WEBVTT

NOTE duration: ”00:54:21.226”

NOTE Confidence: 0.9302724

00:00:28.630 --> 00:00:29.910 Good afternoon, everyone. I hope

NOTE Confidence: 0.9302724

00:00:29.910 --> 00:00:30.970 you can hear me.

NOTE Confidence: 0.9814677

00:00:33.830 --> 00:00:34.810 Okay. So

NOTE Confidence: 0.92451423

00:00:36.310 --> 00:00:37.850 this is our second

NOTE Confidence: 0.9093705

00:00:38.550 --> 00:00:39.050 webinar,

NOTE Confidence: 0.94220424

00:00:39.625 --> 00:00:41.385 hosted by the Yale Center

NOTE Confidence: 0.94220424

00:00:41.385 --> 00:00:42.664 for the Science of Cannabis

NOTE Confidence: 0.94220424

00:00:42.664 --> 00:00:43.405 and Cannabinoids.

NOTE Confidence: 0.9929399

00:00:44.504 --> 00:00:46.024 Thank you all for for

NOTE Confidence: 0.9929399

00:00:46.024 --> 00:00:46.524 joining.

NOTE Confidence: 0.9959398

00:00:47.704 --> 00:00:49.225 I'd like to commemorate this

NOTE Confidence: 0.9959398

00:00:49.225 --> 00:00:50.125 month's webinar,

NOTE Confidence: 0.9210579

00:00:51.385 --> 00:00:52.445 to our late,

NOTE Confidence: 0.7770787

00:00:53.144 --> 00:00:54.684 colleague Patrick Skosnick,

NOTE Confidence: 0.97721004

00:00:55.360 --> 00:00:56.420 who passed away,

NOTE Confidence: 0.9636736

00:00:57.120 --> 00:00:58.480 about a year almost to

NOTE Confidence: 0.9636736

00:00:58.480 --> 00:00:59.140 the date.

NOTE Confidence: 0.9653107

00:01:00.000 --> 00:01:01.520 Patrick was our colleague for

NOTE Confidence: 0.9653107

00:01:01.520 --> 00:01:02.820 almost fifteen years.

NOTE Confidence: 0.99318355

00:01:03.760 --> 00:01:05.040 And for most of his

NOTE Confidence: 0.99318355

00:01:05.040 --> 00:01:06.180 academic life,

NOTE Confidence: 0.9811865

00:01:07.200 --> 00:01:08.020 he spent,

NOTE Confidence: 0.9982039

00:01:08.560 --> 00:01:09.060 investigating

NOTE Confidence: 0.9996337

00:01:10.155 --> 00:01:12.075 the acute and chronic effects

NOTE Confidence: 0.9996337

00:01:12.075 --> 00:01:12.815 of cannabis

NOTE Confidence: 0.9997103

00:01:13.275 --> 00:01:14.015 in humans

NOTE Confidence: 0.9222361

00:01:14.715 --> 00:01:16.415 using a number of complementary

NOTE Confidence: 0.85414505

00:01:16.875 --> 00:01:17.375 methodologies,

NOTE Confidence: 0.98737323

00:01:17.675 --> 00:01:18.975 including EEG,

NOTE Confidence: 0.99715513

00:01:19.515 --> 00:01:20.015 polysomnography,

NOTE Confidence: 0.8856718

00:01:21.435 --> 00:01:22.495 eye blink conditioning,

NOTE Confidence: 0.9985694

00:01:23.110 --> 00:01:24.569 positron emission tomography,

NOTE Confidence: 0.9775376

00:01:24.950 --> 00:01:25.450 fMRI,

NOTE Confidence: 0.9979086

00:01:25.990 --> 00:01:26.729 and MRI.

NOTE Confidence: 0.9962435

00:01:27.270 --> 00:01:28.569 He passed away,

NOTE Confidence: 0.99836034

00:01:29.270 --> 00:01:30.469 at the tender age of

NOTE Confidence: 0.99836034

00:01:30.469 --> 00:01:32.390 fifty after a tragic and

NOTE Confidence: 0.99836034

00:01:32.390 --> 00:01:33.450 freak accident.

NOTE Confidence: 0.97196347

00:01:34.709 --> 00:01:35.909 At the at this time

NOTE Confidence: 0.97196347

00:01:35.909 --> 00:01:36.950 last year, he had just

NOTE Confidence: 0.97196347

00:01:36.950 --> 00:01:37.850 started working

NOTE Confidence: 0.9339711

00:01:38.534 --> 00:01:40.475 at the at Northeastern University,

NOTE Confidence: 0.9601679

00:01:41.494 --> 00:01:42.314 as a professor,

NOTE Confidence: 0.9805959

00:01:43.575 --> 00:01:45.655 and, he maintained an adjunct

NOTE Confidence: 0.9805959

00:01:45.655 --> 00:01:47.814 appointment here at, at Yale.

NOTE Confidence: 0.9805959

00:01:47.814 --> 00:01:49.015 He's gonna be missed by

NOTE Confidence: 0.9805959

00:01:49.015 --> 00:01:49.994 many of us,

NOTE Confidence: 0.95260936

00:01:50.390 --> 00:01:51.909 and I'm proposing that every

NOTE Confidence: 0.95260936

00:01:51.909 --> 00:01:52.409 February,

NOTE Confidence: 0.9203286

00:01:52.710 --> 00:01:53.270 we will,

NOTE Confidence: 0.94685173

00:01:53.829 --> 00:01:54.869 commemorate his,

NOTE Confidence: 0.9762085

00:01:55.829 --> 00:01:56.729 his contributions,

NOTE Confidence: 0.9967758

00:01:58.149 --> 00:01:59.829 by dedicating this webinar to

NOTE Confidence: 0.9967758

00:01:59.829 --> 00:02:00.329 him.

NOTE Confidence: 0.986187

00:02:00.950 --> 00:02:01.909 And I couldn't think of

NOTE Confidence: 0.986187

00:02:01.909 --> 00:02:02.890 a better way,

NOTE Confidence: 0.94806683

00:02:03.465 --> 00:02:05.305 to commemorate him than with

NOTE Confidence: 0.94806683

00:02:05.305 --> 00:02:06.284 today's speaker,

NOTE Confidence: 0.9670464

00:02:06.905 --> 00:02:07.965 Romina Mizrahi.

NOTE Confidence: 0.99773526

00:02:09.065 --> 00:02:11.065 Romina is a professor of

NOTE Confidence: 0.99773526

00:02:11.065 --> 00:02:12.764 psychiatry at McGill University.

NOTE Confidence: 0.9352391

00:02:13.785 --> 00:02:14.985 She is the director of

NOTE Confidence: 0.9352391

00:02:14.985 --> 00:02:16.285 the clinical and translational

NOTE Confidence: 0.99842703

00:02:16.665 --> 00:02:17.885 sciences lab.

NOTE Confidence: 0.99978185

00:02:18.560 --> 00:02:19.940 She has done some wonderful

NOTE Confidence: 0.99978185

00:02:20.000 --> 00:02:21.139 work over the years

NOTE Confidence: 0.94101447

00:02:21.519 --> 00:02:22.019 using,

NOTE Confidence: 0.99090105

00:02:22.480 --> 00:02:23.940 positron emission tomography,

NOTE Confidence: 0.94520694

00:02:25.040 --> 00:02:25.860 to understand,

NOTE Confidence: 0.99235225

00:02:27.760 --> 00:02:29.459 clinically high risk psychosis,

NOTE Confidence: 0.9811687

00:02:29.919 --> 00:02:31.299 psychosis in general,

NOTE Confidence: 0.95029175

00:02:31.599 --> 00:02:33.540 and the relationship between cannabis,

NOTE Confidence: 0.99840945

00:02:34.415 --> 00:02:35.235 and psychosis.

NOTE Confidence: 0.9980398

00:02:35.695 --> 00:02:37.455 Romina's work has been published

NOTE Confidence: 0.9980398

00:02:37.455 --> 00:02:37.775 in the

NOTE Confidence: 0.97614944

00:02:38.415 --> 00:02:40.175 in top tier journals, including

NOTE Confidence: 0.97614944

00:02:40.175 --> 00:02:42.835 JAMA Psychiatry, Molecular Psychiatry, American

NOTE Confidence: 0.9952412

00:02:43.375 --> 00:02:44.335 Journal, and so on and

NOTE Confidence: 0.9952412

00:02:44.335 --> 00:02:45.075 so forth.

NOTE Confidence: 0.997962

00:02:46.014 --> 00:02:47.535 Romina has been quite active

NOTE Confidence: 0.997962

00:02:47.535 --> 00:02:48.035 also

NOTE Confidence: 0.99953926

00:02:48.335 --> 00:02:49.155 in engaging

NOTE Confidence: 0.9997552

00:02:50.400 --> 00:02:51.459 the public about

NOTE Confidence: 0.9517261

00:02:51.840 --> 00:02:53.840 about cannabis. She's, in fact,

NOTE Confidence: 0.9517261

00:02:53.840 --> 00:02:55.700 served as a expert witness,

NOTE Confidence: 0.9885854

00:02:56.560 --> 00:02:57.919 to the Canadian House of

NOTE Confidence: 0.9885854

00:02:57.919 --> 00:02:58.419 Commons,

NOTE Confidence: 0.9835341

00:02:59.120 --> 00:03:01.139 in regard to her expertise

NOTE Confidence: 0.9835341

00:03:01.280 --> 00:03:03.360 on cannabis. So without further

NOTE Confidence: 0.9835341

00:03:03.360 --> 00:03:03.860 ado,

NOTE Confidence: 0.97304004

00:03:04.775 --> 00:03:05.275 Romina,

NOTE Confidence: 0.9176636

00:03:06.215 --> 00:03:06.955 it's yours.

NOTE Confidence: 0.9983483

00:03:07.735 --> 00:03:09.095 Thank you for thank you

NOTE Confidence: 0.9983483

00:03:09.095 --> 00:03:10.535 for coming and speaking with

NOTE Confidence: 0.9983483

00:03:10.535 --> 00:03:11.035 us.

NOTE Confidence: 0.99918234

00:03:11.974 --> 00:03:13.575 Thank you very much. It's

NOTE Confidence: 0.99918234

00:03:13.575 --> 00:03:14.875 a pleasure to be here.

NOTE Confidence: 0.9928457

00:03:15.575 --> 00:03:17.014 I want to mention this,

NOTE Confidence: 0.87704915

00:03:17.735 --> 00:03:19.095 leak bomb is not real.

NOTE Confidence: 0.87704915

00:03:19.095 --> 00:03:20.430 It's, the com it's computer

NOTE Confidence: 0.87704915

00:03:20.489 --> 00:03:22.010 generated. It's my first time.

NOTE Confidence: 0.87704915

00:03:22.010 --> 00:03:23.230 I think it looks okay.

NOTE Confidence: 0.969021

00:03:24.010 --> 00:03:25.290 This is the beginning of

NOTE Confidence: 0.969021

00:03:25.290 --> 00:03:26.430 a world where

NOTE Confidence: 0.97915965

00:03:26.730 --> 00:03:27.769 part of us will be

NOTE Confidence: 0.97915965

00:03:27.769 --> 00:03:29.370 real and part of us

NOTE Confidence: 0.97915965

00:03:29.370 --> 00:03:31.150 will will not. So,

NOTE Confidence: 0.9848388

00:03:32.264 --> 00:03:33.224 so I hope that you

NOTE Confidence: 0.9848388

00:03:33.224 --> 00:03:33.724 enjoy,

NOTE Confidence: 0.96967363

00:03:34.264 --> 00:03:35.465 the talk I will be

NOTE Confidence: 0.96967363

00:03:35.465 --> 00:03:36.605 presenting today.

NOTE Confidence: 0.99748677

00:03:36.905 --> 00:03:38.025 I'm not sure how I,

NOTE Confidence: 0.9510166

00:03:38.504 --> 00:03:40.025 I share let's see. I

NOTE Confidence: 0.9510166

00:03:40.025 --> 00:03:41.305 I was I need to

NOTE Confidence: 0.9510166

00:03:41.305 --> 00:03:42.504 send a request to share

NOTE Confidence: 0.9510166

00:03:42.504 --> 00:03:43.165 my screen.

NOTE Confidence: 0.9862812

00:03:45.090 --> 00:03:46.290 No. I think you should

NOTE Confidence: 0.9862812

00:03:46.290 --> 00:03:46.610 be able

NOTE Confidence: 0.9914874

00:03:47.330 --> 00:03:48.450 I think Wendy set it

NOTE Confidence: 0.9914874

00:03:48.450 --> 00:03:49.250 up so that you can

NOTE Confidence: 0.9914874

00:03:49.250 --> 00:03:50.610 share a screen. You'll be

NOTE Confidence: 0.9914874

00:03:50.610 --> 00:03:51.430 able to share.

NOTE Confidence: 0.9995822

00:03:51.730 --> 00:03:52.790 Alright. Okay.

NOTE Confidence: 0.99044174

00:03:54.130 --> 00:03:56.050 So let's see. I'll open

NOTE Confidence: 0.99044174

00:03:56.050 --> 00:03:57.650 this here, and let's see

NOTE Confidence: 0.99044174

00:03:57.650 --> 00:03:58.630 whether that works.

NOTE Confidence: 0.8994653

00:04:19.139 --> 00:04:20.020 Okay. So,

NOTE Confidence: 0.99729156

00:04:21.300 --> 00:04:22.440 does it work now?

NOTE Confidence: 0.99973726

00:04:26.020 --> 00:04:26.919 Not yet.

NOTE Confidence: 0.99985677

00:04:28.419 --> 00:04:28.919 Okay.

NOTE Confidence: 0.9560572

00:04:31.385 --> 00:04:33.305 I do see it. I,

NOTE Confidence: 0.94304633

00:04:33.945 --> 00:04:35.325 Yep. Now we can.

NOTE Confidence: 0.94950426

00:04:35.785 --> 00:04:37.065 Okay. So let me just,

NOTE Confidence: 0.9561067

00:04:37.945 --> 00:04:39.225 You wanna go to tab.

NOTE Confidence: 0.9561067

00:04:39.225 --> 00:04:40.904 Yeah. Presenting mode. Presenter mode.

NOTE Confidence: 0.9561067

00:04:40.904 --> 00:04:42.585 Yeah. Yeah. Here. Okay. Alright.

