay

NOTE Confidence: 0.961913575

 $00:39:00.936 \rightarrow 00:39:02.719$ attention to is the top left.

NOTE Confidence: 0.961913575

 $00{:}39{:}02{.}720 \dashrightarrow 00{:}39{:}06{.}208$ So this is the day after place bo and

NOTE Confidence: 0.961913575

00:39:06.208 --> 00:39:09.918 what you can see is we observe no

NOTE Confidence: 0.961913575

 $00:39:09.918 \dashrightarrow 00:39:13.099$ LTP pre tetanus versus post tetanus.

NOTE Confidence: 0.961913575

 $00:39:13.100 \longrightarrow 00:39:14.932$ So they related oscillations

NOTE Confidence: 0.961913575

 $00:39:14.932 \longrightarrow 00:39:17.222$ in the Theta band identical.

NOTE Confidence: 0.813215812727273

 $00:39:19.330 \longrightarrow 00:39:22.150$ Suggesting that perhaps in this depressed

 $00:39:22.150 \rightarrow 00:39:24.370$ population they have impaired LTP.

NOTE Confidence: 0.813215812727273

 $00:39:24.370 \longrightarrow 00:39:26.600$ But that's speculative at this

NOTE Confidence: 0.813215812727273

00:39:26.600 --> 00:39:28.359 point because we did see it in our,

NOTE Confidence: 0.813215812727273

 $00:39:28.360 \longrightarrow 00:39:31.810$ at least our pilot control study.

NOTE Confidence: 0.813215812727273

00:39:31.810 --> 00:39:35.248 Likewise, 2 weeks after placebo, same thing.

NOTE Confidence: 0.813215812727273

 $00{:}39{:}35{.}248 \dashrightarrow 00{:}39{:}41{.}090$ No, no LTP from pre tetanus to post tetanus.

NOTE Confidence: 0.813215812727273

00:39:41.090 --> 00:39:42.580 Moving on to Silo Sybian,

NOTE Confidence: 0.813215812727273

 $00:39:42.580 \longrightarrow 00:39:44.968$ so 24 hours after Silas Sibin.

NOTE Confidence: 0.813215812727273

 $00{:}39{:}44{.}970 \dashrightarrow 00{:}39{:}47{.}705$ Again no change from pre

NOTE Confidence: 0.813215812727273

 $00:39:47.705 \longrightarrow 00:39:49.893$ tetanus to post tetanus.

NOTE Confidence: 0.813215812727273

 $00:39:49.900 \rightarrow 00:39:53.050$ And the other thing to note is the amplitude

NOTE Confidence: 0.813215812727273

 $00{:}39{:}53.050 \dashrightarrow 00{:}39{:}55.668$ or the power of the Theta responses

NOTE Confidence: 0.813215812727273

 $00{:}39{:}55{.}668 \dashrightarrow 00{:}39{:}58{.}768$ were the same in all these conditions.

NOTE Confidence: 0.813215812727273

 $00{:}39{:}58.770 \dashrightarrow 00{:}40{:}00.905$ The thing that was we weren't expecting,

NOTE Confidence: 0.813215812727273

 $00{:}40{:}00{.}910 \dashrightarrow 00{:}40{:}03{.}352$ which is really the interesting thing

 $00:40:03.352 \longrightarrow 00:40:06.538$ of this study is we found we we

NOTE Confidence: 0.813215812727273

00:40:06.538 --> 00:40:08.752 didn't see pre tetanus versus post

NOTE Confidence: 0.813215812727273

 $00:40:08.837 \rightarrow 00:40:11.627$ tetanus 2 weeks after silaban either,

NOTE Confidence: 0.813215812727273

 $00:40:11.630 \longrightarrow 00:40:14.708$ but we saw an almost doubling

NOTE Confidence: 0.813215812727273

00:40:14.708 --> 00:40:18.049 of data power just in general.

NOTE Confidence: 0.813215812727273

 $00:40:18.050 \longrightarrow 00:40:19.653$ And these are just the bar graphs

NOTE Confidence: 0.813215812727273

 $00:40:19.653 \rightarrow 00:40:23.380$ showing what I just showed, so.

NOTE Confidence: 0.813215812727273

 $00:40:23.380 \longrightarrow 00:40:24.478$ The difference?

NOTE Confidence: 0.813215812727273

00:40:24.478 --> 00:40:27.223 Pre tetanus post tetanus 24

NOTE Confidence: 0.813215812727273

 $00:40:27.223 \rightarrow 00:40:30.079$ hours after two weeks after,

NOTE Confidence: 0.813215812727273

 $00{:}40{:}30{.}080 \dashrightarrow 00{:}40{:}33{.}056$ maybe a little bit two weeks after here.

NOTE Confidence: 0.813215812727273

 $00:40:33.060 \longrightarrow 00:40:34.551$ Not significant though.

NOTE Confidence: 0.813215812727273

 $00:40:34.551 \rightarrow 00:40:37.533$ Nothing the day after Silas Syben.

NOTE Confidence: 0.813215812727273

 $00{:}40{:}37{.}540 \dashrightarrow 00{:}40{.}40{.}956$ And then you see this doubling of data

NOTE Confidence: 0.813215812727273

 $00:40:40.956 \rightarrow 00:40:44.039$ power two weeks after Silas Simon.

NOTE Confidence: 0.813215812727273

 $00:40:44.040 \rightarrow 00:40:46.756$ And the really intriguing part of this

 $00:40:46.756 \rightarrow 00:40:49.756$ study is that we found that change

NOTE Confidence: 0.813215812727273

 $00{:}40{:}49{.}756 \dashrightarrow 00{:}40{:}53{.}224$ in AMD scores after Salas Livin.

NOTE Confidence: 0.813215812727273

 $00:40:53.230 \rightarrow 00:40:55.046$ Negatively correlated with change

NOTE Confidence: 0.813215812727273

 $00{:}40{:}55{.}046 \dashrightarrow 00{:}40{:}56{.}408$ in Theta power.

NOTE Confidence: 0.813215812727273

 $00:40:56.410 \longrightarrow 00:40:59.090$ So an easy way to to say this is those

NOTE Confidence: 0.813215812727273

 $00:40:59.168 \rightarrow 00:41:01.218$ individuals that had the greatest

NOTE Confidence: 0.813215812727273

 $00{:}41{:}01{.}218$ --> $00{:}41{:}04{.}189$ decrease in their hand D scores had

NOTE Confidence: 0.813215812727273

 $00:41:04.189 \rightarrow 00:41:07.157$ the greatest increase in their Theta power.

NOTE Confidence: 0.806098537857143

 $00{:}41{:}13{.}370 \dashrightarrow 00{:}41{:}15{.}874$ Sorry, was it computed at the brain level

NOTE Confidence: 0.806098537857143

 $00:41:15.874 \rightarrow 00:41:18.710$ or on specific clusters of electrodes?

NOTE Confidence: 0.75650941

 $00:41:19.890 \longrightarrow 00:41:22.034$ That's a good question.

NOTE Confidence: 0.75650941

00:41:22.034 --> 00:41:25.061 We used electrode FCZ umm because

NOTE Confidence: 0.75650941

 $00:41:25.061 \rightarrow 00:41:27.789$ that's we typically we do that a lot.

NOTE Confidence: 0.75650941

 $00{:}41{:}27.790 \dashrightarrow 00{:}41{:}30.429$ That's just where the signal was maximal,

NOTE Confidence: 0.75650941

 $00:41:30.430 \longrightarrow 00:41:32.100$ which is typical for auditory

 $00:41:32.100 \rightarrow 00:41:34.666$ stimuli to have the front of central

NOTE Confidence: 0.75650941

00:41:34.666 --> 00:41:36.326 electrodes have Max responses.

NOTE Confidence: 0.75650941

 $00:41:36.330 \longrightarrow 00:41:39.060$ So we just competed this at FCZ.

NOTE Confidence: 0.838166102222222

 $00:41:41.680 \longrightarrow 00:41:44.638$ Patrick, the because of the

NOTE Confidence: 0.838166102222222

 $00:41:44.638 \longrightarrow 00:41:47.046$ fixed order here, you can't.

NOTE Confidence: 0.838166102222222

00:41:47.046 --> 00:41:50.287 Am I right that you can't disambiguate NOTE Confidence: 0.838166102222222

00:41:50.287 --> 00:41:53.224 whether the increase in power that you

NOTE Confidence: 0.838166102222222

 $00{:}41{:}53.224 \dashrightarrow 00{:}41{:}56.086$ see pre tetanus at 2 weeks is related

NOTE Confidence: 0.838166102222222

 $00:41:56.086 \rightarrow 00:41:58.242$ to the tetanus given at one day?

NOTE Confidence: 0.664559324

 $00:42:02.460 \rightarrow 00:42:04.320$ Well, this correlation has changed.