NOTE Confidence: 0.9561067

00:04:42.585 --> 00:04:44.265 So, thank you very much

NOTE Confidence: 0.9561067

00:04:44.265 --> 00:04:45.465 for the intro. I'm going

NOTE Confidence: 0.9561067

00:04:45.465 --> 00:04:46.790 to start over.

NOTE Confidence: 0.9845641

00:04:47.810 --> 00:04:48.690 I'm going to be talking

NOTE Confidence: 0.9845641

00:04:48.850 --> 00:04:50.150 I selected the studies

NOTE Confidence: 0.97825605

00:04:50.610 --> 00:04:52.850 looking at, cannabis effects on

NOTE Confidence: 0.97825605

00:04:52.850 --> 00:04:53.350 microglia,

NOTE Confidence: 0.95955044

00:04:53.970 --> 00:04:54.470 astroglia,

NOTE Confidence: 0.92772746

00:04:55.010 --> 00:04:55.510 and,

NOTE Confidence: 0.81802243

00:04:57.330 --> 00:04:58.370 sorry, and,

NOTE Confidence: 0.9213155

00:04:58.690 --> 00:04:59.750 synaptic density.

NOTE Confidence: 0.9780692

00:05:03.125 --> 00:05:04.324 So I have really nothing

NOTE Confidence: 0.9780692

00:05:04.324 --> 00:05:05.845 to disclose other than I'm

NOTE Confidence: 0.9780692

00:05:05.845 --> 00:05:08.005 just presenting work from our

NOTE Confidence: 0.9780692

00:05:08.005 --> 00:05:09.125 own lab, but this is,

NOTE Confidence: 0.9780692

00:05:09.125 --> 00:05:10.404 of course, in the context

NOTE Confidence: 0.9780692

00:05:10.404 --> 00:05:12.324 of, great work from other

NOTE Confidence: 0.9780692

00:05:12.324 --> 00:05:12.824 labs

NOTE Confidence: 0.9997084

00:05:13.125 --> 00:05:14.104 around the world.

NOTE Confidence: 0.93574953

00:05:16.710 --> 00:05:18.070 There are three studies. All

NOTE Confidence: 0.93574953

00:05:18.070 --> 00:05:19.110 of them are published. And

NOTE Confidence: 0.93574953

00:05:19.110 --> 00:05:20.470 there's a fourth study also

NOTE Confidence: 0.93574953

00:05:20.470 --> 00:05:21.450 I will be presenting,

NOTE Confidence: 0.8778859

00:05:22.310 --> 00:05:23.610 which is Da Silva,

NOTE Confidence: 0.8177049

00:05:24.070 --> 00:05:25.910 looking at, c four a

NOTE Confidence: 0.8177049

00:05:25.910 --> 00:05:26.410 and,

NOTE Confidence: 0.99745864

00:05:27.029 --> 00:05:28.250 the effects on

NOTE Confidence: 0.97429764

00:05:28.710 --> 00:05:30.630 microglia activation, which I did

NOTE Confidence: 0.97429764

00:05:30.630 --> 00:05:31.850 not list here.

NOTE Confidence: 0.98020184

00:05:32.535 --> 00:05:35.095 So, microglia is critical for

NOTE Confidence: 0.98020184

00:05:35.095 --> 00:05:36.235 the immune response.

NOTE Confidence: 0.9560165

00:05:36.775 --> 00:05:37.595 It monitors,

NOTE Confidence: 0.9279504

00:05:37.975 --> 00:05:39.975 brain pathogens and and, it's

NOTE Confidence: 0.9279504

00:05:39.975 --> 00:05:40.955 critical for,

NOTE Confidence: 0.8886243

00:05:41.735 --> 00:05:42.235 monitoring,

NOTE Confidence: 0.9786388

00:05:43.255 --> 00:05:45.035 damage, brain damage, phagocytosis,

NOTE Confidence: 0.9625653

00:05:45.574 --> 00:05:46.634 debris, pathogens.

NOTE Confidence: 0.9804948

00:05:47.380 --> 00:05:48.900 It's involved in release of

NOTE Confidence: 0.9804948

00:05:48.900 --> 00:05:51.160 cytokines and regulates immune response.

NOTE Confidence: 0.9647484

00:05:51.620 --> 00:05:53.460 It's critically involved in synaptic

NOTE Confidence: 0.9647484

00:05:53.460 --> 00:05:53.960 pruning.

NOTE Confidence: 0.9479295

00:05:54.339 --> 00:05:56.740 It it eliminates weak and

NOTE Confidence: 0.9479295

00:05:56.740 --> 00:05:58.920 unnecessary synapses during development,

NOTE Confidence: 0.84082013

00:05:59.380 --> 00:06:01.800 maintains synaptic plasticity and circuit

NOTE Confidence: 0.84082013

00:06:01.860 --> 00:06:02.360 refinement,

NOTE Confidence: 0.9776035

00:06:02.845 --> 00:06:04.225 as well as it's involved

NOTE Confidence: 0.9776035

00:06:04.285 --> 00:06:05.025 in neuroprotection.

NOTE Confidence: 0.982498

00:06:06.285 --> 00:06:07.645 And that means it's involved

NOTE Confidence: 0.982498

00:06:07.645 --> 00:06:09.325 in programmed cell death and

NOTE Confidence: 0.982498

00:06:09.325 --> 00:06:12.065 modulates inflammatory response to prevent

NOTE Confidence: 0.982498

00:06:12.125 --> 00:06:14.205 excessive damage from stress or

NOTE Confidence: 0.982498

00:06:14.205 --> 00:06:14.705 injury.

NOTE Confidence: 0.9998024

00:06:15.245 --> 00:06:15.745 Now

NOTE Confidence: 0.9771126

00:06:16.169 --> 00:06:17.770 there are several ways to,

NOTE Confidence: 0.9771126

00:06:18.169 --> 00:06:18.669 quantify

NOTE Confidence: 0.89211047

00:06:19.050 --> 00:06:19.550 microglia.

NOTE Confidence: 0.9938383

00:06:20.009 --> 00:06:21.210 And in this case, I'm

NOTE Confidence: 0.9938383

00:06:21.210 --> 00:06:22.729 going to be presenting the

NOTE Confidence: 0.9938383

00:06:22.729 --> 00:06:23.930 line of work we've done

NOTE Confidence: 0.9938383

00:06:23.930 --> 00:06:25.070 looking at translocator

NOTE Confidence: 0.98738354

00:06:25.449 --> 00:06:25.949 protein

NOTE Confidence: 0.926913

00:06:26.490 --> 00:06:27.310 or TSPO.

NOTE Confidence: 0.93804824

00:06:28.835 --> 00:06:30.595 More recently, we started to

NOTE Confidence: 0.93804824

00:06:30.595 --> 00:06:32.455 look into astroglia as well.

NOTE Confidence: 0.93804824

00:06:32.514 --> 00:06:34.595 And, I like this slide

NOTE Confidence: 0.93804824

00:06:34.595 --> 00:06:35.875 because it really shows that

NOTE Confidence: 0.93804824

00:06:35.875 --> 00:06:37.714 while microglia and astroglia explode

NOTE Confidence: 0.9936173

00:06:38.514 --> 00:06:39.955 I'm sorry. I'm interrupting. I

NOTE Confidence: 0.9936173

00:06:39.955 --> 00:06:41.154 don't we don't see your

NOTE Confidence: 0.9936173

00:06:41.154 --> 00:06:41.654 slides.

NOTE Confidence: 0.96606326

00:06:42.509 --> 00:06:43.009 No?

NOTE Confidence: 0.9930167

00:06:43.629 --> 00:06:44.990 No. I'm sorry. And in

NOTE Confidence: 0.9930167

00:06:44.990 --> 00:06:46.110 the chat, it seems that

NOTE Confidence: 0.9930167

00:06:46.110 --> 00:06:47.889 others also cannot see it.

NOTE Confidence: 0.9930167

00:06:47.949 --> 00:06:48.449 Oh,

NOTE Confidence: 0.993928

00:06:48.910 --> 00:06:50.909 okay. That's odd. Thanks for

NOTE Confidence: 0.993928

00:06:50.909 --> 00:06:51.889 letting me know.

NOTE Confidence: 0.92692167

00:06:52.909 --> 00:06:54.509 I can see them. So,

NOTE Confidence: 0.9404682

00:06:55.564 --> 00:06:56.464 maybe do you want

NOTE Confidence: 0.9724333

00:06:56.925 --> 00:06:58.384 to reshare your screen?

NOTE Confidence: 0.9650744

00:06:59.245 --> 00:06:59.745 Sure.

NOTE Confidence: 0.7164411

00:07:00.365 --> 00:07:01.964 That's odd. Never happened. I'd

NOTE Confidence: 0.7164411

00:07:01.964 --> 00:07:02.464 have

NOTE Confidence: 0.7930339

00:07:02.925 --> 00:07:04.705 some people share an application,

NOTE Confidence: 0.9948671

00:07:05.164 --> 00:07:06.145 entire screen.

NOTE Confidence: 0.9713823

00:07:10.060 --> 00:07:11.360 We can see them now.

NOTE Confidence: 0.9997275

00:07:13.180 --> 00:07:13.680 Great.

NOTE Confidence: 0.90933675

00:07:14.060 --> 00:07:15.820 So, Romina, you can continue

NOTE Confidence: 0.90933675

00:07:15.820 --> 00:07:16.980 then. It looks like you

NOTE Confidence: 0.90933675

00:07:16.980 --> 00:07:17.600 you can.

NOTE Confidence: 0.9611893

00:07:18.380 --> 00:07:19.820 Alright. So I I briefly

NOTE Confidence: 0.9611893

00:07:19.820 --> 00:07:21.885 presented the work, or the

NOTE Confidence: 0.9611893

00:07:21.885 --> 00:07:23.264 summary of microglia

NOTE Confidence: 0.93919945

00:07:23.565 --> 00:07:25.185 does. I'm sure everyone knows.

NOTE Confidence: 0.93919945

00:07:25.405 --> 00:07:26.385 It can be quantified,

NOTE Confidence: 0.93617153

00:07:26.925 --> 00:07:27.425 using,

NOTE Confidence: 0.92736334

00:07:28.045 --> 00:07:30.065 PET radioligands targeting TSPO.

NOTE Confidence: 0.9937434

00:07:30.445 --> 00:07:31.485 And I was saying that

NOTE Confidence: 0.9937434

00:07:31.485 --> 00:07:33.485 astroglia has different functions in

NOTE Confidence: 0.9937434

00:07:33.485 --> 00:07:34.145 the brain.

NOTE Confidence: 0.9107453

00:07:34.790 --> 00:07:36.410 It's involved in a homeostasis.

NOTE Confidence: 0.9923353

00:07:37.510 --> 00:07:38.810 It balances extracellular

NOTE Confidence: 0.88115686

00:07:39.190 --> 00:07:41.530 iron, potassium, and calcium, regulates

NOTE Confidence: 0.88115686

00:07:41.590 --> 00:07:43.530 pH. It's involved in six-zero

NOTE Confidence: 0.88115686

00:07:43.750 --> 00:07:44.250 architecture,

NOTE Confidence: 0.90222144

00:07:44.710 --> 00:07:47.350 including neuroglia vascular interfaces, so

NOTE Confidence: 0.90222144

00:07:47.350 --> 00:07:48.870 it controls the blood brain

NOTE Confidence: 0.90222144

00:07:48.870 --> 00:07:49.370 barrier.

NOTE Confidence: 0.9891405

00:07:49.955 --> 00:07:51.655 It's also involved in metabolic

NOTE Confidence: 0.9891405

00:07:51.715 --> 00:07:53.255 support, supplies nutrients

NOTE Confidence: 0.94724935

00:07:53.875 --> 00:07:55.395 to neurons such as glucose

NOTE Confidence: 0.94724935

00:07:55.395 --> 00:07:56.755 and lactate, as well as

NOTE Confidence: 0.94724935

00:07:56.755 --> 00:07:57.255 regulating,

NOTE Confidence: 0.98340327

00:07:57.635 --> 00:07:58.615 energy metabolism.

NOTE Confidence: 0.9538718

00:07:58.995 --> 00:08:00.435 It creates it's involved in

NOTE Confidence: 0.9538718

00:08:00.435 --> 00:08:02.935 waste clearance, including, reactive oxygen

NOTE Confidence: 0.9538718

00:08:02.995 --> 00:08:03.495 species.

NOTE Confidence: 0.97746575

00:08:04.560 --> 00:08:06.020 It's also involved in neurotransmitter

NOTE Confidence: 0.97746575

00:08:06.159 --> 00:08:07.300 levels via clearance,

NOTE Confidence: 0.99497694

00:08:07.840 --> 00:08:08.800 and that's via,

NOTE Confidence: 0.84832406

00:08:09.199 --> 00:08:09.699 EAAT

NOTE Confidence: 0.90786296

00:08:10.159 --> 00:08:12.400 and, dopamine transporters, and that

NOTE Confidence: 0.90786296

00:08:12.400 --> 00:08:14.159 includes FEMA two as well

NOTE Confidence: 0.90786296

00:08:14.159 --> 00:08:14.740 as MAOB.

NOTE Confidence: 0.98711383

00:08:15.199 --> 00:08:16.639 And it's also involved in

NOTE Confidence: 0.98711383

00:08:16.639 --> 00:08:17.645 synaptic function,

NOTE Confidence: 0.95204353

00:08:18.345 --> 00:08:19.065 such as,

NOTE Confidence: 0.9461427

00:08:20.025 --> 00:08:21.485 its role involving

NOTE Confidence: 0.7006921

00:08:21.785 --> 00:08:22.285 strengthening,

NOTE Confidence: 0.9875343

00:08:23.065 --> 00:08:25.085 neural connectivity through myelination.

NOTE Confidence: 0.86320066

00:08:26.664 --> 00:08:28.585 Using PET radioligands, we can

NOTE Confidence: 0.86320066

00:08:28.585 --> 00:08:29.085 actually

NOTE Confidence: 0.9921556

00:08:30.860 --> 00:08:32.860 quantify astroglia. We believe we

NOTE Confidence: 0.9921556

00:08:32.860 --> 00:08:33.360 can

NOTE Confidence: 0.75481266

00:08:33.820 --> 00:08:35.040 quantify microglia,

NOTE Confidence: 0.94016486

00:08:35.980 --> 00:08:38.540 using a specific radioligand for

NOTE Confidence: 0.94016486

00:08:38.540 --> 00:08:39.920 MAOB or monooxidase

NOTE Confidence: 0.9240348

00:08:40.300 --> 00:08:40.800 b.

NOTE Confidence: 0.9996232

00:08:41.660 --> 00:08:42.160 So

NOTE Confidence: 0.97554564

00:08:42.540 --> 00:08:44.405 first, the studies on TSPO

NOTE Confidence: 0.97554564

00:08:44.545 --> 00:08:45.605 are looking at microglia,

NOTE Confidence: 0.9992273

00:08:45.905 --> 00:08:46.405 specifically

NOTE Confidence: 0.9493336

00:08:46.945 --> 00:08:47.445 microglia

NOTE Confidence: 0.99960524

00:08:47.985 --> 00:08:48.485 density

NOTE Confidence: 0.9944736

00:08:48.945 --> 00:08:50.885 in long term cannabis users.

NOTE Confidence: 0.9857247

00:08:51.265 --> 00:08:52.705 There are several reasons one

NOTE Confidence: 0.9857247

00:08:53.025 --> 00:08:54.804 why one would like to

NOTE Confidence: 0.9857247

00:08:54.865 --> 00:08:56.165 explore or investigate

NOTE Confidence: 0.8865794

00:08:56.465 --> 00:08:58.165 immune response and cannabis.

NOTE Confidence: 0.9658219

00:08:58.780 --> 00:09:00.380 Regular cannabis use has been

NOTE Confidence: 0.9658219

00:09:00.380 --> 00:09:01.980 associated with long long term

NOTE Confidence: 0.9658219

00:09:01.980 --> 00:09:03.679 changes in the brain, particularly,

NOTE Confidence: 0.9947217

00:09:04.940 --> 00:09:06.460 this is critical given its

NOTE Confidence: 0.9947217

00:09:06.460 --> 00:09:08.240 legalization across the world.

NOTE Confidence: 0.9821043

00:09:08.780 --> 00:09:10.460 It's also critical in the

NOTE Confidence: 0.9821043

00:09:10.460 --> 00:09:11.840 modulation of inflammatory

NOTE Confidence: 0.9971528

00:09:12.220 --> 00:09:12.720 responses.

NOTE Confidence: 0.98873335

00:09:13.694 --> 00:09:15.535 Preclinical studies have reported,

NOTE Confidence: 0.9737815

00:09:15.934 --> 00:09:17.375 anti inflammatory as well as

NOTE Confidence: 0.9737815

00:09:17.375 --> 00:09:17.875 immunosuppressant

NOTE Confidence: 0.98220444

00:09:18.255 --> 00:09:19.235 effects of cannabinoids

NOTE Confidence: 0.95287085

00:09:20.095 --> 00:09:22.595 by inhibiting microglial activation, inhibiting

NOTE Confidence: 0.95287085

00:09:22.654 --> 00:09:24.595 the release of ROS, decreasing

NOTE Confidence: 0.95287085

00:09:24.735 --> 00:09:27.375 proinflammatory cytokine secretion, and increasing

NOTE Confidence: 0.95287085

00:09:27.375 --> 00:09:29.330 anti inflammatory cytokine release from

NOTE Confidence: 0.95287085

00:09:29.330 --> 00:09:29.830 microglia.

NOTE Confidence: 0.99572045

00:09:30.529 --> 00:09:32.230 Now THC and cannabidiol

NOTE Confidence: 0.9677782

00:09:32.769 --> 00:09:34.630 are also currently being investigated

NOTE Confidence: 0.9677782

00:09:34.769 --> 00:09:35.589 as potential

NOTE Confidence: 0.98192483

00:09:36.209 --> 00:09:37.429 therapeutic targets,

NOTE Confidence: 0.9967878

00:09:38.290 --> 00:09:39.990 agents for several inflammatory

NOTE Confidence: 0.95063496

00:09:40.450 --> 00:09:42.950 and immune diseases, including schizophrenia

NOTE Confidence: 0.9926858

00:09:43.410 --> 00:09:44.975 and CHR participants.

NOTE Confidence: 0.9571064

00:09:46.235 --> 00:09:47.675 So based on this, back

NOTE Confidence: 0.9571064

00:09:47.675 --> 00:09:48.955 in the day, a few

NOTE Confidence: 0.9571064

00:09:48.955 --> 00:09:49.695 years back,

NOTE Confidence: 0.9725832

00:09:50.235 --> 00:09:52.415 we we decided to investigate,

NOTE Confidence: 0.96184605

00:09:53.035 --> 00:09:55.434 neuroimmune activation or TSPO in

NOTE Confidence: 0.96184605

00:09:55.434 --> 00:09:57.035 long term cannabis users. And

NOTE Confidence: 0.96184605

00:09:57.035 --> 00:09:59.059 here, we included twenty seven

NOTE Confidence: 0.96184605

00:09:59.059 --> 00:09:59.880 healthy controls

NOTE Confidence: 0.9377537

00:10:00.420 --> 00:10:02.179 and forty, sorry, and twenty

NOTE Confidence: 0.9377537

00:10:02.179 --> 00:10:03.639 four cannabis users.

NOTE Confidence: 0.9050644

00:10:04.579 --> 00:10:06.179 These were young people in

NOTE Confidence: 0.9050644

00:10:06.179 --> 00:10:07.940 the very young twenty three

NOTE Confidence: 0.9050644

00:10:07.940 --> 00:10:09.139 years old as a mini

NOTE Confidence: 0.9050644

00:10:09.139 --> 00:10:09.639 age

NOTE Confidence: 0.97550815

00:10:10.225 --> 00:10:11.825 who had started to use

NOTE Confidence: 0.97550815

00:10:11.825 --> 00:10:13.025 cannabis at the age of

NOTE Confidence: 0.97550815

00:10:13.025 --> 00:10:14.545 sixteen more or less, some

NOTE Confidence: 0.97550815

00:10:14.545 --> 00:10:15.684 some of them younger.

NOTE Confidence: 0.9727577

00:10:16.065 --> 00:10:17.825 This is the estimated lifetime

NOTE Confidence: 0.9727577

00:10:17.825 --> 00:10:19.905 cannabis use. And of these,

NOTE Confidence: 0.9727577

00:10:20.225 --> 00:10:22.245 twenty four participants, fifteen,

NOTE Confidence: 0.96102434

00:10:23.105 --> 00:10:24.885 had a cannabis use disorder

NOTE Confidence: 0.96102434

00:10:24.945 --> 00:10:25.445 diagnosis,

NOTE Confidence: 0.97935927

00:10:26.059 --> 00:10:27.600 and seven were using tobacco.

NOTE Confidence: 0.96763384

00:10:28.699 --> 00:10:30.480 And so we, showed,

NOTE Confidence: 0.96542287

00:10:31.339 --> 00:10:33.199 contrary to our hypothesis,

NOTE Confidence: 0.976955

00:10:33.980 --> 00:10:35.040 higher TSPO,

NOTE Confidence: 0.99563444

00:10:35.660 --> 00:10:37.260 in long term cannabis users

NOTE Confidence: 0.99563444

00:10:37.260 --> 00:10:38.399 compared to controls.

NOTE Confidence: 0.9051062

00:10:38.855 --> 00:10:40.054 Here on the y axis,

NOTE Confidence: 0.9051062

00:10:40.054 --> 00:10:41.495 you have f eighteen FIPA,

NOTE Confidence: 0.9446427

00:10:42.054 --> 00:10:42.554 VTs.

NOTE Confidence: 0.96231204

00:10:43.415 --> 00:10:44.774 The higher the VT, the

NOTE Confidence: 0.96231204

00:10:44.774 --> 00:10:46.554 higher the microglia density.

NOTE Confidence: 0.99025893

00:10:47.095 --> 00:10:48.615 And in the x axis,

NOTE Confidence: 0.99025893

00:10:48.615 --> 00:10:49.815 you have the different brain

NOTE Confidence: 0.99025893

00:10:49.815 --> 00:10:50.875 regions, DLPFC,

NOTE Confidence: 0.93325394

00:10:51.975 --> 00:10:53.675 MPFC, temporal, ACC,

NOTE Confidence: 0.94982547

00:10:54.370 --> 00:10:56.130 cerebellum, and gray matter. And

NOTE Confidence: 0.94982547

00:10:56.130 --> 00:10:57.570 this is elevated across the

NOTE Confidence: 0.94982547

00:10:57.570 --> 00:10:58.070 board.

NOTE Confidence: 0.9970773

00:10:58.450 --> 00:11:00.210 And this is even higher

NOTE Confidence: 0.9970773

00:11:00.210 --> 00:11:02.050 when looking into cannabis use

NOTE Confidence: 0.9970773

00:11:02.050 --> 00:11:03.110 disorder individuals,

NOTE Confidence: 0.99963033

00:11:04.210 --> 00:11:05.510 which you can see here.

NOTE Confidence: 0.92649156

00:11:07.404 --> 00:11:08.845 To me, it was also

NOTE Confidence: 0.92649156

00:11:08.845 --> 00:11:09.345 interested,

NOTE Confidence: 0.9987771

00:11:09.884 --> 00:11:12.065 that higher TSPO was associated

NOTE Confidence: 0.9987771

00:11:12.125 --> 00:11:13.904 with higher behavioral measures

NOTE Confidence: 0.9183736

00:11:14.285 --> 00:11:16.384 of both stress and anxiety

NOTE Confidence: 0.9183736

00:11:16.444 --> 00:11:16.944 scores

NOTE Confidence: 0.9398092

00:11:17.404 --> 00:11:19.324 and which are critical for,

NOTE Confidence: 0.99833935

00:11:19.804 --> 00:11:21.024 the role of the endocannabinoid

NOTE Confidence: 0.9519772

00:11:21.500 --> 00:11:23.179 system as everyone knows. I'm

NOTE Confidence: 0.9519772

00:11:23.179 --> 00:11:24.459 not presenting any of that

NOTE Confidence: 0.9519772

00:11:24.459 --> 00:11:25.899 work today, but to me,

NOTE Confidence: 0.9519772

00:11:25.899 --> 00:11:27.600 that was important to see,

NOTE Confidence: 0.9519772

00:11:27.740 --> 00:11:29.440 as well as higher circulating

NOTE Confidence: 0.9519772

00:11:29.579 --> 00:11:31.420 CRP levels, per in the

NOTE Confidence: 0.9519772

00:11:31.420 --> 00:11:33.579 periphery for cannabis users. As

NOTE Confidence: 0.9519772

00:11:33.579 --> 00:11:35.019 you can see here, VT

NOTE Confidence: 0.9519772

00:11:35.019 --> 00:11:37.120 values, chronic stress measures.

NOTE Confidence: 0.9968911

00:11:37.715 --> 00:11:39.235 And in the x axis

NOTE Confidence: 0.9968911

00:11:39.235 --> 00:11:40.275 here, you have,

NOTE Confidence: 0.98774624

00:11:40.755 --> 00:11:42.934 the high sensitivity CRP levels,

NOTE Confidence: 0.8840637

00:11:43.475 --> 00:11:45.235 showing a direct relationship in

NOTE Confidence: 0.8840637

00:11:45.235 --> 00:11:45.975 both cases.

NOTE Confidence: 0.99910706

00:11:47.554 --> 00:11:48.054 So

NOTE Confidence: 0.9927511

00:11:48.355 --> 00:11:49.395 this is what we found

NOTE Confidence: 0.9927511

00:11:49.395 --> 00:11:50.615 for, for

NOTE Confidence: 0.883976

00:11:51.949 --> 00:11:52.429 TSPO. And,

NOTE Confidence: 0.9809264

00:11:53.069 --> 00:11:53.569 then,

NOTE Confidence: 0.99728537

00:11:53.949 --> 00:11:54.850 we had

NOTE Confidence: 0.9866945

00:11:55.389 --> 00:11:57.149 somewhat preliminary data at the

NOTE Confidence: 0.9866945

00:11:57.149 --> 00:11:57.629 time,

NOTE Confidence: 0.92480075

00:11:58.029 --> 00:11:59.949 looking at monox monoxidase b

NOTE Confidence: 0.92480075

00:11:59.949 --> 00:12:00.690 or MAOB,

NOTE Confidence: 0.9915951

00:12:01.709 --> 00:12:02.829 which you may know is

NOTE Confidence: 0.9915951

00:12:02.829 --> 00:12:04.370 confined to the outer mitochondria,

NOTE Confidence: 0.99928474

00:12:05.230 --> 00:12:06.129 of astrocytes

NOTE Confidence: 0.97910964

00:12:06.485 --> 00:12:07.605 as well as as well

NOTE Confidence: 0.97910964

00:12:07.605 --> 00:12:08.185 as serotoninergic

NOTE Confidence: 0.9737157

00:12:08.885 --> 00:12:10.345 neurons and cell bodies.

NOTE Confidence: 0.9412274

00:12:10.805 --> 00:12:12.425 It catalyzes the oxidative

NOTE Confidence: 0.7897059

00:12:12.885 --> 00:12:14.825 deamination of monamine neurotransmitters,

NOTE Confidence: 0.98010176

00:12:15.205 --> 00:12:16.745 including dopamine, norepinephrine.

NOTE Confidence: 0.7853516

00:12:18.725 --> 00:12:20.405 Maub is also critically engaged

NOTE Confidence: 0.7853516

00:12:20.405 --> 00:12:22.380 in hydrogen peroxins synthesis

NOTE Confidence: 0.9802469

00:12:23.020 --> 00:12:25.120 that's involved in mitochondrial dysfunction

NOTE Confidence: 0.9802469

00:12:25.179 --> 00:12:26.559 and oxidative stress,

NOTE Confidence: 0.9681706

00:12:27.260 --> 00:12:29.260 as I've mentioned previously. And

NOTE Confidence: 0.9681706

00:12:29.260 --> 00:12:31.040 MAOB expression is significantly

NOTE Confidence: 0.9445788

00:12:31.340 --> 00:12:33.340 increased in reactive astrocytes, both

NOTE Confidence: 0.9445788

00:12:33.340 --> 00:12:35.179 in hippocampus and frontal cortex

NOTE Confidence: 0.9445788

00:12:35.179 --> 00:12:36.320 in Alzheimer's disease,

NOTE Confidence: 0.9522973

00:12:36.705 --> 00:12:38.325 as well as MAOB inhibitors

NOTE Confidence: 0.9522973

00:12:38.385 --> 00:12:39.765 can reduce astrogliosis.