NOTE Confidence: 0.664559324

 $00{:}42{:}04{.}320 \dashrightarrow 00{:}42{:}07.650$ This I I should specify this

NOTE Confidence: 0.664559324

 $00:42:07.650 \longrightarrow 00:42:11.480$ correlation is change from.

NOTE Confidence: 0.664559324

00:42:11.480 --> 00:42:13.580 24 hours post silacci ibin

NOTE Confidence: 0.664559324

 $00:42:13.580 \longrightarrow 00:42:15.428$ to two weeks psilocybin.

NOTE Confidence: 0.760934485333333

 $00:42:15.860 \longrightarrow 00:42:17.967$ I'm sorry but I've been just in

NOTE Confidence: 0.760934485333333

 $00:42:17.967 \longrightarrow 00:42:20.566$ the EG if you go back one slide.

- NOTE Confidence: 0.760934485333333
- 00:42:20.570 --> 00:42:21.836 So I don't know if this
- NOTE Confidence: 0.760934485333333
- $00:42:21.836 \longrightarrow 00:42:22.734$ makes any sense or not,
- NOTE Confidence: 0.760934485333333
- $00:42:22.734 \rightarrow 00:42:24.316$ but this is just where my mind is going.
- NOTE Confidence: 0.760934485333333
- $00:42:24.316 \longrightarrow 00:42:25.690$ So you're giving a tetanus one
- NOTE Confidence: 0.760934485333333
- 00:42:25.745 --> 00:42:28.280 day after psilocybin, right?
- NOTE Confidence: 0.760934485333333
- $00:42:28.280 \longrightarrow 00:42:30.824$ And you see no change in power one
- NOTE Confidence: 0.760934485333333
- $00:42:30.824 \rightarrow 00:42:32.870$ hour after that tetanus, right?
- NOTE Confidence: 0.788279707058824
- $00:42:33.990 \longrightarrow 00:42:35.394$ It's shorter than that.
- NOTE Confidence: 0.788279707058824
- 00:42:35.394 --> 00:42:37.909 It it it's it's about it's about
- NOTE Confidence: 0.788279707058824
- $00:42:37.909 \rightarrow 00:42:39.895$ 8 minutes of the tone pips,
- NOTE Confidence: 0.788279707058824
- $00:42:39.900 \longrightarrow 00:42:42.732$ 2 minutes of tetanus and then
- NOTE Confidence: 0.788279707058824
- $00{:}42{:}42{.}732 \dashrightarrow 00{:}42{:}45{.}177$ another two another 8 minutes
- NOTE Confidence: 0.788279707058824
- $00{:}42{:}45{.}177 \dashrightarrow 00{:}42{:}47{.}628$ of the does it make sense?
- NOTE Confidence: 0.632368769090909
- $00{:}42{:}49{.}020 \dashrightarrow 00{:}42{:}50{.}994$ Only no enhancement of LTP immediately
- NOTE Confidence: 0.632368769090909
- $00:42:50.994 \rightarrow 00:42:53.303$ within minutes after the tenants, correct?
- NOTE Confidence: 0.632368769090909

 $00:42:53.303 \rightarrow 00:42:55.662$ But suppose you got an enhancement

NOTE Confidence: 0.632368769090909

 $00:42:55.662 \rightarrow 00:42:58.260$ of LTP an hour after the tetanus.

NOTE Confidence: 0.839599677142857

00:43:01.050 - 00:43:03.346 See that in your week four data?

NOTE Confidence: 0.839599677142857

00:43:03.350 - 00:43:05.890 Because you're looking too soon.

NOTE Confidence: 0.839599677142857

 $00:43:05.890 \longrightarrow 00:43:08.968$ And that could be the cause.

NOTE Confidence: 0.839599677142857

 $00:43:08.970 \longrightarrow 00:43:11.022$ Of the increase that you see at 2 weeks,

NOTE Confidence: 0.839599677142857

 $00:43:11.030 \longrightarrow 00:43:14.210$ it could be long lasting LTP.

NOTE Confidence: 0.839599677142857

 $00:43:14.210 \rightarrow 00:43:18.725$ Obviously enhanced could be long lasting LTP.

NOTE Confidence: 0.839599677142857

00:43:18.730 --> 00:43:21.980 From the Week 4 stimulus, right. You

NOTE Confidence: 0.828642926363636

 $00:43:21.990 \rightarrow 00:43:23.525$ know that's a really interesting

NOTE Confidence: 0.828642926363636

 $00{:}43{:}23.525 \dashrightarrow 00{:}43{:}24.753$ interpretation that I didn't

NOTE Confidence: 0.828642926363636

00:43:24.753 --> 00:43:26.998 think of. Yeah, so you don't

NOTE Confidence: 0.801743842

 $00:43:27.010 \longrightarrow 00:43:28.590$ that we didn't see any change

NOTE Confidence: 0.801743842

 $00:43:28.590 \longrightarrow 00:43:31.389$ from that initial week 02 weeks.

NOTE Confidence: 0.801743842

 $00:43:31.390 \longrightarrow 00:43:33.980$ I would clearly it would be 4 weeks

NOTE Confidence: 0.560522518333333

 $00:43:33.990 \rightarrow 00:43:35.724$ and you have a silvbin effect, right.

 $00:43:35.724 \rightarrow 00:43:38.342$ So it could either be that psilocybin

NOTE Confidence: 0.560522518333333

 $00:43:38.342 \longrightarrow 00:43:40.315$ is enhancing Theta in a completely

NOTE Confidence: 0.560522518333333

 $00:43:40.315 \rightarrow 00:43:42.240$ non contingent way that you know two

NOTE Confidence: 0.560522518333333

00:43:42.297 --> 00:43:44.103 weeks after psilocybin you have an

NOTE Confidence: 0.560522518333333

 $00{:}43{:}44.103 \dashrightarrow 00{:}43{:}46.002$ increased in the Theta that's induced

NOTE Confidence: 0.560522518333333

 $00:43:46.002 \rightarrow 00:43:47.904$ by these auditory pips full stop,

NOTE Confidence: 0.560522518333333

 $00{:}43{:}47{.}910 \dashrightarrow 00{:}43{:}49{.}947$ has nothing to do with the tetanus.

NOTE Confidence: 0.560522518333333

 $00{:}43{:}49{.}950 \dashrightarrow 00{:}43{:}54{.}950$ Or it could be that it is psilocybin

NOTE Confidence: 0.560522518333333

 $00:43:54.950 \longrightarrow 00:43:57.740$ increases plasticity it increases.

NOTE Confidence: 0.560522518333333

00:43:57.740 --> 00:44:00.316 Plasticity produce in a long lasting way,

NOTE Confidence: 0.560522518333333

 $00{:}44{:}00{.}320 \dashrightarrow 00{:}44{:}03{.}210$ it's just that you don't see it at 8 minutes.

NOTE Confidence: 0.560522518333333

 $00:44:03.210 \rightarrow 00:44:05.030$ You see it sometime hours or days

NOTE Confidence: 0.560522518333333

 $00:44:05.030 \dashrightarrow 00:44:07.169$ after and it persists for two weeks.

NOTE Confidence: 0.560522518333333

 $00{:}44{:}07{.}170 \dashrightarrow 00{:}44{:}08{.}220$ And because of the fixed story,

NOTE Confidence: 0.560522518333333

00:44:08.220 --> 00:44:10.210 you can't, you can't disambiguate

 $00:44:10.210 \longrightarrow 00:44:11.190$ those from this design.

NOTE Confidence: 0.560522518333333

00:44:11.190 --> 00:44:13.017 But it's it's just this may be

NOTE Confidence: 0.560522518333333

00:44:13.017 --> 00:44:13.975 a plasticity effect, right?

NOTE Confidence: 0.560522518333333

00:44:13.975 - 00:44:15.375 This may be a result of your tetanus.

NOTE Confidence: 0.560522518333333

 $00:44:15.380 \rightarrow 00:44:17.277$ It's just taking just manifesting much later.

NOTE Confidence: 0.739229506

 $00:44:18.380 \longrightarrow 00:44:19.500$ What it it's a great,

NOTE Confidence: 0.739229506

 $00:44:19.500 \longrightarrow 00:44:20.308$ it's a great point.

NOTE Confidence: 0.739229506

 $00{:}44{:}20{.}308 \dashrightarrow 00{:}44{:}21{.}520$ I didn't think of that interpretation.

NOTE Confidence: 0.739229506

 $00{:}44{:}21{.}520 \dashrightarrow 00{:}44{:}23{.}560$ I think either way it's a plasticity effect.