NOTE Confidence: 0.98024595

00:12:41.105 --> 00:12:43.184 GFAP, a sensitive and reliable

NOTE Confidence: 0.98024595

00:12:43.184 --> 00:12:44.325 marker of astrogliosis,

NOTE Confidence: 0.997227

00:12:44.785 --> 00:12:45.285 demonstrates

NOTE Confidence: 0.9952336

00:12:45.665 --> 00:12:47.825 very high correlation with, with

NOTE Confidence: 0.9952336

00:12:47.825 --> 00:12:48.325 MAOB.

NOTE Confidence: 0.9861603

00:12:48.785 --> 00:12:49.665 This is a study that

NOTE Confidence: 0.9861603

00:12:49.665 --> 00:12:51.125 we did back in Toronto.

NOTE Confidence: 0.9080656

00:12:52.380 --> 00:12:54.620 Carbon eleven c, SL twenty

NOTE Confidence: 0.9080656

00:12:54.620 --> 00:12:56.080 five one one eight eight,

NOTE Confidence: 0.9551875

00:12:56.540 --> 00:12:57.980 it's a radioligand we used

NOTE Confidence: 0.9551875

00:12:57.980 --> 00:12:59.260 back in Toronto and now

NOTE Confidence: 0.9551875

00:12:59.260 --> 00:13:00.540 we use here in in

NOTE Confidence: 0.9551875

00:13:00.540 --> 00:13:01.200 in McGill.

NOTE Confidence: 0.99463946

00:13:01.980 --> 00:13:03.500 It's a valid radioligand to

NOTE Confidence: 0.99463946

00:13:03.500 --> 00:13:04.559 quantify MAOB,

NOTE Confidence: 0.9590988

00:13:05.115 --> 00:13:06.095 increase MAOB,

NOTE Confidence: 0.9924935

00:13:06.635 --> 00:13:09.115 selectivity and sensitivity as compared

NOTE Confidence: 0.9924935

00:13:09.115 --> 00:13:10.815 to previous MAOB radioligands.

NOTE Confidence: 0.9788998

00:13:11.515 --> 00:13:12.815 This is a third generation,

NOTE Confidence: 0.97167057

00:13:13.275 --> 00:13:15.195 MAOB radioligand as compared to

NOTE Confidence: 0.97167057

00:13:15.195 --> 00:13:16.575 the previous two generations.

NOTE Confidence: 0.99859834

00:13:17.110 --> 00:13:18.570 Has very good reproducibility

NOTE Confidence: 0.917958

00:13:19.510 --> 00:13:20.490 and identifiability.

NOTE Confidence: 0.9580678

00:13:21.670 --> 00:13:23.270 And MaOB can be used

NOTE Confidence: 0.9580678

00:13:23.270 --> 00:13:25.130 as a reliable reactive astroglia

NOTE Confidence: 0.9580678

00:13:25.270 --> 00:13:27.850 marker supported by significant increase

NOTE Confidence: 0.9580678

00:13:27.990 --> 00:13:29.130 in MAOB levels

NOTE Confidence: 0.92194515

00:13:29.725 --> 00:13:31.325 in out opposite striatum of

NOTE Confidence: 0.92194515

00:13:31.325 --> 00:13:33.184 patients with multiple system atrophy.

NOTE Confidence: 0.92194515

00:13:33.485 --> 00:13:35.085 This is characterized by marked

NOTE Confidence: 0.92194515

00:13:35.085 --> 00:13:36.145 increase in astrobleiosis.

NOTE Confidence: 0.99571294

00:13:37.165 --> 00:13:38.605 We also showed very high

NOTE Confidence: 0.99571294

00:13:38.605 --> 00:13:40.785 correlation between regional MAOB,

NOTE Confidence: 0.90278983

00:13:41.245 --> 00:13:42.705 total volume of distribution

NOTE Confidence: 0.89159644

00:13:43.260 --> 00:13:44.720 for SL twenty five,

NOTE Confidence: 0.8954417

00:13:45.179 --> 00:13:46.480 and MAOB density

NOTE Confidence: 0.9318392

00:13:46.780 --> 00:13:48.240 in autopsied brains.

NOTE Confidence: 0.9996395

00:13:50.059 --> 00:13:50.559 So

NOTE Confidence: 0.96353436

00:13:51.260 --> 00:13:52.300 at the time, it was

NOTE Confidence: 0.96353436

00:13:52.300 --> 00:13:53.980 really unclear what the evidence

NOTE Confidence: 0.96353436

00:13:53.980 --> 00:13:55.280 was for MAOB,

NOTE Confidence: 0.9508167

00:13:55.660 --> 00:13:57.200 and in particular in psychosis.

NOTE Confidence: 0.9508167

00:13:57.340 --> 00:13:58.465 And you'll see that this

NOTE Confidence: 0.9508167

00:13:58.465 --> 00:13:59.745 is a preliminary study. It's

NOTE Confidence: 0.9508167

00:13:59.745 --> 00:14:01.205 a combination of,

NOTE Confidence: 0.9988306

00:14:02.705 --> 00:14:03.205 participants

NOTE Confidence: 0.930616

00:14:03.825 --> 00:14:04.945 who and which I will

NOTE Confidence: 0.930616

00:14:04.945 --> 00:14:05.665 show you in a few

NOTE Confidence: 0.930616

00:14:05.665 --> 00:14:06.165 minutes.

NOTE Confidence: 0.94920456

00:14:07.345 --> 00:14:09.605 Participants who had different diagnosis

NOTE Confidence: 0.95437807

00:14:10.340 --> 00:14:12.340 and, different levels of cannabis

NOTE Confidence: 0.95437807

00:14:12.340 --> 00:14:13.620 use, very low in this

NOTE Confidence: 0.95437807

00:14:13.620 --> 00:14:14.740 case. And I'm going to

NOTE Confidence: 0.95437807

00:14:14.740 --> 00:14:15.780 tell you a bit about

NOTE Confidence: 0.95437807

00:14:15.780 --> 00:14:17.700 the ongoing studies study which

NOTE Confidence: 0.95437807

00:14:17.700 --> 00:14:18.280 we are,

NOTE Confidence: 0.9903736

00:14:18.740 --> 00:14:20.420 close to, to an end

NOTE Confidence: 0.9903736

00:14:20.420 --> 00:14:22.520 here, in in in Montreal.

NOTE Confidence: 0.9970201

00:14:23.264 --> 00:14:24.485 So in terms of psychosis,

NOTE Confidence: 0.9809403

00:14:25.504 --> 00:14:27.745 postmortem studies, peripheral studies, and

NOTE Confidence: 0.9809403

00:14:27.745 --> 00:14:30.245 preclinical studies show complete variable

NOTE Confidence: 0.9809403

00:14:30.305 --> 00:14:31.444 results for MAOB,

NOTE Confidence: 0.99134886

00:14:32.464 --> 00:14:34.225 in in either animal models

NOTE Confidence: 0.99134886

00:14:34.225 --> 00:14:34.964 or postmortem,

NOTE Confidence: 0.9941959

00:14:36.225 --> 00:14:38.160 brain tissue of patients with

NOTE Confidence: 0.9941959

00:14:38.319 --> 00:14:38.819 schizophrenia.

NOTE Confidence: 0.9865292

00:14:40.399 --> 00:14:41.300 It is consistent,

NOTE Confidence: 0.96997195

00:14:41.680 --> 00:14:43.920 however, that in regular cigarette

NOTE Confidence: 0.96997195

00:14:43.920 --> 00:14:45.600 smokers, there is both a

NOTE Confidence: 0.96997195

00:14:45.600 --> 00:14:46.819 decrease in MAOB,

NOTE Confidence: 0.94124126

00:14:47.120 --> 00:14:47.940 both postmortem,

NOTE Confidence: 0.9829012

00:14:48.480 --> 00:14:49.040 many times,

NOTE Confidence: 0.7137498

00:14:50.160 --> 00:14:50.660 replicated,

NOTE Confidence: 0.72098887

00:14:51.360 --> 00:14:51.860 periphery,

NOTE Confidence: 0.84929055

00:14:52.265 --> 00:14:53.305 as well as many pet

NOTE Confidence: 0.84929055

00:14:53.305 --> 00:14:53.805 studies,

NOTE Confidence: 0.93110293

00:14:54.505 --> 00:14:55.625 going back all the way

NOTE Confidence: 0.93110293

00:14:55.625 --> 00:14:56.745 two thousand to two thousand

NOTE Confidence: 0.93110293

00:14:56.745 --> 00:14:57.485 and five.

NOTE Confidence: 0.95076877

00:14:58.105 --> 00:14:59.645 Now in terms of cannabis,

NOTE Confidence: 0.95076877

00:14:59.865 --> 00:15:01.725 it's really or it was

NOTE Confidence: 0.9495703

00:15:02.025 --> 00:15:03.645 it is really unclear.

NOTE Confidence: 0.91265273

00:15:04.025 --> 00:15:05.145 There were two studies we

NOTE Confidence: 0.91265273

00:15:05.145 --> 00:15:06.185 could find at the at

NOTE Confidence: 0.91265273

00:15:06.185 --> 00:15:07.325 the time only.

NOTE Confidence: 0.9868124

00:15:07.740 --> 00:15:10.160 One showing MAOB gene expression,

NOTE Confidence: 0.9675903

00:15:10.700 --> 00:15:11.600 being lower,

NOTE Confidence: 0.951551

00:15:12.060 --> 00:15:13.820 after acute low dose of

NOTE Confidence: 0.951551

00:15:13.820 --> 00:15:14.880 cannabis exposure,

NOTE Confidence: 0.9262883

00:15:15.500 --> 00:15:17.680 and one GVAP study expression,

NOTE Confidence: 0.9813239

00:15:18.540 --> 00:15:19.680 showing preclinically

NOTE Confidence: 0.9986809

00:15:20.140 --> 00:15:20.640 reductions

NOTE Confidence: 0.9985313

00:15:21.020 --> 00:15:21.600 as well.

NOTE Confidence: 0.9967432

00:15:22.975 --> 00:15:23.875 As I've mentioned,

NOTE Confidence: 0.971076

00:15:24.254 --> 00:15:26.194 TSPO is lower in psychosis

NOTE Confidence: 0.9384137

00:15:26.654 --> 00:15:27.875 as well as in cannabis

NOTE Confidence: 0.9384137

00:15:27.935 --> 00:15:28.435 use.

NOTE Confidence: 0.92516834

00:15:28.894 --> 00:15:30.654 However, it's elevated in cannabis

NOTE Confidence: 0.92516834

00:15:30.654 --> 00:15:32.915 use suggesting that, astroglia

NOTE Confidence: 0.9880413

00:15:33.295 --> 00:15:34.514 may may be lower

NOTE Confidence: 0.9606493

00:15:34.890 --> 00:15:36.410 or higher. At the time,

NOTE Confidence: 0.9606493

00:15:36.410 --> 00:15:37.850 actually, we were not sure.

NOTE Confidence: 0.9606493

00:15:37.850 --> 00:15:39.390 We hypo we hypothesized

NOTE Confidence: 0.99652547

00:15:39.770 --> 00:15:41.870 lower based on our findings,

NOTE Confidence: 0.9993851

00:15:42.170 --> 00:15:43.070 in schizophrenia.

NOTE Confidence: 0.9027831

00:15:44.250 --> 00:15:45.790 No in vivo study investigated

NOTE Confidence: 0.9027831

00:15:45.930 --> 00:15:46.970 MAOB in the brain of

NOTE Confidence: 0.9027831

00:15:46.970 --> 00:15:49.070 psychosis pain patients or cannabis

NOTE Confidence: 0.9027831

00:15:49.290 --> 00:15:49.790 users.

NOTE Confidence: 0.9763376

00:15:51.225 --> 00:15:53.065 So at the time, we

NOTE Confidence: 0.9763376

00:15:53.065 --> 00:15:54.585 wanted to examine the effects

NOTE Confidence: 0.9763376

00:15:54.585 --> 00:15:55.945 of a study group. And

NOTE Confidence: 0.9763376

00:15:55.945 --> 00:15:57.065 in this case, as I've

NOTE Confidence: 0.9763376

00:15:57.065 --> 00:15:58.845 mentioned, we included healthy controls,

NOTE Confidence: 0.97167206

00:15:59.385 --> 00:16:00.825 those at clinical high risk

NOTE Confidence: 0.97167206

00:16:00.825 --> 00:16:02.185 for psychosis, as well as

NOTE Confidence: 0.97167206

00:16:02.185 --> 00:16:03.965 first episode psychosis patients.

NOTE Confidence: 0.82730573

00:16:04.580 --> 00:16:05.860 We use a center SL

NOTE Confidence: 0.82730573

00:16:05.860 --> 00:16:08.520 twenty five, total distribution volume

NOTE Confidence: 0.82730573

00:16:08.580 --> 00:16:09.320 to estimate,

NOTE Confidence: 0.73398185

00:16:10.180 --> 00:16:10.680 astroglia,

NOTE Confidence: 0.9997421

00:16:11.300 --> 00:16:11.800 function

NOTE Confidence: 0.8212886

00:16:12.180 --> 00:16:13.080 in this case.

NOTE Confidence: 0.9452084

00:16:13.460 --> 00:16:15.220 And, we examine the effect

NOTE Confidence: 0.9452084

00:16:15.220 --> 00:16:15.880 of cannabis,

NOTE Confidence: 0.93976295

00:16:16.355 --> 00:16:17.394 and we look at the

NOTE Confidence: 0.93976295

00:16:17.394 --> 00:16:18.134 the interaction,

NOTE Confidence: 0.99444836

00:16:18.514 --> 00:16:20.214 between both cannabis and group.

NOTE Confidence: 0.99137586

00:16:21.954 --> 00:16:22.995 This was a study which

NOTE Confidence: 0.99137586

00:16:22.995 --> 00:16:24.035 was meant to be a

NOTE Confidence: 0.99137586

00:16:24.035 --> 00:16:25.254 really large study,

NOTE Confidence: 0.98915184

00:16:25.555 --> 00:16:26.675 but that's when I moved

NOTE Confidence: 0.98915184

00:16:26.675 --> 00:16:28.680 from Toronto to Montreal. So,

NOTE Confidence: 0.9494324

00:16:29.320 --> 00:16:31.320 what I'm presenting here, which

NOTE Confidence: 0.9494324

00:16:31.320 --> 00:16:33.180 was published in Molecular Psychiatry,

NOTE Confidence: 0.9494324

00:16:33.240 --> 00:16:34.279 is all the samples that

NOTE Confidence: 0.9494324

00:16:34.279 --> 00:16:35.820 we have available to us,

NOTE Confidence: 0.93894625

00:16:36.200 --> 00:16:36.700 before,

NOTE Confidence: 0.912987

00:16:37.160 --> 00:16:38.380 changing, location.

NOTE Confidence: 0.98675686

00:16:39.160 --> 00:16:40.460 So for this study,

NOTE Confidence: 0.99825245

00:16:40.839 --> 00:16:42.120 as we've done over the

NOTE Confidence: 0.99825245

00:16:42.120 --> 00:16:43.445 last few decades,

NOTE Confidence: 0.91684663

00:16:44.145 --> 00:16:45.985 first episode psychosis patients were

NOTE Confidence: 0.91684663

00:16:45.985 --> 00:16:48.085 diagnosed with the DSM five.

NOTE Confidence: 0.9222443

00:16:48.865 --> 00:16:50.785 Clinical high risk individuals with

NOTE Confidence: 0.9222443

00:16:50.785 --> 00:16:53.025 the seps. Kanavis users were

NOTE Confidence: 0.9222443

00:16:53.025 --> 00:16:53.525 carefully,

NOTE Confidence: 0.8556762

00:16:54.385 --> 00:16:55.605 studied, and,

NOTE Confidence: 0.9901705

00:16:56.145 --> 00:16:57.900 the presence of cannabis was

NOTE Confidence: 0.9901705

00:16:57.900 --> 00:17:00.220 quantified objectively with urine drug

NOTE Confidence: 0.9901705

00:17:00.220 --> 00:17:00.720 screens.

NOTE Confidence: 0.8510664

00:17:01.100 --> 00:17:02.220 We have the very deep,

NOTE Confidence: 0.969891

00:17:03.180 --> 00:17:05.180 drug history questionnaires with record

NOTE Confidence: 0.969891

00:17:05.180 --> 00:17:07.020 tobacco use. It's a small

NOTE Confidence: 0.969891

00:17:07.020 --> 00:17:08.220 sample as you can see

NOTE Confidence: 0.969891

00:17:08.220 --> 00:17:09.260 here. I'm going to show

NOTE Confidence: 0.969891

00:17:09.260 --> 00:17:10.140 you a little bit more

NOTE Confidence: 0.969891

00:17:10.140 --> 00:17:11.180 about the sample in the

NOTE Confidence: 0.969891

00:17:11.180 --> 00:17:11.920 next slide.

NOTE Confidence: 0.8599724

00:17:12.315 --> 00:17:13.274 We obtained MRI,

NOTE Confidence: 0.9672345

00:17:14.794 --> 00:17:16.635 scan for each participant. We

NOTE Confidence: 0.9672345

00:17:16.635 --> 00:17:18.575 scanned participants in the HRT

NOTE Confidence: 0.9672345

00:17:18.794 --> 00:17:19.774 for ninety minutes.

NOTE Confidence: 0.9663494

00:17:20.234 --> 00:17:22.475 We obtained arterial blood sample

NOTE Confidence: 0.9663494

00:17:22.475 --> 00:17:24.154 with the automatic blood sampling

NOTE Confidence: 0.9663494

00:17:24.154 --> 00:17:25.514 system as well as manual

NOTE Confidence: 0.9663494

00:17:25.514 --> 00:17:25.950 samples,

NOTE Confidence: 0.91333735

00:17:26.510 --> 00:17:28.429 and we obtained, we used,

NOTE Confidence: 0.91333735

00:17:28.669 --> 00:17:30.450 the two tissue compartment model,

NOTE Confidence: 0.9556631

00:17:31.149 --> 00:17:31.649 and,

NOTE Confidence: 0.90883106

00:17:32.429 --> 00:17:34.190 the outcome measure was total

NOTE Confidence: 0.90883106

00:17:34.190 --> 00:17:35.630 volume of distribution or v

NOTE Confidence: 0.90883106

00:17:35.630 --> 00:17:36.130 t.

NOTE Confidence: 0.97476196

00:17:37.710 --> 00:17:39.070 As I've mentioned, the sample

NOTE Confidence: 0.97476196

00:17:39.070 --> 00:17:40.415 is not ideal,

NOTE Confidence: 0.99403

00:17:40.795 --> 00:17:42.235 based on the move, but

NOTE Confidence: 0.99403

00:17:42.235 --> 00:17:43.435 I just want to highlight

NOTE Confidence: 0.99403

00:17:43.435 --> 00:17:44.415 a few things.

NOTE Confidence: 0.7866862

00:17:45.595 --> 00:17:46.415 It's relatively

NOTE Confidence: 0.98981977

00:17:46.715 --> 00:17:47.615 young cohort

NOTE Confidence: 0.5878627

00:17:48.235 --> 00:17:48.735 and,

NOTE Confidence: 0.9917058

00:17:50.315 --> 00:17:51.929 here you can see there

NOTE Confidence: 0.9917058

00:17:51.929 --> 00:17:53.529 were no tobacco smokers in

NOTE Confidence: 0.9917058

00:17:53.529 --> 00:17:55.210 the healthy controls. There was

NOTE Confidence: 0.9917058

00:17:55.210 --> 00:17:56.889 one tobacco smoker in the

NOTE Confidence: 0.9917058

00:17:56.889 --> 00:17:58.970 clinical high risk group and

NOTE Confidence: 0.9917058

00:17:58.970 --> 00:18:00.509 three in the first episode

NOTE Confidence: 0.9917058

00:18:00.570 --> 00:18:01.070 group.

NOTE Confidence: 0.9997682

00:18:01.529 --> 00:18:02.750 In terms of cannabis,

NOTE Confidence: 0.9988496

00:18:03.529 --> 00:18:04.909 two healthy controls

NOTE Confidence: 0.97337276

00:18:05.210 --> 00:18:05.609 were,

NOTE Confidence: 0.97903883

00:18:06.330 --> 00:18:07.470 cannabis users,

NOTE Confidence: 0.98889846

00:18:07.984 --> 00:18:09.905 two in the clinical high

NOTE Confidence: 0.98889846

00:18:09.905 --> 00:18:11.425 risk group, as well as

NOTE Confidence: 0.98889846

00:18:11.425 --> 00:18:13.345 one in the first, episode

NOTE Confidence: 0.98889846

00:18:13.345 --> 00:18:13.845 group.

NOTE Confidence: 0.9683517

00:18:14.305 --> 00:18:15.185 And then there were, of

NOTE Confidence: 0.9683517

00:18:15.185 --> 00:18:16.565 course, as you would expect,

NOTE Confidence: 0.9683517

00:18:16.785 --> 00:18:18.805 difference in differences in antipsychotic

NOTE Confidence: 0.9683517

00:18:19.105 --> 00:18:19.605 exposure,

NOTE Confidence: 0.983887

00:18:20.230 --> 00:18:21.850 no difference in PET parameters,

NOTE Confidence: 0.983887

00:18:22.070 --> 00:18:23.289 and these are the differences,

NOTE Confidence: 0.9530492

00:18:23.909 --> 00:18:24.869 in terms of,

NOTE Confidence: 0.88872576

00:18:26.470 --> 00:18:26.970 psychopathology

NOTE Confidence: 0.99906504

00:18:27.590 --> 00:18:29.450 for for the three groups.

NOTE Confidence: 0.9653951

00:18:31.190 --> 00:18:32.630 And what you can see

NOTE Confidence: 0.9653951

00:18:32.630 --> 00:18:33.690 is that there are significantly

NOTE Confidence: 0.87066174

00:18:34.070 --> 00:18:37.234 significant differences with, within, between

NOTE Confidence: 0.87066174

00:18:37.455 --> 00:18:37.955 groups.

NOTE Confidence: 0.9434641

00:18:40.015 --> 00:18:41.135 In the y axis, you

NOTE Confidence: 0.9434641

00:18:41.135 --> 00:18:43.135 see SL twenty five or

NOTE Confidence: 0.9434641

00:18:43.135 --> 00:18:44.835 a marker of astroglia function.

NOTE Confidence: 0.9434641

00:18:45.135 --> 00:18:46.575 In the top panel, you

NOTE Confidence: 0.9434641

00:18:46.575 --> 00:18:48.494 can see the striatum. In

NOTE Confidence: 0.9434641

00:18:48.494 --> 00:18:49.935 the lower panel, you can

NOTE Confidence: 0.9434641

00:18:49.935 --> 00:18:51.234 see cortical regions.

NOTE Confidence: 0.96305794

00:18:51.630 --> 00:18:52.910 It's divided, and you'll see

NOTE Confidence: 0.96305794

00:18:52.910 --> 00:18:54.910 the y axis. It's higher

NOTE Confidence: 0.96305794

00:18:54.910 --> 00:18:55.630 in the,

NOTE Confidence: 0.90920883

00:18:55.950 --> 00:18:57.070 estriatal regions,

NOTE Confidence: 0.9797935

00:18:57.390 --> 00:18:58.830 versus in the cortical regions.

NOTE Confidence: 0.9797935

00:18:58.830 --> 00:19:00.190 It's divided so as to

NOTE Confidence: 0.9797935

00:19:00.190 --> 00:19:00.850 make sure,

NOTE Confidence: 0.9921648

00:19:01.869 --> 00:19:03.170 you can see them clearly.

NOTE Confidence: 0.8951459

00:19:03.790 --> 00:19:05.615 And there is a very,

NOTE Confidence: 0.8951459

00:19:05.615 --> 00:19:06.654 to us, in bed at

NOTE Confidence: 0.8951459

00:19:06.654 --> 00:19:08.255 least, a very big effect

NOTE Confidence: 0.8951459

00:19:08.255 --> 00:19:09.695 size as you can see

NOTE Confidence: 0.8951459

00:19:09.695 --> 00:19:10.195 here,

NOTE Confidence: 0.97950935

00:19:10.815 --> 00:19:12.835 even with this very, very

NOTE Confidence: 0.98984927

00:19:13.215 --> 00:19:14.034 small sample.

NOTE Confidence: 0.9885666

00:19:14.734 --> 00:19:15.934 Of course, there is an

NOTE Confidence: 0.9885666

00:19:15.934 --> 00:19:17.690 effect of tobacco, as you

NOTE Confidence: 0.9885666

00:19:17.690 --> 00:19:18.890 can see here, as well

NOTE Confidence: 0.9885666

00:19:18.890 --> 00:19:20.350 as an effect of cannabis.

NOTE Confidence: 0.9285588

00:19:20.730 --> 00:19:22.810 So it's both significant for

NOTE Confidence: 0.9285588

00:19:22.890 --> 00:19:24.650 three, both it's not both.

NOTE Confidence: 0.9285588

00:19:24.650 --> 00:19:26.830 Significant for group for cannabis

NOTE Confidence: 0.9285588

00:19:27.130 --> 00:19:27.869 and tobacco.

NOTE Confidence: 0.9698733

00:19:29.065 --> 00:19:31.065 And this is present both

NOTE Confidence: 0.9698733

00:19:31.065 --> 00:19:32.905 in estriotic regions as well

NOTE Confidence: 0.9698733

00:19:32.905 --> 00:19:34.445 as in cortical regions.

NOTE Confidence: 0.99641997

00:19:35.865 --> 00:19:37.705 Just trying to summarize what

NOTE Confidence: 0.99641997

00:19:37.705 --> 00:19:38.185 we,

NOTE Confidence: 0.8788016

00:19:38.585 --> 00:19:39.405 have seen,

NOTE Confidence: 0.9995713

00:19:39.785 --> 00:19:41.645 the effects of cannabis

NOTE Confidence: 0.98864

00:19:42.480 --> 00:19:44.000 or the very small sample

NOTE Confidence: 0.98864

00:19:44.000 --> 00:19:45.220 that we have of cannabis

NOTE Confidence: 0.98864

00:19:45.280 --> 00:19:45.780 users.

NOTE Confidence: 0.9701576

00:19:46.160 --> 00:19:47.200 And I I wanna show

NOTE Confidence: 0.9701576

00:19:47.200 --> 00:19:48.720 you these effect sizes because

NOTE Confidence: 0.9701576

00:19:48.720 --> 00:19:49.700 they're big,

NOTE Confidence: 0.99979246

00:19:50.160 --> 00:19:50.900 for us.

NOTE Confidence: 0.9799992

00:19:51.520 --> 00:19:52.640 You may remember there were

NOTE Confidence: 0.9799992

00:19:52.640 --> 00:19:54.560 very, very few people in

NOTE Confidence: 0.9799992

00:19:54.560 --> 00:19:56.240 this cohort, but there seems

NOTE Confidence: 0.9799992

00:19:56.240 --> 00:19:57.755 no effect in the healthy

NOTE Confidence: 0.9799992

00:19:57.755 --> 00:19:58.255 controls,

NOTE Confidence: 0.9348079

00:19:59.355 --> 00:20:01.274 of cannabis use on SL

NOTE Confidence: 0.9348079

00:20:01.274 --> 00:20:02.095 twenty five,

NOTE Confidence: 0.9963712

00:20:02.794 --> 00:20:03.914 where there seems to be

NOTE Confidence: 0.9963712

00:20:03.914 --> 00:20:05.695 an effect on both CHR

NOTE Confidence: 0.9963712

00:20:05.835 --> 00:20:07.054 as in the first episode

NOTE Confidence: 0.9963712

00:20:07.115 --> 00:20:07.615 group.

NOTE Confidence: 0.9314124

00:20:08.715 --> 00:20:10.394 And these group differences are

NOTE Confidence: 0.9314124

00:20:10.394 --> 00:20:11.135 more pronounced

NOTE Confidence: 0.8520335

00:20:11.500 --> 00:20:12.799 in a striatal regions

NOTE Confidence: 0.9126122

00:20:13.100 --> 00:20:15.020 than cortical regions as well

NOTE Confidence: 0.9126122

00:20:15.020 --> 00:20:16.640 as these group differences.