NOTE Confidence: 0.739229506

 $00:44:23.560 \rightarrow 00:44:27.176$ It could be like you said the places

NOTE Confidence: 0.739229506

 $00{:}44{:}27.180 \dashrightarrow 00{:}44{:}29.430$ plasticity effect from the tetanus

NOTE Confidence: 0.739229506

 $00:44:29.430 \longrightarrow 00:44:32.659$ just takes longer to kick in for back.

NOTE Confidence: 0.739229506

 $00:44:32.660 \longrightarrow 00:44:36.386$ Lack of a better phrase or.

NOTE Confidence: 0.739229506

00:44:36.390 - 00:44:38.077 The way we've thought about it with

NOTE Confidence: 0.739229506

 $00:44:38.077 \longrightarrow 00:44:39.590$ this paper is in in revision.

NOTE Confidence: 0.739229506

 $00:44:39.590 \longrightarrow 00:44:41.702$ So the way we framed it is we
- NOTE Confidence: 0.739229506
- $00:44:41.702 \longrightarrow 00:44:43.753$ think this increase in Theta in
- NOTE Confidence: 0.739229506
- 00:44:43.753 --> 00:44:45.931 general is sort of a qualitatively
- NOTE Confidence: 0.739229506
- 00:44:46.003 --> 00:44:47.919 different type of plasticity.
- NOTE Confidence: 0.760532966190476
- $00:44:50.700 \rightarrow 00:44:53.024$ But yeah, in the mechanisms of synaptic
- NOTE Confidence: 0.760532966190476
- $00:44:53.024 \rightarrow 00:44:54.986$ plasticity the they were qualitatively
- NOTE Confidence: 0.760532966190476
- $00{:}44{:}54{.}986 \dashrightarrow 00{:}44{:}56{.}806$ different mechanisms involved in
- NOTE Confidence: 0.760532966190476
- $00:44:56.806 \rightarrow 00:44:59.140$ short term plasticity lasting minutes.
- NOTE Confidence: 0.760532966190476
- $00{:}44{:}59{.}140 \dashrightarrow 00{:}45{:}00{.}904$ Then there are in plasticity that
- NOTE Confidence: 0.760532966190476
- $00{:}45{:}00{.}904 \dashrightarrow 00{:}45{:}02{.}891$ lasts hours or days they're completely
- NOTE Confidence: 0.760532966190476
- $00:45:02.891 \rightarrow 00:45:04.756$ and you can dissociate them.
- NOTE Confidence: 0.760532966190476
- $00:45:04.760 \longrightarrow 00:45:05.288$ That's actually.
- NOTE Confidence: 0.760532966190476
- $00:45:05.288 \rightarrow 00:45:07.816$ This is actually what I did my PhD thesis
- NOTE Confidence: 0.760532966190476
- $00:45:07.816 \rightarrow 00:45:09.988$ on was blocking long lasting plasticity
- NOTE Confidence: 0.760532966190476
- $00{:}45{:}09{.}988 \dashrightarrow 00{:}45{:}11{.}959$ without affecting short term plasticity.
- NOTE Confidence: 0.760532966190476
- $00:45:11.960 \rightarrow 00:45:14.354$ You can also enhance long lasting plasticity
- NOTE Confidence: 0.760532966190476

 $00:45:14.354 \rightarrow 00:45:17.300$ without affecting short term plasticity.

NOTE Confidence: 0.760532966190476

 $00:45:17.300 \rightarrow 00:45:19.616$ So depending on the mechanisms whereby.

NOTE Confidence: 0.760532966190476

00:45:19.620 --> 00:45:21.528 Hillside and is acting on plasticity.

NOTE Confidence: 0.760532966190476

 $00:45:21.530 \longrightarrow 00:45:23.402$ It it's it's very plausible that

NOTE Confidence: 0.760532966190476

 $00{:}45{:}23{.}402 \dashrightarrow 00{:}45{:}25{.}841$ it could have not have a short term

NOTE Confidence: 0.760532966190476

 $00{:}45{:}25{.}841 \dashrightarrow 00{:}45{:}28{.}030$ effect but have a long term effect.

NOTE Confidence: 0.760532966190476

 $00:45:28.030 \dashrightarrow 00:45:30.590$ So I think that's an important your date.

NOTE Confidence: 0.760532966190476

 $00:45:30.590 \longrightarrow 00:45:31.850$ This is a discussion point is not

NOTE Confidence: 0.760532966190476

 $00:45:31.850 \rightarrow 00:45:32.828$ something your data can speak to,

NOTE Confidence: 0.760532966190476

 $00:45:32.830 \rightarrow 00:45:33.990$ but it's an important possibility

NOTE Confidence: 0.760532966190476

 $00{:}45{:}33{.}990 \dashrightarrow 00{:}45{:}36{.}125$ to to think, to think about when

NOTE Confidence: 0.760532966190476

 $00:45:36.125 \longrightarrow 00:45:37.590$ looking at future studies.

NOTE Confidence: 0.760532966190476

 $00{:}45{:}37{.}590 \dashrightarrow 00{:}45{:}40{.}285$ If this were a non contingent effect,

NOTE Confidence: 0.760532966190476

 $00:45:40.290 \longrightarrow 00:45:41.530$ meaning if this had nothing

NOTE Confidence: 0.760532966190476

 $00:45:41.530 \longrightarrow 00:45:42.770$ to do with the tetanus,

NOTE Confidence: 0.760532966190476

 $00:45:42.770 \longrightarrow 00:45:45.008$ it would be startling to me.

- NOTE Confidence: 0.760532966190476
- 00:45:45.010 --> 00:45:46.914 If you do you do you see any
- NOTE Confidence: 0.760532966190476
- $00:45:46.914 \longrightarrow 00:45:48.858$ effects in Theta in resting Theta?
- NOTE Confidence: 0.760532966190476
- 00:45:48.860 --> 00:45:51.667 If you just look at your resting
- NOTE Confidence: 0.760532966190476
- $00{:}45{:}51.667 \dashrightarrow 00{:}45{:}54.968$ EEG if this were a non contingent.
- NOTE Confidence: 0.760532966190476
- $00{:}45{:}54{.}970 \dashrightarrow 00{:}45{:}57{.}440$ Change in brain wiring that
- NOTE Confidence: 0.760532966190476
- $00{:}45{:}57{.}440 \dashrightarrow 00{:}45{:}59{.}416$ causes enhanced Theta power.
- NOTE Confidence: 0.760532966190476
- $00:45:59.420 \rightarrow 00:46:02.980$ You should see something in your resting age.
- NOTE Confidence: 0.760532966190476
- $00:46:02.980 \rightarrow 00:46:05.167$ And if you only see it with your stimulation,
- NOTE Confidence: 0.760532966190476
- $00{:}46{:}05{.}170 \dashrightarrow 00{:}46{:}06{.}958$ then that makes it sound like
- NOTE Confidence: 0.760532966190476
- 00:46:06.958 --> 00:46:08.600 it's a circuit specific effect,
- NOTE Confidence: 0.760532966190476
- $00:46:08.600 \rightarrow 00:46:10.769$ which makes it to my mind more likely to
- NOTE Confidence: 0.760532966190476
- $00{:}46{:}10.769 \dashrightarrow 00{:}46{:}13.210$ be a late effect of your of your tetanus.
- NOTE Confidence: 0.8401547166666667
- $00:46:14.330 \longrightarrow 00:46:15.805$ Yeah, we didn't see anything
- NOTE Confidence: 0.8401547166666667
- $00{:}46{:}15.805 \dashrightarrow 00{:}46{:}16.985$ in the resting Theta.
- NOTE Confidence: 0.8401547166666667
- $00:46:16.990 \longrightarrow 00:46:19.566$ In fact if you did so this
- NOTE Confidence: 0.840154716666667

 $00:46:19.566 \longrightarrow 00:46:21.190$ this dashed line here,

NOTE Confidence: 0.8401547166666667

 $00:46:21.190 \longrightarrow 00:46:22.339$ that's stimulus onset.

NOTE Confidence: 0.8401547166666667

 $00:46:22.339 \rightarrow 00:46:25.410$ So if you saw differences in resting data,

NOTE Confidence: 0.8401547166666667

 $00:46:25.410 \longrightarrow 00:46:26.964$ you would actually see it in this,

NOTE Confidence: 0.8401547166666667

 $00:46:26.970 \longrightarrow 00:46:28.430$ in this window here,

NOTE Confidence: 0.8401547166666667

 $00:46:28.430 \longrightarrow 00:46:31.910$ this pre stimulus window, so.

NOTE Confidence: 0.8401547166666667

 $00:46:31.910 \longrightarrow 00:46:32.996$ But this is a great point.

NOTE Confidence: 0.8401547166666667

 $00:46:33.000 \rightarrow 00:46:36.295$ It goes back to that plot I showed

NOTE Confidence: 0.8401547166666667

 $00:46:36.295 \rightarrow 00:46:38.305$ earlier with the different time courses,

NOTE Confidence: 0.8401547166666667

 $00:46:38.310 \longrightarrow 00:46:41.200$ from the early, immediate early

NOTE Confidence: 0.8401547166666667

 $00{:}46{:}41.200 \dashrightarrow 00{:}46{:}44.550$ genes to the synaptogenesis and the.

NOTE Confidence: 0.8401547166666667

 $00:46:44.550 \dashrightarrow 00:46:47.870$ Increase in dendritic spines.

NOTE Confidence: 0.8401547166666667

 $00:46:47.870 \longrightarrow 00:46:50.005$ The one study from I think it's

NOTE Confidence: 0.8401547166666667

00:46:50.005 - 00:46:52.326 Ravel at all showed that in pig

NOTE Confidence: 0.8401547166666667

 $00:46:52.326 \longrightarrow 00:46:54.450$ brain a single dose of Cialis

NOTE Confidence: 0.8401547166666667

00:46:54.450 --> 00:46:56.747 Cybin you don't see increases in

- NOTE Confidence: 0.8401547166666667
- $00:46:56.747 \rightarrow 00:46:58.479$ synaptic density until about.
- NOTE Confidence: 0.8401547166666667
- $00:46:58.480 \longrightarrow 00:46:59.881$ Seven days after.
- NOTE Confidence: 0.8401547166666667
- $00{:}46{:}59.881 \dashrightarrow 00{:}47{:}02.683$ And that also makes sense because
- NOTE Confidence: 0.8401547166666667
- $00:47:02.683 \rightarrow 00:47:05.951$ the way what EG is measuring
- NOTE Confidence: 0.8401547166666667
- $00{:}47{:}05{.}951 \dashrightarrow 00{:}47{:}08{.}123$ is thousands of postsynaptic
- NOTE Confidence: 0.8401547166666667
- $00:47:08.123 \rightarrow 00:47:10.538$ potentials from pyramidal cells.
- NOTE Confidence: 0.8401547166666667
- $00:47:10.540 \longrightarrow 00:47:13.738$ So if you have increased spine
- NOTE Confidence: 0.840154716666667
- 00:47:13.738 --> 00:47:15.337 density and synaptogenesis,
- NOTE Confidence: 0.8401547166666667
- $00:47:15.340 \longrightarrow 00:47:17.800$ you're going to see increase
- NOTE Confidence: 0.8401547166666667
- $00:47:17.800 \longrightarrow 00:47:18.864$ ERP's and increase power.
- NOTE Confidence: 0.8401547166666667
- $00:47:18.864 \rightarrow 00:47:20.460$ So that's sort of the way
- NOTE Confidence: 0.8401547166666667
- $00:47:20.516 \longrightarrow 00:47:21.680$ we're thinking about it.
- NOTE Confidence: 0.7458300426666667
- $00{:}47{:}25{.}980 \dashrightarrow 00{:}47{:}27{.}440$ So just in summary,
- NOTE Confidence: 0.7458300426666667
- $00{:}47{:}27{.}440 \dashrightarrow 00{:}47{:}29{.}630$ EG long interpretation was not observed
- NOTE Confidence: 0.7458300426666667
- $00{:}47{:}29.695 \dashrightarrow 00{:}47{:}31.800$ in this sample depressed subjects,
- NOTE Confidence: 0.7458300426666667

 $00:47:31.800 \longrightarrow 00:47:36.112$ we did it observe increased Theta power which

NOTE Confidence: 0.745830042666667

 $00:47:36.112 \longrightarrow 00:47:39.410$ correlated with decreases in depression.

NOTE Confidence: 0.745830042666667

 $00{:}47{:}39{.}410 \dashrightarrow 00{:}47{:}41.672$ This increased Theta power post Silas

NOTE Confidence: 0.745830042666667

00:47:41.672 --> 00:47:43.180 statement is objective evidence

NOTE Confidence: 0.745830042666667

 $00:47:43.238 \rightarrow 00:47:44.483$ of sustained electrophysiological

NOTE Confidence: 0.745830042666667

 $00:47:44.483 \rightarrow 00:47:46.973$ changes in the brain produced by

NOTE Confidence: 0.7458300426666667

 $00:47:46.973 \rightarrow 00:47:49.358$ Psylocybe bin and given the correlation

NOTE Confidence: 0.745830042666667

 $00:47:49.358 \rightarrow 00:47:50.504$ with decreased depression,

NOTE Confidence: 0.745830042666667

 $00:47:50.510 \rightarrow 00:47:52.856$ this may represent a biomarker response

NOTE Confidence: 0.7458300426666667

 $00:47:52.856 \rightarrow 00:47:55.260$ to Silas cyber couple limitations.

NOTE Confidence: 0.745830042666667

 $00{:}47{:}55{.}260 \dashrightarrow 00{:}47{:}57{.}612$ We didn't have a control group to

NOTE Confidence: 0.7458300426666667

 $00{:}47{:}57.612 \dashrightarrow 00{:}47{:}59.790$ compare the EEG LTE LTP outcome.

NOTE Confidence: 0.7458300426666667

 $00{:}47{:}59{.}790 \dashrightarrow 00{:}48{:}01{.}210$ We do have pilot data,

NOTE Confidence: 0.7458300426666667

 $00{:}48{:}01{.}210 \dashrightarrow 00{:}48{:}03{.}968$ but we don't have the longitudinal 4

NOTE Confidence: 0.745830042666667

 $00:48:03.968 \rightarrow 00:48:06.930$ test days with with control subjects,

NOTE Confidence: 0.7458300426666667

 $00:48:06.930 \longrightarrow 00:48:09.418$ so it's unclear if if that lack of.

- NOTE Confidence: 0.745830042666667
- $00{:}48{:}09{.}420 \dashrightarrow 00{:}48{:}11{.}996$ LP was it because that these are depressed
- NOTE Confidence: 0.745830042666667
- $00{:}48{:}11.996 \dashrightarrow 00{:}48{:}14.347$ people and that's impaired in general.
- NOTE Confidence: 0.7458300426666667
- $00:48:14.350 \longrightarrow 00:48:16.569$ So that's an area of future study.
- NOTE Confidence: 0.7458300426666667
- $00:48:16.570 \rightarrow 00:48:19.566$ We didn't have any baseline EEG measures,
- NOTE Confidence: 0.7458300426666667
- $00{:}48{:}19.570 \dashrightarrow 00{:}48{:}21.970$ you know, before the.
- NOTE Confidence: 0.745830042666667
- $00:48:21.970 \longrightarrow 00:48:22.714$ The sequence started,
- NOTE Confidence: 0.7458300426666667
- $00:48:22.714 \rightarrow 00:48:24.670$ but I think because there's a placebo arm,
- NOTE Confidence: 0.745830042666667
- $00{:}48{:}24.670 \dashrightarrow 00{:}48{:}27.526$ I don't think that's a big limitation.
- NOTE Confidence: 0.7458300426666667
- 00:48:27.530 --> 00:48:28.638 I should mention that
- NOTE Confidence: 0.745830042666667
- $00:48:28.638 \longrightarrow 00:48:29.746$ the effective data pile,
- NOTE Confidence: 0.7458300426666667
- $00:48:29.750 \longrightarrow 00:48:32.207$ we're actually at trend level at .07,
- NOTE Confidence: 0.745830042666667
- $00:48:32.210 \longrightarrow 00:48:33.638$ so that's probably due
- NOTE Confidence: 0.745830042666667
- $00:48:33.638 \longrightarrow 00:48:35.423$ to the small sample size.
- NOTE Confidence: 0.745830042666667
- $00{:}48{:}35{.}430 \dashrightarrow 00{:}48{:}37{.}420$ But we think these limitations
- NOTE Confidence: 0.7458300426666667
- $00:48:37.420 \longrightarrow 00:48:39.012$ notwithstanding these results complement
- NOTE Confidence: 0.745830042666667

 $00:48:39.012 \rightarrow 00:48:41.354$ the emerging notion that Silas Syben

NOTE Confidence: 0.745830042666667

 $00{:}48{:}41{.}354 \dashrightarrow 00{:}48{:}42{.}862$ and perhaps other psyched elics,

NOTE Confidence: 0.745830042666667

00:48:42.870 --> 00:48:44.547 classical psychedelics can

NOTE Confidence: 0.7458300426666667

 $00:48:44.547 \rightarrow 00:48:46.783$ produce long-term alterations in

NOTE Confidence: 0.745830042666667

 $00{:}48{:}46.783 \dashrightarrow 00{:}48{:}48.914$ neuroplasticity as assessed via

NOTE Confidence: 0.745830042666667

 $00:48:48.914 \rightarrow 00:48:51.224$ electrophysiology or EEG in this case.