NOTE Confidence: 0.93734473

00:20:18.059 --> 00:20:19.740 As sorry. These group differences

NOTE Confidence: 0.93734473

00:20:19.740 --> 00:20:20.720 are more in a striatal

NOTE Confidence: 0.93734473

00:20:20.779 --> 00:20:22.299 versus cortical regions as you

NOTE Confidence: 0.93734473

00:20:22.299 --> 00:20:23.820 can see here. Core these

NOTE Confidence: 0.93734473

00:20:23.820 --> 00:20:25.260 are the striatal regions and

NOTE Confidence: 0.93734473

00:20:25.260 --> 00:20:26.460 these are the cortical regions,

NOTE Confidence: 0.93734473

00:20:26.460 --> 00:20:27.525 and these are the group

NOTE Confidence: 0.93734473

00:20:27.525 --> 00:20:29.605 differences here. And here, you

NOTE Confidence: 0.93734473

00:20:29.605 --> 00:20:31.285 can see the effects of

NOTE Confidence: 0.93734473

00:20:31.285 --> 00:20:31.785 cannabis

NOTE Confidence: 0.9250968

00:20:32.645 --> 00:20:34.265 on MAOB on MAOB,

NOTE Confidence: 0.9568246

00:20:35.925 --> 00:20:38.005 or SL twenty five in

NOTE Confidence: 0.9568246

00:20:38.005 --> 00:20:38.505 estriatal

NOTE Confidence: 0.989911

00:20:38.805 --> 00:20:39.705 regions versus,

NOTE Confidence: 0.94609183

00:20:40.100 --> 00:20:42.280 sorry, in cortical regions versus

NOTE Confidence: 0.94609183

00:20:42.420 --> 00:20:45.160 estriatal region regions. Again, showing,

NOTE Confidence: 0.97486335

00:20:45.619 --> 00:20:46.680 a bigger effect,

NOTE Confidence: 0.96284914

00:20:47.220 --> 00:20:49.480 in estriatum versus cortex.

NOTE Confidence: 0.9741528

00:20:50.020 --> 00:20:50.900 And I would like you

NOTE Confidence: 0.9741528

00:20:50.900 --> 00:20:52.580 to remember this, because,

NOTE Confidence: 0.9732542

00:20:53.460 --> 00:20:54.980 we've seen kind of the

NOTE Confidence: 0.9732542

00:20:54.980 --> 00:20:55.480 opposite,

NOTE Confidence: 0.9924899

00:20:55.924 --> 00:20:57.285 in the later studies that

NOTE Confidence: 0.9924899

00:20:57.285 --> 00:20:59.205 we have, and I'm really

NOTE Confidence: 0.9924899

00:20:59.205 --> 00:21:01.125 looking forward to discussing those,

NOTE Confidence: 0.9924899

00:21:01.445 --> 00:21:02.505 with all of you.

NOTE Confidence: 0.9861441

00:21:03.125 --> 00:21:04.484 So remember this because we've

NOTE Confidence: 0.9861441

00:21:04.484 --> 00:21:05.765 been looking into this more

NOTE Confidence: 0.9861441

00:21:05.765 --> 00:21:06.665 recently only.

NOTE Confidence: 0.99100804

00:21:07.789 --> 00:21:08.190 So,

NOTE Confidence: 0.89852065

00:21:08.669 --> 00:21:10.270 we found altered m a

NOTE Confidence: 0.89852065

00:21:10.350 --> 00:21:12.510 MAOB and astroglia marker in

NOTE Confidence: 0.89852065

00:21:12.510 --> 00:21:14.770 early psychosis with cannabis use.

NOTE Confidence: 0.99588424

00:21:15.710 --> 00:21:16.210 And

NOTE Confidence: 0.93916893

00:21:16.909 --> 00:21:18.590 this kind of summarizes this,

NOTE Confidence: 0.93916893

00:21:19.070 --> 00:21:19.570 heterogene

NOTE Confidence: 0.9503889

00:21:20.270 --> 00:21:20.770 heterogeneous

NOTE Confidence: 0.8301757

00:21:21.230 --> 00:21:23.535 small sample. We shall reduce

NOTE Confidence: 0.8301757

00:21:23.535 --> 00:21:25.535 MAOB concentration in cannabis use

NOTE Confidence: 0.8301757

00:21:25.535 --> 00:21:27.155 in CHR on Fab patients,

NOTE Confidence: 0.9191795

00:21:27.615 --> 00:21:28.595 reduce MAOB,

NOTE Confidence: 0.98110104

00:21:29.215 --> 00:21:30.195 which is which

NOTE Confidence: 0.912912

00:21:31.054 --> 00:21:32.734 replicates in many ways the

NOTE Confidence: 0.912912

00:21:32.734 --> 00:21:35.234 estriatal dopamine elevation in psychosis.

NOTE Confidence: 0.9333937

00:21:35.910 --> 00:21:38.170 This reduced MAOB supports involvement

NOTE Confidence: 0.9333937

00:21:38.310 --> 00:21:39.930 of astrocytes in glutamatergic

NOTE Confidence: 0.90481627

00:21:40.310 --> 00:21:40.810 processes,

NOTE Confidence: 0.94325864

00:21:41.350 --> 00:21:43.510 including biosynthesis, reuptake, and release,

NOTE Confidence: 0.94325864

00:21:43.510 --> 00:21:44.630 and we can discuss that

NOTE Confidence: 0.94325864

00:21:44.630 --> 00:21:45.750 as well, as well as

NOTE Confidence: 0.94325864

00:21:45.750 --> 00:21:46.650 reduced MAOB,

NOTE Confidence: 0.99970245

00:21:47.350 --> 00:21:49.210 supporting the involvement of astrocytes

NOTE Confidence: 0.9965251

00:21:49.565 --> 00:21:50.545 in energy metabolism

NOTE Confidence: 0.94782686

00:21:51.085 --> 00:21:51.585 alterations

NOTE Confidence: 0.8093808

00:21:52.125 --> 00:21:54.285 also observed in psychosis and

NOTE Confidence: 0.8093808

00:21:54.285 --> 00:21:55.105 I would say,

NOTE Confidence: 0.9801278

00:21:55.565 --> 00:21:57.184 perhaps in cannabis use.

NOTE Confidence: 0.9786047

00:21:58.684 --> 00:21:59.405 So just,

NOTE Confidence: 0.99733347

00:21:59.725 --> 00:22:00.625 very briefly,

NOTE Confidence: 0.8691491

00:22:01.484 --> 00:22:02.304 the complement

NOTE Confidence: 0.9765196

00:22:02.845 --> 00:22:05.184 proteins are involved in mediating

NOTE Confidence: 0.9765196

00:22:05.410 --> 00:22:05.910 microglial

NOTE Confidence: 0.97478646

00:22:06.290 --> 00:22:08.150 engulfment of synaptic material.

NOTE Confidence: 0.9938392

00:22:08.530 --> 00:22:09.810 So it is possible that

NOTE Confidence: 0.9938392

00:22:09.810 --> 00:22:11.650 genetically predicted brain c four

NOTE Confidence: 0.9938392

00:22:11.650 --> 00:22:12.150 a,

NOTE Confidence: 0.99055386

00:22:12.690 --> 00:22:13.830 relates to TSPO,

NOTE Confidence: 0.9150194

00:22:14.450 --> 00:22:16.050 and brain morphology. I'm going

NOTE Confidence: 0.9150194

00:22:16.050 --> 00:22:17.010 to be talking about the

NOTE Confidence: 0.9150194

00:22:17.010 --> 00:22:18.710 brain TSPO only today.

NOTE Confidence: 0.9521421

00:22:19.085 --> 00:22:20.605 So here, in this,

NOTE Confidence: 0.9861499

00:22:21.085 --> 00:22:23.165 study, we looked at, the

NOTE Confidence: 0.9861499

00:22:23.165 --> 00:22:25.565 association between genetically predicted brain

NOTE Confidence: 0.9861499

00:22:25.565 --> 00:22:26.545 c four a,

NOTE Confidence: 0.9963086

00:22:27.325 --> 00:22:27.825 as

NOTE Confidence: 0.8153398

00:22:28.205 --> 00:22:29.085 as well as,

NOTE Confidence: 0.9927395

00:22:29.565 --> 00:22:32.200 TSPO and cannabis use. And

NOTE Confidence: 0.9927395

00:22:32.200 --> 00:22:33.500 based on all the literature

NOTE Confidence: 0.9927395

00:22:33.640 --> 00:22:35.080 up until that until that

NOTE Confidence: 0.9927395

00:22:35.080 --> 00:22:35.580 point,

NOTE Confidence: 0.9393829

00:22:35.960 --> 00:22:36.700 we hypothesize

NOTE Confidence: 0.92824066

00:22:37.160 --> 00:22:37.560 that,

NOTE Confidence: 0.95437896

00:22:38.200 --> 00:22:39.900 c four a, genetically predicted

NOTE Confidence: 0.95862997

00:22:40.200 --> 00:22:41.080 c four a, which is

NOTE Confidence: 0.95862997

00:22:41.080 --> 00:22:42.119 not brain c four a,

NOTE Confidence: 0.95862997

00:22:42.119 --> 00:22:43.960 it's genetically predicted c four

NOTE Confidence: 0.95862997

00:22:43.960 --> 00:22:44.460 a,

NOTE Confidence: 0.9717231

00:22:44.955 --> 00:22:46.815 will be associated with TSPO

NOTE Confidence: 0.9717231

00:22:46.875 --> 00:22:48.335 and, brain morphology,

NOTE Confidence: 0.97746843

00:22:48.715 --> 00:22:50.635 and we also hypothesize that

NOTE Confidence: 0.97746843

00:22:50.635 --> 00:22:51.914 higher c four a in

NOTE Confidence: 0.97746843

00:22:51.914 --> 00:22:52.815 patient populations.

NOTE Confidence: 0.87165815

00:22:54.234 --> 00:22:55.115 And this is,

NOTE Confidence: 0.98285395

00:22:55.835 --> 00:22:57.934 the sample. It's a pretty

NOTE Confidence: 0.98285395

00:22:58.155 --> 00:22:59.890 big sample for a two

NOTE Confidence: 0.98285395

00:22:59.890 --> 00:23:02.210 hour arterial PET scan, with

NOTE Confidence: 0.98285395

00:23:02.210 --> 00:23:03.650 FIFA. As you can see,

NOTE Confidence: 0.98285395

00:23:03.650 --> 00:23:04.310 it includes

NOTE Confidence: 0.99487907

00:23:05.010 --> 00:23:07.330 forty six healthy controls, forty

NOTE Confidence: 0.99487907

00:23:07.330 --> 00:23:09.350 three clinical high risk individuals,

NOTE Confidence: 0.99487907

00:23:09.570 --> 00:23:10.390 and forty

NOTE Confidence: 0.99720454

00:23:11.315 --> 00:23:12.455 participants with,

NOTE Confidence: 0.9903065

00:23:13.315 --> 00:23:14.535 psychotic disorders.

NOTE Confidence: 0.95122707

00:23:15.155 --> 00:23:16.615 These are the mean ages,

NOTE Confidence: 0.9410993

00:23:17.395 --> 00:23:19.255 and and the sex, ratios.

NOTE Confidence: 0.986184

00:23:20.915 --> 00:23:22.195 And you can see here

NOTE Confidence: 0.986184

00:23:22.195 --> 00:23:23.895 of within these cohorts,

NOTE Confidence: 0.95449877

00:23:24.690 --> 00:23:26.289 nine of the forty six

NOTE Confidence: 0.95449877

00:23:26.289 --> 00:23:28.929 were using, tobacco and twenty

NOTE Confidence: 0.95449877

00:23:28.929 --> 00:23:30.869 seven were cannabis users.

NOTE Confidence: 0.9278186

00:23:31.409 --> 00:23:32.869 Here in for the clinical

NOTE Confidence: 0.9278186

00:23:33.010 --> 00:23:34.609 high risk, from this,

NOTE Confidence: 0.93680215

00:23:35.250 --> 00:23:36.149 forty three,

NOTE Confidence: 0.9396871

00:23:36.529 --> 00:23:38.950 eleven were also, using tobacco,

NOTE Confidence: 0.9396871

00:23:39.090 --> 00:23:41.035 and eight were using cannabis.

NOTE Confidence: 0.9830626

00:23:41.655 --> 00:23:42.455 And here,

NOTE Confidence: 0.9994336

00:23:42.934 --> 00:23:43.434 sixteen

NOTE Confidence: 0.9336009

00:23:43.815 --> 00:23:45.755 of the forty first episode

NOTE Confidence: 0.9336009

00:23:45.815 --> 00:23:47.275 psychotic patients were,

NOTE Confidence: 0.9060477

00:23:47.655 --> 00:23:49.434 using tobacco and two,

NOTE Confidence: 0.8926927

00:23:51.015 --> 00:23:51.515 cannabis.

NOTE Confidence: 0.95691586

00:23:54.180 --> 00:23:55.619 So, again, we found the

NOTE Confidence: 0.95691586

00:23:55.619 --> 00:23:57.080 opposite of what we hypothesized.

NOTE Confidence: 0.94619167

00:23:57.380 --> 00:23:58.580 We thought we will find

NOTE Confidence: 0.94619167

00:23:58.580 --> 00:23:59.780 an increase in,

NOTE Confidence: 0.9791654

00:24:00.740 --> 00:24:01.960 schizophrenia patients,

NOTE Confidence: 0.90847015

00:24:02.420 --> 00:24:04.280 of of genetically predicted,

NOTE Confidence: 0.8481075

00:24:05.380 --> 00:24:06.280 c four a,

NOTE Confidence: 0.9555479

00:24:07.015 --> 00:24:08.295 brain c four a, and,

NOTE Confidence: 0.9555479

00:24:08.615 --> 00:24:10.234 we we found no difference

NOTE Confidence: 0.9555479

00:24:10.375 --> 00:24:12.375 between healthy controls and psychotic

NOTE Confidence: 0.9555479

00:24:12.375 --> 00:24:12.875 patients.

NOTE Confidence: 0.925924

00:24:13.335 --> 00:24:14.295 These are first episode of

NOTE Confidence: 0.925924

00:24:14.295 --> 00:24:15.734 psychotic French patients. Not all

NOTE Confidence: 0.925924

00:24:15.734 --> 00:24:16.875 of them have schizophrenia.