NOTE Confidence: 0.8139732

 $00:48:54.820 \longrightarrow 00:48:56.222$ All right. And that's what

NOTE Confidence: 0.8139732

 $00{:}48{:}56{.}222 \dashrightarrow 00{:}48{:}57{.}830$ I ask from the EEG portion.

NOTE Confidence: 0.798996604

00:48:59.810 --> 00:49:00.866 Patrick, it's Jerry.

NOTE Confidence: 0.798996604

00:49:00.866 --> 00:49:03.330 So I understand your logic by not

NOTE Confidence: 0.798996604

 $00:49:03.402 \longrightarrow 00:49:07.170$ doing it before the placebo, but.

NOTE Confidence: 0.798996604

 $00{:}49{:}07{.}170 \dashrightarrow 00{:}49{:}09{.}450$ The studies that I know and

NOTE Confidence: 0.798996604

 $00:49:09.450 \longrightarrow 00:49:10.970$ depression actually the best

NOTE Confidence: 0.798996604

00:49:11.044 --> 00:49:13.486 predictor is EG of placebo response.

NOTE Confidence: 0.798996604

00:49:13.490 $\operatorname{-->}$ 00:49:15.583 You know, the Lucia's data and others

NOTE Confidence: 0.798996604

 $00:49:15.583 \rightarrow 00:49:18.070$ that that's a pretty powerful predictor.

- NOTE Confidence: 0.798996604
- 00:49:18.070 --> 00:49:20.408 In fact, I think they're trying to
- NOTE Confidence: 0.798996604
- $00{:}49{:}20{.}408 \dashrightarrow 00{:}49{:}22{.}169$ develop whole methodologies of predicting
- NOTE Confidence: 0.69431736
- $00:49:22.590 \longrightarrow 00:49:24.565$ predictor of what predictor of
- NOTE Confidence: 0.69431736
- $00:49:24.565 \rightarrow 00:49:26.145$ clinical response to antidepressant.
- NOTE Confidence: 0.425537339285714
- $00:49:26.290 \rightarrow 00:49:30.609$ Yeah, with with EG to to placebo.
- NOTE Confidence: 0.79654087625
- $00{:}49{:}32.640 \dashrightarrow 00{:}49{:}35.216$ But so the the thought was you weren't,
- NOTE Confidence: 0.79654087625
- $00:49:35.220 \longrightarrow 00:49:36.520$ you weren't really interested in
- NOTE Confidence: 0.79654087625
- $00:49:36.520 \rightarrow 00:49:37.820$ the placebo response that's why
- NOTE Confidence: 0.79654087625
- 00:49:37.866 --> 00:49:39.245 you didn't do it prior to placebo?
- NOTE Confidence: 0.555509314285714
- 00:49:41.600 --> 00:49:45.968 But Jerry, EG what EEG measure and
- NOTE Confidence: 0.763873339285714
- $00:49:45.980 \rightarrow 00:49:48.059$ they they have, they're looking at alpha
- NOTE Confidence: 0.763873339285714
- 00:49:48.059 --> 00:49:50.237 and gamma and a few other things in
- NOTE Confidence: 0.763873339285714
- $00{:}49{:}50{.}237 \dashrightarrow 00{:}49{:}52{.}346$ the resting part of it is proprietary,
- NOTE Confidence: 0.763873339285714
- $00{:}49{:}52{.}346 \dashrightarrow 00{:}49{:}54{.}440$ so you don't know exactly what.
- NOTE Confidence: 0.763873339285714
- $00{:}49{:}54{.}440 \dashrightarrow 00{:}49{:}57{.}800$ What the whole set of measures are,
- NOTE Confidence: 0.763873339285714

 $00{:}49{:}57{.}800 \dashrightarrow 00{:}49{:}59{.}952$ but and they're looking at resting and then

NOTE Confidence: 0.763873339285714

 $00:49:59.952 \rightarrow 00:50:01.716$ they look at the change after placebo.

NOTE Confidence: 0.73806334

 $00{:}50{:}04{.}940 \dashrightarrow 00{:}50{:}06{.}900$ Yeah, it's a fairpoint. I guess we

NOTE Confidence: 0.73806334

 $00:50:06.900 \rightarrow 00:50:08.100$ were thinking about subject burden,

NOTE Confidence: 0.879723385

00:50:08.100 --> 00:50:10.452 but you know maybe in retrospect we we

NOTE Confidence: 0.879723385

 $00{:}50{:}10.452 \dashrightarrow 00{:}50{:}13.696$ should have had a baseline EEG before NOTE Confidence: 0.879723385

 $00:50:13.696 \rightarrow 00:50:16.350$ before placebo and the whole sequence.

NOTE Confidence: 0.743849627333333

 $00:50:16.360 \longrightarrow 00:50:17.535$ I can understand that that's

NOTE Confidence: 0.743849627333333

 $00{:}50{:}17{.}535 \dashrightarrow 00{:}50{:}18{.}710$ a that's a pretty heavy

NOTE Confidence: 0.743849627333333

 $00:50:18.764 \rightarrow 00:50:20.079$ burden on people right there.

NOTE Confidence: 0.743849627333333

 $00:50:20.080 \longrightarrow 00:50:21.020$ You want to minimize it,

NOTE Confidence: 0.743849627333333

 $00{:}50{:}21.020 \dashrightarrow 00{:}50{:}22.680$ but that that was the reason

NOTE Confidence: 0.743849627333333

 $00:50:22.680 \longrightarrow 00:50:25.500$ we didn't do it subject burden.

NOTE Confidence: 0.621349538333333

 $00:50:28.590 \longrightarrow 00:50:30.156$ Yeah, these edges take, you know,

NOTE Confidence: 0.621349538333333

 $00:50:30.160 \dashrightarrow 00:50:31.260$ these are very depressed people.

NOTE Confidence: 0.621349538333333

 $00:50:31.260 \longrightarrow 00:50:33.570$ They take about 3 hours.

- NOTE Confidence: 0.621349538333333
- 00:50:33.570 --> 00:50:36.962 Our hour and a half set up hour
- NOTE Confidence: 0.621349538333333
- 00:50:36.962 --> 00:50:41.030 of task and. No. Debriefing
- NOTE Confidence: 0.638522108
- $00:50:41.120 \longrightarrow 00:50:43.040$ you're doing pre post stimulation.
- NOTE Confidence: 0.638522108
- $00:50:43.040 \longrightarrow 00:50:44.670$ I think that's the lesson, the concerns.
- NOTE Confidence: 0.3850543
- $00:50:49.400 \longrightarrow 00:50:51.794$ So do you have a couple more slides?
- NOTE Confidence: 0.797025342857143
- 00:50:51.800 --> 00:50:53.438 But if there's that, I could show.
- NOTE Confidence: 0.797025342857143
- $00:50:53.440 \longrightarrow 00:50:55.280$ But if there's other questions,
- NOTE Confidence: 0.797025342857143
- $00:50:55.280 \rightarrow 00:50:57.521$ you could do you now or I could wrap
- NOTE Confidence: 0.797025342857143
- $00{:}50{:}57{.}521 \dashrightarrow 00{:}51{:}01{.}270$ up my slides, but you would want to.
- NOTE Confidence: 0.797025342857143
- $00:51:01.270 \longrightarrow 00:51:04.010$ Ask anything about the Lego piece.
- NOTE Confidence: 0.905390387142857
- 00:51:06.100 --> 00:51:07.549 Can I ask you a quick question?
- NOTE Confidence: 0.84455884
- $00{:}51{:}09{.}330 \dashrightarrow 00{:}51{:}13{.}220$ Sure. Hi, this is Pasha. I'm MD,
- NOTE Confidence: 0.657059395
- 00:51:13.230 --> 00:51:14.670 pH. D student in Alex Kwanzaa.
- NOTE Confidence: 0.657059395
- $00:51:14.670 \longrightarrow 00:51:15.980$ So I actually did the ethers for
- NOTE Confidence: 0.657059395
- $00:51:15.980 \longrightarrow 00:51:17.486$ the shall at all paper that you
- NOTE Confidence: 0.657059395

 $00:51:17.486 \dashrightarrow 00:51:19.270$ showed and I'm doing in vivo now.

NOTE Confidence: 0.657059395

00:51:19.270 --> 00:51:21.646 So we're trying to think of like more

NOTE Confidence: 0.657059395

 $00:51:21.650 \rightarrow 00:51:23.760$ reverse translationally relevant.

NOTE Confidence: 0.9193705166666667

00:51:24.470 --> 00:51:25.160 Did you look

NOTE Confidence: 0.909420536666667

 $00:51:25.170 \longrightarrow 00:51:26.358$ at any of the other bands?

NOTE Confidence: 0.85979897111111

00:51:26.370 --> 00:51:28.230 Because I know there's been

NOTE Confidence: 0.85979897111111

 $00:51:28.230 \longrightarrow 00:51:29.718$ some work in preclinical

NOTE Confidence: 0.77018512625

 $00{:}51{:}29{.}730 \dashrightarrow 00{:}51{:}30{.}550$ and clinical for like

NOTE Confidence: 0.77018512625

00:51:30.550 $\operatorname{-->}$ 00:51:31.880 gamma bands and stuff, but

NOTE Confidence: 0.829025311

 $00{:}51{:}32{.}290 \dashrightarrow 00{:}51{:}34{.}200$ and you said all of this was in the frontal

NOTE Confidence: 0.86529266

 $00:51:34.210 \rightarrow 00:51:36.730$ cortical electrodes. Is that right?

NOTE Confidence: 0.871039796

00:51:37.630 --> 00:51:42.064 Yeah, but you know, these discrete

NOTE Confidence: 0.871039796

00:51:42.064 --> 00:51:45.020 auditory stimuli almost always.

NOTE Confidence: 0.871039796

 $00:51:45.020 \longrightarrow 00:51:46.736$ They they live in the Theta

NOTE Confidence: 0.871039796

 $00:51:46.736 \longrightarrow 00:51:48.240$ band between 4:00 and 8:00.

NOTE Confidence: 0.871039796

00:51:48.240 --> 00:51:49.330 You just, you just don't,

- NOTE Confidence: 0.871039796
- 00:51:49.330 --> 00:51:51.682 you just don't say any evoked

NOTE Confidence: 0.871039796

 $00:51:51.682 \rightarrow 00:51:53.780$ activity in the higher bands.

NOTE Confidence: 0.871039796

 $00:51:53.780 \longrightarrow 00:51:57.600$ Thank you. Had we done a more

NOTE Confidence: 0.871039796

00:51:57.600 --> 00:51:59.220 cognitive perceptual task,

NOTE Confidence: 0.871039796

 $00:51:59.220 \rightarrow 00:52:01.098$ then certainly we would probably want

NOTE Confidence: 0.871039796

 $00:52:01.098 \rightarrow 00:52:03.619$ to look at the other bands as well,

NOTE Confidence: 0.871039796

 $00:52:03.620 \rightarrow 00:52:05.720$ but this is very simple sensory stimuli.

NOTE Confidence: 0.891907733333333

 $00:52:06.480 \longrightarrow 00:52:08.028$ Patrick, did you look at the

NOTE Confidence: 0.41061586

 $00:52:08.560 \rightarrow 00:52:12.540$ the affected VLT EEG correlates?

NOTE Confidence: 0.35781595

 $00:52:14.620 \longrightarrow 00:52:18.770$ The AV Lt. yeah, yeah.

NOTE Confidence: 0.847596637272727

00:52:18.770 --> 00:52:21.486 That's in process, So what I didn't

NOTE Confidence: 0.847596637272727

 $00{:}52{:}21{.}486 \dashrightarrow 00{:}52{:}23{.}638$ mention to every one is when you

NOTE Confidence: 0.847596637272727

00:52:23.638 --> 00:52:26.710 take all the the time to get people

NOTE Confidence: 0.847596637272727

 $00{:}52{:}26.803 \dashrightarrow 00{:}52{:}29.595$ set up with the EG in the booth.

NOTE Confidence: 0.847596637272727

 $00{:}52{:}29{.}600 \dashrightarrow 00{:}52{:}31{.}812$ This this task is about 12 minutes

NOTE Confidence: 0.847596637272727

 $00:52:31.812 \longrightarrow 00:52:34.036$ this LTP task, so you don't want

NOTE Confidence: 0.847596637272727

 $00{:}52{:}34{.}036 \dashrightarrow 00{:}52{:}36{.}689$ to do all that set up and get.

NOTE Confidence: 0.847596637272727

00:52:36.690 --> 00:52:38.170 Just 10 minutes of data,

NOTE Confidence: 0.847596637272727

00:52:38.170 --> 00:52:39.074 12 minutes of data.

NOTE Confidence: 0.847596637272727

 $00{:}52{:}39{.}074 \dashrightarrow 00{:}52{:}40{.}932$ So we have several other tasks that we're

NOTE Confidence: 0.847596637272727

 $00:52:40.932 \rightarrow 00:52:42.514$ going to be looking at and hopefully

NOTE Confidence: 0.847596637272727

 $00:52:42.514 \longrightarrow 00:52:44.330$ we can have some follow up papers on.

NOTE Confidence: 0.847596637272727

00:52:44.330 --> 00:52:48.210 One is and EG version of the Gray

NOTE Confidence: 0.847596637272727

 $00:52:48.210 \longrightarrow 00:52:50.430$ auditory verbal learning task and

NOTE Confidence: 0.847596637272727

 $00:52:50.430 \rightarrow 00:52:53.009$ we also have gamma driving P300.

NOTE Confidence: 0.847596637272727

 $00{:}52{:}53{.}009 \dashrightarrow 00{:}52{:}55{.}163$ So there's other things that we

NOTE Confidence: 0.847596637272727

 $00:52:55.163 \rightarrow 00:52:57.639$ can look at that might inform.

NOTE Confidence: 0.847596637272727

 $00:52:57.640 \longrightarrow 00:52:58.820$ Potential mechanisms.

NOTE Confidence: 0.816078085714286

 $00:53:06.440 \rightarrow 00:53:08.036$ Well, we have a couple of minutes.

NOTE Confidence: 0.816078085714286

 $00{:}53{:}08{.}040 \dashrightarrow 00{:}53{:}11{.}688$ I'll just quickly show a little bit of

NOTE Confidence: 0.816078085714286

 $00:53:11.688 \rightarrow 00:53:14.405$ data related to psychological mechanisms

NOTE Confidence: 0.816078085714286

 $00{:}53{:}14{.}405 \dashrightarrow 00{:}53{:}18{.}325$ and this was relates to in some ways

NOTE Confidence: 0.816078085714286

 $00{:}53{:}18.325 \dashrightarrow 00{:}53{:}20.455$ what could be a psychological correlate

NOTE Confidence: 0.816078085714286

 $00:53:20.455 \rightarrow 00:53:23.168$ of what we're seeing in terms of

NOTE Confidence: 0.816078085714286

 $00:53:23.168 \rightarrow 00:53:25.279$ neuroplasticity are to equate the two,

NOTE Confidence: 0.816078085714286

 $00:53:25.280 \longrightarrow 00:53:26.201$ one being cellular,

NOTE Confidence: 0.816078085714286

 $00{:}53{:}26{.}201 \dashrightarrow 00{:}53{:}28{.}350$ but in this other concept much more

NOTE Confidence: 0.816078085714286

 $00:53:28.415 \longrightarrow 00:53:30.150$ in the psychological realm but.

NOTE Confidence: 0.816078085714286

 $00:53:30.150 \longrightarrow 00:53:32.664$ Still going with that same general

NOTE Confidence: 0.816078085714286

 $00{:}53{:}32.664 \dashrightarrow 00{:}53{:}34.779$ notion that psychedelics might open

NOTE Confidence: 0.816078085714286

 $00:53:34.779 \rightarrow 00:53:36.987$ up this period of critical plasticity

NOTE Confidence: 0.816078085714286

 $00:53:36.987 \rightarrow 00:53:39.935$ in which there may be more potential

NOTE Confidence: 0.816078085714286

 $00:53:39.935 \rightarrow 00:53:41.715$ for psychological flexibility and

NOTE Confidence: 0.816078085714286

 $00{:}53{:}41{.}715 \dashrightarrow 00{:}53{:}43{.}945$ other changes in people's lives.

NOTE Confidence: 0.816078085714286

 $00{:}53{:}43{.}945 \dashrightarrow 00{:}53{:}47{.}354$ So we did use this the rapy model using

NOTE Confidence: 0.816078085714286

 $00{:}53{:}47{.}354 \dashrightarrow 00{:}53{:}48{.}978$ acceptance and commitment the rapy,

NOTE Confidence: 0.816078085714286

 $00:53:48.980 \rightarrow 00:53:52.332$ which explicitly targets psychological

NOTE Confidence: 0.816078085714286

 $00:53:52.332 \dashrightarrow 00:53:54.674$ flexibility. That's the main mechanism.

NOTE Confidence: 0.816078085714286

 $00{:}53{:}54{.}674$ --> $00{:}53{:}57{.}631$ We've written some papers and I could give NOTE Confidence: 0.816078085714286

 $00{:}53{:}57{.}631 \dashrightarrow 00{:}54{:}00{.}360$ a whole talk about just this this model.