NOTE Confidence: 0.9863397

00:24:17.415 --> 00:24:18.615 And in the clinical high

NOTE Confidence: 0.9863397

00:24:18.615 --> 00:24:20.055 risk group, we found a

NOTE Confidence: 0.9863397

00:24:20.055 --> 00:24:21.835 reduction, a significant reduction,

NOTE Confidence: 0.99645245

00:24:22.710 --> 00:24:23.929 and not an increase.

NOTE Confidence: 0.99310327

00:24:24.869 --> 00:24:26.630 However, what we did find

NOTE Confidence: 0.99310327

00:24:26.630 --> 00:24:28.550 is that genetically predicted brain

NOTE Confidence: 0.99310327

00:24:28.550 --> 00:24:29.910 c four a expression was

NOTE Confidence: 0.99310327

00:24:29.910 --> 00:24:30.410 significantly

NOTE Confidence: 0.9960302

00:24:30.869 --> 00:24:32.570 associated across the board,

NOTE Confidence: 0.9668215

00:24:33.030 --> 00:24:34.550 with c four a. So

NOTE Confidence: 0.9668215

00:24:34.550 --> 00:24:36.550 here on all these different

NOTE Confidence: 0.9668215

00:24:36.550 --> 00:24:37.369 brain regions,

NOTE Confidence: 0.8342666

00:24:37.734 --> 00:24:39.355 you've seen the y axis,

NOTE Confidence: 0.8342666

00:24:39.414 --> 00:24:40.554 f eighteen, and

NOTE Confidence: 0.96588844

00:24:41.335 --> 00:24:42.615 on the x axis, you

NOTE Confidence: 0.96588844

00:24:42.615 --> 00:24:44.455 have the genetically predict brain

NOTE Confidence: 0.96588844

00:24:44.455 --> 00:24:45.734 c four a expression that

NOTE Confidence: 0.96588844

00:24:45.734 --> 00:24:46.475 came from,

NOTE Confidence: 0.9598156

00:24:47.255 --> 00:24:48.455 the work from the Broad

NOTE Confidence: 0.9598156

00:24:48.455 --> 00:24:49.595 Institute. We calculated,

NOTE Confidence: 0.91515386

00:24:50.135 --> 00:24:51.195 following their,

NOTE Confidence: 0.7325801

00:24:51.975 --> 00:24:52.475 their

NOTE Confidence: 0.9088125

00:24:52.990 --> 00:24:53.650 their advice.

NOTE Confidence: 0.9929508

00:24:54.590 --> 00:24:56.929 And we report a significant

NOTE Confidence: 0.99580467

00:24:57.470 --> 00:24:59.490 effect of group, a significant

NOTE Confidence: 0.99580467

00:24:59.710 --> 00:25:00.929 effect of sex,

NOTE Confidence: 0.9309775

00:25:01.230 --> 00:25:02.990 and a significant effect of

NOTE Confidence: 0.9309775

00:25:02.990 --> 00:25:04.750 cannabis use. So in other

NOTE Confidence: 0.9309775

00:25:04.750 --> 00:25:06.210 words, there was a significant

NOTE Confidence: 0.95055336

00:25:06.915 --> 00:25:08.595 in other words, males and

NOTE Confidence: 0.95055336

00:25:08.595 --> 00:25:10.615 cannabis users had higher TSPO

NOTE Confidence: 0.95055336

00:25:10.675 --> 00:25:11.955 levels, and there was no

NOTE Confidence: 0.95055336

00:25:11.955 --> 00:25:13.075 difference as I showed you

NOTE Confidence: 0.95055336

00:25:13.075 --> 00:25:13.575 before,

NOTE Confidence: 0.96568143

00:25:14.195 --> 00:25:14.675 between,

NOTE Confidence: 0.999496

00:25:15.155 --> 00:25:16.135 clinical groups.

NOTE Confidence: 0.9925443

00:25:19.730 --> 00:25:21.090 So with this, we moved

NOTE Confidence: 0.9925443

00:25:21.090 --> 00:25:22.149 into the studies,

NOTE Confidence: 0.99242324

00:25:22.609 --> 00:25:23.330 to look into,

NOTE Confidence: 0.71197796

00:25:24.690 --> 00:25:26.629 SYNBEST one, or,

NOTE Confidence: 0.8802654

00:25:28.369 --> 00:25:29.429 SV two a.

NOTE Confidence: 0.97653115

00:25:30.289 --> 00:25:31.490 And, of course, all of

NOTE Confidence: 0.97653115

00:25:31.490 --> 00:25:32.710 you are well,

NOTE Confidence: 0.867813

00:25:34.294 --> 00:25:35.835 they know this very well.

NOTE Confidence: 0.9254868

00:25:36.375 --> 00:25:38.075 Synaptic vesicle glycoprotein

NOTE Confidence: 0.9368279

00:25:38.375 --> 00:25:39.335 two a or c s

NOTE Confidence: 0.9368279

00:25:39.335 --> 00:25:40.294 v two a can be

NOTE Confidence: 0.9368279

00:25:40.294 --> 00:25:41.575 used can be used to

NOTE Confidence: 0.9368279

00:25:41.575 --> 00:25:43.034 quantify synaptic density.

NOTE Confidence: 0.94328773

00:25:43.734 --> 00:25:46.075 It's located in synaptic vesicles

NOTE Confidence: 0.9790032

00:25:46.770 --> 00:25:47.270 and,

NOTE Confidence: 0.9687152

00:25:47.650 --> 00:25:49.590 really, it's important in vesicular

NOTE Confidence: 0.9687152

00:25:49.730 --> 00:25:50.230 processes.

NOTE Confidence: 0.6908277

00:25:50.770 --> 00:25:53.030 It's has an obit ovidis

NOTE Confidence: 0.90068066

00:25:53.650 --> 00:25:54.150 distribution,

NOTE Confidence: 0.9215221

00:25:56.690 --> 00:25:58.150 in the brain and,

NOTE Confidence: 0.9860458

00:25:58.530 --> 00:25:59.430 quite importantly,

NOTE Confidence: 0.89735216

00:26:01.035 --> 00:26:02.015 significant correlation

NOTE Confidence: 0.9604478

00:26:02.475 --> 00:26:03.855 found in many studies,

NOTE Confidence: 0.9892156

00:26:04.395 --> 00:26:05.775 with synaptic markers.

NOTE Confidence: 0.975584

00:26:06.475 --> 00:26:07.535 It highly correlates,

NOTE Confidence: 0.8865595

00:26:07.994 --> 00:26:09.775 with the gold standard synaptophysin

NOTE Confidence: 0.96682036

00:26:10.635 --> 00:26:12.315 in postmortem samples, and this

NOTE Confidence: 0.96682036

00:26:12.315 --> 00:26:13.375 was shown previously.

NOTE Confidence: 0.98938006

00:26:14.490 --> 00:26:15.550 So our study,

NOTE Confidence: 0.9994557

00:26:16.010 --> 00:26:17.530 was done in the context

NOTE Confidence: 0.9994557

00:26:17.530 --> 00:26:19.310 of four previous studies.

NOTE Confidence: 0.9899728

00:26:20.010 --> 00:26:21.230 The first two studies,

NOTE Confidence: 0.98322904

00:26:21.770 --> 00:26:22.270 included,

NOTE Confidence: 0.97183967

00:26:22.890 --> 00:26:24.830 a group of, patients,

NOTE Confidence: 0.9247909

00:26:25.210 --> 00:26:26.190 with schizophrenia,

NOTE Confidence: 0.9449799

00:26:27.025 --> 00:26:28.705 and they were scanned with

NOTE Confidence: 0.9449799

00:26:28.705 --> 00:26:30.804 UCV J, carbon eleven UCV

NOTE Confidence: 0.9449799

00:26:30.945 --> 00:26:32.465 J. They have a longer

NOTE Confidence: 0.9449799

00:26:32.465 --> 00:26:33.984 duration of illness of about

NOTE Confidence: 0.9449799

00:26:33.984 --> 00:26:36.225 seventeen years, both studies, and

NOTE Confidence: 0.9449799

00:26:36.225 --> 00:26:37.684 both studies as well

NOTE Confidence: 0.95437944

00:26:38.065 --> 00:26:40.145 reported a reduction in SV

NOTE Confidence: 0.95437944

00:26:40.145 --> 00:26:42.240 two a, using the outcome

NOTE Confidence: 0.95437944

00:26:42.240 --> 00:26:44.580 measure of, total distribution volume,

NOTE Confidence: 0.9112145

00:26:46.080 --> 00:26:47.460 in different brain regions.

NOTE Confidence: 0.99634075

00:26:48.720 --> 00:26:50.000 There were two studies after

NOTE Confidence: 0.99634075

00:26:50.000 --> 00:26:51.780 that in younger cohorts.

NOTE Confidence: 0.954526

00:26:52.080 --> 00:26:53.200 The first is the study

NOTE Confidence: 0.954526

00:26:53.200 --> 00:26:53.940 by Yoon,

NOTE Confidence: 0.79486614

00:26:54.715 --> 00:26:55.534 only includes

NOTE Confidence: 0.9412545

00:26:55.835 --> 00:26:56.315 nine,

NOTE Confidence: 0.99971956

00:26:56.794 --> 00:26:57.294 participants

NOTE Confidence: 0.9890401

00:26:57.914 --> 00:26:59.674 with only three years of,

NOTE Confidence: 0.9697345

00:27:00.475 --> 00:27:01.534 duration of illness,

NOTE Confidence: 0.984135

00:27:02.394 --> 00:27:03.934 and very odd,

NOTE Confidence: 0.97522515

00:27:04.715 --> 00:27:05.215 ROI,

NOTE Confidence: 0.8913027

00:27:05.674 --> 00:27:06.174 selection.

NOTE Confidence: 0.91717607

00:27:07.009 --> 00:27:08.869 And they report a significant

NOTE Confidence: 0.91717607

00:27:09.009 --> 00:27:10.450 reduction in s v two

NOTE Confidence: 0.91717607

00:27:10.450 --> 00:27:10.950 a,

NOTE Confidence: 0.58541167

00:27:11.970 --> 00:27:12.470 BP,

NOTE Confidence: 0.89457554

00:27:13.409 --> 00:27:14.629 ND in this case.

NOTE Confidence: 0.95924157

00:27:15.330 --> 00:27:16.129 And the,

NOTE Confidence: 0.94725543

00:27:16.690 --> 00:27:18.230 sec the the fourth study,

NOTE Confidence: 0.94725543

00:27:18.450 --> 00:27:19.984 was later published with a

NOTE Confidence: 0.94725543

00:27:19.984 --> 00:27:21.984 larger sample also using carbon

NOTE Confidence: 0.94725543

00:27:21.984 --> 00:27:22.885 eleven UCBJ

NOTE Confidence: 0.8409179

00:27:23.744 --> 00:27:25.825 at smaller or shorter duration

NOTE Confidence: 0.8409179

00:27:25.825 --> 00:27:26.565 of illness,

NOTE Confidence: 0.9986553

00:27:27.424 --> 00:27:27.924 wider

NOTE Confidence: 0.889559

00:27:30.385 --> 00:27:31.924 regions of interest of ROIs.

NOTE Confidence: 0.9770855

00:27:32.330 --> 00:27:33.770 And in this case, there's

NOTE Confidence: 0.9770855

00:27:33.770 --> 00:27:35.150 no significant difference,

NOTE Confidence: 0.9590165

00:27:35.690 --> 00:27:36.190 between,

NOTE Confidence: 0.7377606

00:27:36.570 --> 00:27:38.410 first episodes of psychotics psychotic

NOTE Confidence: 0.7377606

00:27:38.410 --> 00:27:39.390 patients and controls.

NOTE Confidence: 0.90387803

00:27:41.690 --> 00:27:42.490 And in this case, they

NOTE Confidence: 0.90387803

00:27:42.490 --> 00:27:44.170 use both SB to a,

NOTE Confidence: 0.90387803

00:27:44.570 --> 00:27:46.030 the total volume of distribution

NOTE Confidence: 0.90387803

00:27:46.090 --> 00:27:47.130 or VT as well as

NOTE Confidence: 0.90387803

00:27:47.130 --> 00:27:47.955 DVR as outcome

NOTE Confidence: 0.9642184

00:27:50.115 --> 00:27:50.615 measure.

NOTE Confidence: 0.9733939

00:27:50.994 --> 00:27:51.815 So for us,

NOTE Confidence: 0.97581977

00:27:52.274 --> 00:27:53.475 what we wanted to do

NOTE Confidence: 0.97581977

00:27:53.475 --> 00:27:54.294 at the time,

NOTE Confidence: 0.9909583

00:27:54.674 --> 00:27:55.875 is to answer these three

NOTE Confidence: 0.9909583

00:27:55.875 --> 00:27:56.375 questions.

NOTE Confidence: 0.9821306

00:27:56.835 --> 00:27:58.994 Is synaptic density reduced in

NOTE Confidence: 0.9821306

00:27:58.994 --> 00:28:00.755 first episode and in clinical

NOTE Confidence: 0.9821306

00:28:00.755 --> 00:28:01.955 high risk? And this second

NOTE Confidence: 0.9821306

00:28:01.955 --> 00:28:03.075 part was done for the

NOTE Confidence: 0.9821306

00:28:03.075 --> 00:28:03.734 first time.

NOTE Confidence: 0.99263614

00:28:04.050 --> 00:28:05.890 Is synaptic density related to

NOTE Confidence: 0.99263614

00:28:05.890 --> 00:28:06.950 environmental factors

NOTE Confidence: 0.9762021

00:28:07.330 --> 00:28:08.150 or documented

NOTE Confidence: 0.8850799

00:28:08.530 --> 00:28:10.630 environmental factors such as cannabis

NOTE Confidence: 0.8850799

00:28:10.690 --> 00:28:12.370 use, both in Fab and

NOTE Confidence: 0.8850799

00:28:12.370 --> 00:28:12.870 CHR?

NOTE Confidence: 0.97088367

00:28:13.730 --> 00:28:15.030 Does synaptic density

NOTE Confidence: 0.9131435

00:28:15.330 --> 00:28:17.270 relate to grain matter microstructure?