NOTE Confidence: 0.835869603333333

00:54:02.370 --> 00:54:05.258 But the basic idea was was that we

NOTE Confidence: 0.835869603333333

 $00{:}54{:}05{.}258 \dashrightarrow 00{:}54{:}07{.}046$ saw conceptual and phenomenological NOTE Confidence: 0.835869603333333

 $00:54:07.046 \longrightarrow 00:54:09.516$ overlaps between the components of

NOTE Confidence: 0.835869603333333

 $00:54:09.516 \rightarrow 00:54:12.770$ act and the effects of solar cybin.

NOTE Confidence: 0.835869603333333

00:54:12.770 --> 00:54:14.933 And we thought that these two might

NOTE Confidence: 0.835869603333333

00:54:14.933 --> 00:54:17.222 synergize well together and that this

NOTE Confidence: 0.835869603333333

00:54:17.222 --> 00:54:19.038 increases in psychological flexibility

NOTE Confidence: 0.835869603333333

 $00{:}54{:}19{.}038 \dashrightarrow 00{:}54{:}21{.}186$ which there there are measures

NOTE Confidence: 0.835869603333333

 $00:54:21.186 \longrightarrow 00:54:23.328$ for could maybe a key mediator.

NOTE Confidence: 0.835869603333333

 $00{:}54{:}23{.}330 \dashrightarrow 00{:}54{:}25{.}946$ So we wanted to look at that and

NOTE Confidence: 0.835869603333333

00:54:25.946 --> 00:54:27.345 increasingly actually other investigators

NOTE Confidence: 0.835869603333333

 $00:54:27.345 \longrightarrow 00:54:30.057$ have picked up on this idea and this

- NOTE Confidence: 0.835869603333333
- $00:54:30.125 \longrightarrow 00:54:32.429$ is from now on Davis that did show it.
- NOTE Confidence: 0.835869603333333
- 00:54:32.430 --> 00:54:33.750 This is from survey data,
- NOTE Confidence: 0.835869603333333
- $00{:}54{:}33{.}750 \dashrightarrow 00{:}54{:}36{.}342$ but did show that basic kind of model
- NOTE Confidence: 0.835869603333333
- $00:54:36.342 \rightarrow 00:54:38.909$ of the acute psychedelic effects
- NOTE Confidence: 0.835869603333333
- 00:54:38.910 --> 00:54:41.600 feeding into increases in psychological
- NOTE Confidence: 0.835869603333333
- $00:54:41.600 \longrightarrow 00:54:43.752$ flexibility that that mediated.
- NOTE Confidence: 0.835869603333333
- 00:54:43.760 00:54:44.552 Clinical improvements.
- NOTE Confidence: 0.835869603333333
- 00:54:44.552 --> 00:54:47.324 This far just quickly to show you
- NOTE Confidence: 0.835869603333333
- $00:54:47.324 \longrightarrow 00:54:49.198$ because I think it it was nice
- NOTE Confidence: 0.835869603333333
- $00:54:49.198 \longrightarrow 00:54:50.700$ data that we we did see.
- NOTE Confidence: 0.835869603333333
- $00:54:50.700 \rightarrow 00:54:52.000$ So this is the AQ,
- NOTE Confidence: 0.835869603333333
- $00{:}54{:}52{.}000 \dashrightarrow 00{:}54{:}53{.}939$ it's one of the primary measures that
- NOTE Confidence: 0.835869603333333
- $00{:}54{:}53{.}939 \dashrightarrow 00{:}54{:}56{.}788$ was developed to look at the idea of
- NOTE Confidence: 0.835869603333333
- 00:54:56.788 --> 00:54:58.906 psychological flexibility decreases are
- NOTE Confidence: 0.835869603333333
- $00:54:58.906 \rightarrow 00:55:00.998$ actually clinical improvements here.
- NOTE Confidence: 0.835869603333333

 $00:55:01.000 \rightarrow 00:55:03.772$ So we did see a statistically

NOTE Confidence: 0.835869603333333

 $00:55:03.772 \longrightarrow 00:55:05.158$ significant improvements in

NOTE Confidence: 0.835869603333333

00:55:05.158 --> 00:55:06.523 psychological flexibility following

NOTE Confidence: 0.835869603333333

 $00:55:06.523 \rightarrow 00:55:09.435$ soybean but not after placebo and this

NOTE Confidence: 0.835869603333333

 $00:55:09.435 \rightarrow 00:55:11.878$ was a significant difference here.

NOTE Confidence: 0.835869603333333

 $00{:}55{:}11.880 \dashrightarrow 00{:}55{:}14.052$ We looked two weeks after Socmen

NOTE Confidence: 0.835869603333333

 $00:55:14.052 \rightarrow 00:55:16.454$ and again it did persist.

NOTE Confidence: 0.835869603333333

 $00:55:16.454 \rightarrow 00:55:18.128$ Three months later,

NOTE Confidence: 0.835869603333333

 $00{:}55{:}18.130 \dashrightarrow 00{:}55{:}20.674$ I do have some other measures that we

NOTE Confidence: 0.835869603333333

 $00:55:20.674 \dashrightarrow 00:55:23.068$ looked at that relate to this idea.

NOTE Confidence: 0.835869603333333

 $00:55:23.070 \rightarrow 00:55:24.602$ Especially mindfulness and there

NOTE Confidence: 0.835869603333333

 $00{:}55{:}24.602 \dashrightarrow 00{:}55{:}26.134$ were some significant changes

NOTE Confidence: 0.835869603333333

 $00:55:26.134 \rightarrow 00:55:28.250$ there as well as in value living.

NOTE Confidence: 0.835869603333333

00:55:28.250 --> 00:55:29.058 And just to show,

NOTE Confidence: 0.835869603333333

 $00:55:29.058 \rightarrow 00:55:30.830$ you know the other thing that was Nice is,

NOTE Confidence: 0.835869603333333

 $00:55:30.830 \longrightarrow 00:55:32.462$ is we also saw,

- NOTE Confidence: 0.835869603333333
- $00{:}55{:}32.462 \dashrightarrow 00{:}55{:}35.700$ did see a correlation here between those
- NOTE Confidence: 0.835869603333333
- $00{:}55{:}35{.}700 \dashrightarrow 00{:}55{:}38{.}080$ changes in psychological flexibility
- NOTE Confidence: 0.835869603333333
- $00:55:38.080 \dashrightarrow 00:55:41.590$ and the actual clinical improvements.
- NOTE Confidence: 0.835869603333333
- $00{:}55{:}41{.}590 \dashrightarrow 00{:}55{:}43{.}490$ So those things trending together
- NOTE Confidence: 0.835869603333333
- $00{:}55{:}43{.}490 \dashrightarrow 00{:}55{:}45{.}512$ of course can't see causation,
- NOTE Confidence: 0.835869603333333
- $00{:}55{:}45{.}512 \dashrightarrow 00{:}55{:}48{.}022$ but it was highly significant
- NOTE Confidence: 0.835869603333333
- $00:55:48.022 \dashrightarrow 00:55:50.606$ correlation between those two.
- NOTE Confidence: 0.835869603333333
- $00:55:50.606 \rightarrow 00:55:54.372$ So, so just a promising direction here.
- NOTE Confidence: 0.835869603333333
- $00:55:54.380 \dashrightarrow 00:55:55.166$ And you know,
- NOTE Confidence: 0.835869603333333
- $00:55:55.166 \rightarrow 00:55:56.214$ it's interesting given the
- NOTE Confidence: 0.835869603333333
- $00:55:56.214 \longrightarrow 00:55:58.185$ small sample that we did see a
- NOTE Confidence: 0.835869603333333
- 00:55:58.185 --> 00:55:59.037 highly significant improvement,
- NOTE Confidence: 0.835869603333333
- $00:55:59.040 \rightarrow 00:55:59.418$ sorry,
- NOTE Confidence: 0.835869603333333
- 00:55:59.418 --> 00:56:00.174 correlation here,
- NOTE Confidence: 0.835869603333333
- $00:56:00.174 \longrightarrow 00:56:02.820$ but we actually did not see a
- NOTE Confidence: 0.835869603333333

00:56:02.896 --> 00:56:05.560 statistically significant correlation,

NOTE Confidence: 0.835869603333333

 $00{:}56{:}05{.}560 \dashrightarrow 00{:}56{:}07{.}924$ really any correlation here between the

NOTE Confidence: 0.835869603333333

 $00{:}56{:}07{.}924 \dashrightarrow 00{:}56{:}10{.}519$ strength of the mystical experience and

NOTE Confidence: 0.835869603333333

 $00:56:10.519 \rightarrow 00:56:12.894$ the clinical improvements postal cybin,

NOTE Confidence: 0.835869603333333

 $00{:}56{:}12{.}900 \dashrightarrow 00{:}56{:}14{.}208$ which and that has,

NOTE Confidence: 0.835869603333333

 $00:56:14.208 \rightarrow 00:56:16.781$ you know typically been one of the

NOTE Confidence: 0.835869603333333

 $00:56:16.781 \rightarrow 00:56:19.466$ prominent explanatory mechanisms on the

NOTE Confidence: 0.835869603333333

 $00:56:19.466 \rightarrow 00:56:21.614$ more psychological experiential level.

NOTE Confidence: 0.835869603333333

 $00:56:21.620 \longrightarrow 00:56:22.710$ So we didn't see that,

NOTE Confidence: 0.835869603333333

 $00:56:22.710 \dashrightarrow 00:56:25.326$ but we did see the correlations.

NOTE Confidence: 0.835869603333333

 $00{:}56{:}25{.}330 \dashrightarrow 00{:}56{:}26{.}905$ Both with the EEG measure

NOTE Confidence: 0.835869603333333

 $00:56:26.905 \longrightarrow 00:56:27.850$ that Patrick shared,

NOTE Confidence: 0.835869603333333

 $00:56:27.850 \rightarrow 00:56:31.630$ as well as with psychological flexibility.

NOTE Confidence: 0.835869603333333

 $00:56:31.630 \rightarrow 00:56:33.464$ So that's just what I said there.

NOTE Confidence: 0.835869603333333

 $00:56:33.470 \longrightarrow 00:56:34.400$ And so just to wrap up,

NOTE Confidence: 0.835869603333333

 $00:56:34.400 \longrightarrow 00:56:36.444$ you know I think the study was

- NOTE Confidence: 0.835869603333333
- 00:56:36.444 --> 00:56:37.932 really a good demonstrator
- NOTE Confidence: 0.835869603333333
- 00:56:37.932 --> 00:56:40.108 of with psychedelic studies,
- NOTE Confidence: 0.835869603333333
- $00:56:40.110 \longrightarrow 00:56:42.492$ just how tricky these are from
- NOTE Confidence: 0.835869603333333
- $00:56:42.492 \rightarrow 00:56:43.683$ a methodological standpoint.
- NOTE Confidence: 0.835869603333333
- 00:56:43.690 --> 00:56:45.748 And it's such a complex interplay
- NOTE Confidence: 0.835869603333333
- $00:56:45.748 \rightarrow 00:56:46.777$ between expectancy effects,
- NOTE Confidence: 0.835869603333333
- $00:56:46.780 \rightarrow 00:56:48.640$ therapy effects and drug and placebo
- NOTE Confidence: 0.835869603333333
- $00:56:48.640 \rightarrow 00:56:50.754$ effects that we need to be really
- NOTE Confidence: 0.835869603333333
- $00:56:50.754 \rightarrow 00:56:52.658$ mindful of as we design these trials.
- NOTE Confidence: 0.835869603333333
- $00{:}56{:}52{.}660 \dashrightarrow 00{:}56{:}55{.}300$ I I do think given the robustness of NOTE Confidence: 0.835869603333333
- 00:56:55.300 --> 00:56:57.600 the clinical effects that we saw that
- NOTE Confidence: 0.835869603333333
- 00:56:57.600 --> 00:57:00.236 it does again add to the promise of NOTE Confidence: 0.835869603333333
- $00:57:00.236 \rightarrow 00:57:01.956$ this overall treatment model both
- NOTE Confidence: 0.835869603333333
- $00:57:01.956 \rightarrow 00:57:03.939$ suicide and therapy and potentially
- NOTE Confidence: 0.835869603333333
- $00:57:03.940 \longrightarrow 00:57:06.200$ with actions and psychological
- NOTE Confidence: 0.835869603333333

 $00:57:06.200 \longrightarrow 00:57:08.361$ flexibility as being important

NOTE Confidence: 0.835869603333333

 $00:57:08.361 \longrightarrow 00:57:10.666$ potential ways of providing this

NOTE Confidence: 0.835869603333333

 $00:57:10.666 \rightarrow 00:57:13.320$ treatment to patients with depression.

NOTE Confidence: 0.835869603333333

 $00{:}57{:}13.320 \dashrightarrow 00{:}57{:}16.182$ And both of our these alterations

NOTE Confidence: 0.835869603333333

 $00{:}57{:}16.182 \dashrightarrow 00{:}57{:}18.090$ in neuroplasticity and changes

NOTE Confidence: 0.844311666

 $00:57:18.169 \rightarrow 00:57:20.257$ in psychological flexibility may

NOTE Confidence: 0.844311666

 $00{:}57{:}20.257 \dashrightarrow 00{:}57{:}22.208$ be important potential mechanisms.

NOTE Confidence: 0.844311666

00:57:22.208 --> 00:57:25.064 Of course psychedelic therapy for depression,

NOTE Confidence: 0.844311666

 $00{:}57{:}25{.}070 \dashrightarrow 00{:}57{:}27{.}692$ but potentially again we we're seeing

NOTE Confidence: 0.844311666

 $00:57:27.692 \rightarrow 00:57:30.003$ effects across many other mental

NOTE Confidence: 0.844311666

 $00{:}57{:}30{.}003 \dashrightarrow 00{:}57{:}33{.}405$ disorders and and both of these are

NOTE Confidence: 0.844311666

 $00:57:33.405 \rightarrow 00:57:34.780$ potentially transdiagnostic mechanisms

NOTE Confidence: 0.844311666

 $00{:}57{:}34.780 \dashrightarrow 00{:}57{:}37.602$ and so I think that adds to the

NOTE Confidence: 0.844311666

 $00:57:37.602 \rightarrow 00:57:40.674$ intrigue around both of those so.

NOTE Confidence: 0.844311666

 $00{:}57{:}40{.}680 \dashrightarrow 00{:}57{:}43{.}928$ Lot of questions remain on how to deliver

NOTE Confidence: 0.844311666

 $00:57:43.928 \rightarrow 00:57:46.602$ this treatment most effectively and discuss,

- NOTE Confidence: 0.844311666
- $00{:}57{:}46.602 \dashrightarrow 00{:}57{:}48.779$ but I think I'm just going to

NOTE Confidence: 0.844311666

00:57:48.779 --> 00:57:50.887 wrap up so we can discuss here.

NOTE Confidence: 0.844311666

00:57:50.890 --> 00:57:53.698 Again, just really want to thank

NOTE Confidence: 0.844311666

 $00{:}57{:}53.698 \dashrightarrow 00{:}57{:}56.279$ Doctor D'souza for sticking with me

NOTE Confidence: 0.844311666

 $00{:}57{:}56{.}279 \dashrightarrow 00{:}57{:}58{.}512$ and the study for the duration and

NOTE Confidence: 0.844311666

 $00:57:58.512 \rightarrow 00:58:01.219$ taking it to the finish line as well

NOTE Confidence: 0.844311666

 $00:58:01.219 \rightarrow 00:58:03.569$ as everyone who's been involved from.

NOTE Confidence: 0.844311666

00:58:03.570 -> 00:58:06.186 Of the synergy lab at the VA there

NOTE Confidence: 0.844311666

 $00{:}58{:}06{.}186 \dashrightarrow 00{:}58{:}08{.}551$ and our whole team of the rapists

NOTE Confidence: 0.844311666

 $00{:}58{:}08{.}551 \dashrightarrow 00{:}58{:}11{.}970$ and and our funders as well as the

NOTE Confidence: 0.844311666

 $00{:}58{:}11{.}970 \dashrightarrow 00{:}58{:}14{.}070$ study participants who were our

NOTE Confidence: 0.844311666

 $00{:}58{:}14.070 \dashrightarrow 00{:}58{:}16.554$ best teachers in this never so.

NOTE Confidence: 0.844311666

00:58:16.554 --> 00:58:18.060 Thank you all.

NOTE Confidence: 0.688268853571429

 $00{:}58{:}20{.}470 \dashrightarrow 00{:}58{:}22{.}689$ See if there's any. Great for discussion.

NOTE Confidence: 0.6656290075

 $00:58:24.480 \longrightarrow 00:58:25.365$ Thank you both.

NOTE Confidence: 0.6656290075

00:58:25.365 --> 00:58:26.620 It's really great to see this NOTE Confidence: 0.6656290075 00:58:26.620 --> 00:58:27.760 come to fruition and there's NOTE Confidence: 0.6656290075 00:58:27.760 --> 00:58:29.540 some nice results, you know, NOTE Confidence: 0.6656290075 00:58:29.540 --> 00:58:30.560 small and limited study, NOTE Confidence: 0.6656290075 00:58:30.560 --> 00:58:31.595 but given those limitations NOTE Confidence: 0.6656290075 00:58:31.595 --> 00:58:32.765 have some nice stuff in there. NOTE Confidence: 0.87008202

 $00:58:34.510 \longrightarrow 00:58:35.758$ So thank you.