NOTE Confidence: 0.9255841

00:28:17.730 --> 00:28:18.610 And I'm not going to

NOTE Confidence: 0.9255841

00:28:18.610 --> 00:28:20.265 be presenting that, But for

NOTE Confidence: 0.9255841

00:28:20.265 --> 00:28:22.185 that, we used, a special

NOTE Confidence: 0.9255841

00:28:22.185 --> 00:28:23.805 acquisitions called NODI.

NOTE Confidence: 0.9915896

00:28:26.905 --> 00:28:27.405 So

NOTE Confidence: 0.995972

00:28:27.705 --> 00:28:28.845 for image acquisition,

NOTE Confidence: 0.92681515

00:28:29.225 --> 00:28:30.125 we acquired,

NOTE Confidence: 0.6694068

00:28:32.105 --> 00:28:33.645 a ninety minute Synvest,

NOTE Confidence: 0.99671185

00:28:34.265 --> 00:28:35.005 t one

NOTE Confidence: 0.97299325

00:28:35.580 --> 00:28:36.080 scan.

NOTE Confidence: 0.8855609

00:28:36.859 --> 00:28:37.340 We,

NOTE Confidence: 0.9094966

00:28:37.660 --> 00:28:39.660 used the simplified reference tissue

NOTE Confidence: 0.9094966

00:28:39.660 --> 00:28:41.340 model. In this case, we

NOTE Confidence: 0.9094966

00:28:41.340 --> 00:28:42.799 used highly selected

NOTE Confidence: 0.97863835

00:28:43.100 --> 00:28:43.919 white matter,

NOTE Confidence: 0.96983844

00:28:44.860 --> 00:28:45.419 which is,

NOTE Confidence: 0.8570215

00:28:45.980 --> 00:28:47.660 was masked across the whole

NOTE Confidence: 0.8570215

00:28:47.660 --> 00:28:49.200 brain and then look localized,

NOTE Confidence: 0.9614831

00:28:50.125 --> 00:28:51.105 very neatly,

NOTE Confidence: 0.75619143

00:28:51.485 --> 00:28:52.445 in the center of Simul

NOTE Confidence: 0.75619143

00:28:52.445 --> 00:28:52.945 Valley.

NOTE Confidence: 0.74939597

00:28:53.405 --> 00:28:55.505 And, we used Cymbes one

NOTE Confidence: 0.7715095

00:28:56.205 --> 00:28:57.184 binding potential

NOTE Confidence: 0.9080823

00:28:57.565 --> 00:28:58.845 b bp and d. We

NOTE Confidence: 0.9080823

00:28:58.845 --> 00:29:00.125 would have used BT, but

NOTE Confidence: 0.9080823

00:29:00.125 --> 00:29:01.485 at the time, we started

NOTE Confidence: 0.9080823

00:29:01.485 --> 00:29:02.845 this study right when we

NOTE Confidence: 0.9080823

00:29:02.845 --> 00:29:04.445 moved. We did not have

NOTE Confidence: 0.9080823

00:29:04.445 --> 00:29:06.890 the, radio, metabolite lab at

NOTE Confidence: 0.9080823

00:29:06.890 --> 00:29:08.030 the time or the equipment.

NOTE Confidence: 0.9740307

00:29:08.570 --> 00:29:10.010 So we decided to start

NOTE Confidence: 0.9740307

00:29:10.010 --> 00:29:11.290 start this study during the

NOTE Confidence: 0.9740307

00:29:11.290 --> 00:29:12.350 pandemic anyways,

NOTE Confidence: 0.96102166

00:29:13.530 --> 00:29:14.890 and, this is what I'm

NOTE Confidence: 0.96102166

00:29:14.890 --> 00:29:15.850 going to be showing you

NOTE Confidence: 0.96102166

00:29:15.850 --> 00:29:16.730 to do to to you

NOTE Confidence: 0.96102166

00:29:16.730 --> 00:29:17.230 today.

NOTE Confidence: 0.9233421

00:29:17.764 --> 00:29:19.784 We also acquired a naughty,

NOTE Confidence: 0.9602682

00:29:20.644 --> 00:29:21.924 acquisition, which is a special

NOTE Confidence: 0.9602682

00:29:21.924 --> 00:29:22.424 acquisition,

NOTE Confidence: 0.92658526

00:29:23.284 --> 00:29:24.725 and this was presented in

NOTE Confidence: 0.92658526

00:29:24.725 --> 00:29:26.644 ACMB here in December and

NOTE Confidence: 0.92658526

00:29:26.644 --> 00:29:27.945 it's also in the paper.

NOTE Confidence: 0.97688293

00:29:28.725 --> 00:29:30.505 And we also acquire MRI

NOTE Confidence: 0.97688293

00:29:30.565 --> 00:29:32.005 for each participant, and we

NOTE Confidence: 0.97688293

00:29:32.005 --> 00:29:34.000 use this to select the

NOTE Confidence: 0.97688293

00:29:34.000 --> 00:29:35.200 regions of interest in the

NOTE Confidence: 0.97688293

00:29:35.200 --> 00:29:36.320 PET scans as we have

NOTE Confidence: 0.97688293

00:29:36.320 --> 00:29:38.020 done over many, many

NOTE Confidence: 0.99639374

00:29:38.320 --> 00:29:39.220 couple of decades.

NOTE Confidence: 0.948491

00:29:40.720 --> 00:29:42.260 So we wanted to investigate

NOTE Confidence: 0.948491

00:29:42.320 --> 00:29:44.720 whether synaptic density is reduced

NOTE Confidence: 0.948491

00:29:44.720 --> 00:29:46.020 in FEP and CHR,

NOTE Confidence: 0.98714453

00:29:46.414 --> 00:29:47.794 whether there was a relationship

NOTE Confidence: 0.98714453

00:29:47.934 --> 00:29:49.774 with, the severity of psychotic

NOTE Confidence: 0.98714453

00:29:49.774 --> 00:29:50.274 symptoms.

NOTE Confidence: 0.9717922

00:29:50.654 --> 00:29:52.174 We wanted to investigate the

NOTE Confidence: 0.9717922

00:29:52.174 --> 00:29:53.455 role of cannabis use, and

NOTE Confidence: 0.9717922

00:29:53.455 --> 00:29:54.335 for this was the first

NOTE Confidence: 0.9717922

00:29:54.335 --> 00:29:55.534 time as compared to the

NOTE Confidence: 0.9717922

00:29:55.534 --> 00:29:56.595 previous four studies.

NOTE Confidence: 0.9855144

00:29:56.975 --> 00:29:58.174 And, we wanted to look

NOTE Confidence: 0.9855144

00:29:58.174 --> 00:29:58.575 at,

NOTE Confidence: 0.9171789

00:29:59.294 --> 00:30:00.895 gray matter microstructure as I've

NOTE Confidence: 0.9171789

00:30:00.895 --> 00:30:01.715 mentioned previously.

NOTE Confidence: 0.9657503

00:30:03.000 --> 00:30:04.200 So this is the sample.

NOTE Confidence: 0.9657503

00:30:04.440 --> 00:30:05.720 At the time, we are

NOTE Confidence: 0.9657503

00:30:05.720 --> 00:30:06.540 still connecting,

NOTE Confidence: 0.9901078

00:30:07.160 --> 00:30:09.580 individuals under this protocol. Specifically,

NOTE Confidence: 0.9901078

00:30:09.720 --> 00:30:10.760 we are interested in the

NOTE Confidence: 0.9901078

00:30:10.760 --> 00:30:11.260 longitudinal

NOTE Confidence: 0.9304075

00:30:11.640 --> 00:30:12.140 follow-up.

NOTE Confidence: 0.9347322

00:30:12.920 --> 00:30:14.625 And so, this study is

NOTE Confidence: 0.9347322

00:30:14.705 --> 00:30:16.625 still now ongoing, and this

NOTE Confidence: 0.9347322

00:30:16.625 --> 00:30:18.065 is the data presented up

NOTE Confidence: 0.9347322

00:30:18.065 --> 00:30:18.565 until

NOTE Confidence: 0.9595749

00:30:19.745 --> 00:30:20.945 a date in publishing the

NOTE Confidence: 0.9595749

00:30:20.945 --> 00:30:22.325 paper. I can't remember exactly,

NOTE Confidence: 0.9045717

00:30:22.785 --> 00:30:24.625 when we submitted the, the

NOTE Confidence: 0.9045717

00:30:24.625 --> 00:30:25.825 paper. It's in the paper

NOTE Confidence: 0.9045717

00:30:25.825 --> 00:30:27.125 at to what date,

NOTE Confidence: 0.9951843

00:30:28.065 --> 00:30:30.165 the data acquisition was done.

NOTE Confidence: 0.94217306

00:30:31.080 --> 00:30:31.799 But I have to tell

NOTE Confidence: 0.94217306

00:30:31.799 --> 00:30:32.919 you, when we continue the

NOTE Confidence: 0.94217306

00:30:32.919 --> 00:30:33.419 study,

NOTE Confidence: 0.91951877

00:30:33.880 --> 00:30:35.419 now, the latest,

NOTE Confidence: 0.9995596

00:30:36.440 --> 00:30:37.559 work is going to be

NOTE Confidence: 0.9995596

00:30:37.559 --> 00:30:38.059 presented

NOTE Confidence: 0.99079406

00:30:38.360 --> 00:30:39.179 at SOBP

NOTE Confidence: 0.98077786

00:30:39.799 --> 00:30:41.240 in Toronto. We have a

NOTE Confidence: 0.98077786

00:30:41.240 --> 00:30:42.200 little bit of a larger

NOTE Confidence: 0.98077786

00:30:42.200 --> 00:30:43.480 sample, and we we see

NOTE Confidence: 0.98077786

00:30:43.480 --> 00:30:45.000 exactly the same the same

NOTE Confidence: 0.98077786

00:30:45.000 --> 00:30:45.500 results.

NOTE Confidence: 0.994737

00:30:46.355 --> 00:30:46.835 So,

NOTE Confidence: 0.9688458

00:30:47.315 --> 00:30:48.995 what about this sample? It

NOTE Confidence: 0.9688458

00:30:48.995 --> 00:30:51.655 includes sixteen healthy controls, seventeen

NOTE Confidence: 0.9688458

00:30:51.795 --> 00:30:53.555 CHR. These are the first,

NOTE Confidence: 0.96899956

00:30:54.755 --> 00:30:55.955 time we are seeing this,

NOTE Confidence: 0.96899956

00:30:55.955 --> 00:30:57.395 as well as sixteen healthy,

NOTE Confidence: 0.96899956

00:30:57.635 --> 00:30:59.549 first episode psychosis, very young

NOTE Confidence: 0.96899956

00:30:59.549 --> 00:31:00.830 people, twenty one, as you

NOTE Confidence: 0.96899956

00:31:00.830 --> 00:31:01.710 can see here for the

NOTE Confidence: 0.96899956

00:31:01.710 --> 00:31:02.450 high risk.

NOTE Confidence: 0.99823767

00:31:03.309 --> 00:31:04.289 This is BMI

NOTE Confidence: 0.8830134

00:31:04.750 --> 00:31:07.169 as well as, sex, ratio

NOTE Confidence: 0.8830134

00:31:07.230 --> 00:31:08.049 across groups.

NOTE Confidence: 0.9686662

00:31:08.350 --> 00:31:09.470 Some of them were using

NOTE Confidence: 0.9686662

00:31:09.470 --> 00:31:10.690 tobacco, mostly,

NOTE Confidence: 0.984553

00:31:11.070 --> 00:31:12.510 in the clinical high risk

NOTE Confidence: 0.984553

00:31:12.510 --> 00:31:14.144 group, and some of them

NOTE Confidence: 0.984553

00:31:14.144 --> 00:31:16.544 had, documented cannabis use,

NOTE Confidence: 0.91572446

00:31:16.865 --> 00:31:18.625 in urine drug screens. And

NOTE Confidence: 0.91572446

00:31:18.625 --> 00:31:19.505 you as you can see,

NOTE Confidence: 0.91572446

00:31:19.505 --> 00:31:21.424 two seven and five, two

NOTE Confidence: 0.91572446

00:31:21.424 --> 00:31:23.184 of fourteen, seven of ten,

NOTE Confidence: 0.91572446

00:31:23.184 --> 00:31:23.585 and,

NOTE Confidence: 0.9891751

00:31:23.985 --> 00:31:25.284 five of eleven.

NOTE Confidence: 0.93235314

00:31:26.160 --> 00:31:28.400 Or significant difference again in

NOTE Confidence: 0.93235314

00:31:28.400 --> 00:31:29.620 antipsychotic exposure.

NOTE Confidence: 0.87907857

00:31:30.560 --> 00:31:31.620 No no PET,

NOTE Confidence: 0.8832833

00:31:33.040 --> 00:31:35.120 parameters differences between the groups,

NOTE Confidence: 0.8832833

00:31:35.120 --> 00:31:36.160 and these are the,

NOTE Confidence: 0.97068214

00:31:36.800 --> 00:31:37.300 scores,

NOTE Confidence: 0.9269693

00:31:38.240 --> 00:31:39.460 for, psychopathology

NOTE Confidence: 0.9402911

00:31:40.000 --> 00:31:41.600 for the clinical, the clinical

NOTE Confidence: 0.9402911

00:31:41.600 --> 00:31:41.895 groups.

NOTE Confidence: 0.9314954

00:31:42.855 --> 00:31:44.215 And what we found is

NOTE Confidence: 0.9314954

00:31:44.215 --> 00:31:45.355 that synoptic density,

NOTE Confidence: 0.7317689

00:31:45.975 --> 00:31:47.515 SYNBEST one, BPMD

NOTE Confidence: 0.9385361

00:31:47.815 --> 00:31:49.415 is different between groups as

NOTE Confidence: 0.9385361

00:31:49.415 --> 00:31:50.315 you can see here,

NOTE Confidence: 0.93841004

00:31:51.175 --> 00:31:51.655 with,

NOTE Confidence: 0.93223715

00:31:52.215 --> 00:31:52.715 small,

NOTE Confidence: 0.984982

00:31:53.255 --> 00:31:54.060 effect size

NOTE Confidence: 0.9991661

00:31:54.700 --> 00:31:55.820 as compared to the other

NOTE Confidence: 0.9991661

00:31:55.820 --> 00:31:57.200 studies in chronic schizophrenia

NOTE Confidence: 0.9882809

00:31:57.580 --> 00:31:59.040 or long term schizophrenia.

NOTE Confidence: 0.9757621

00:31:59.900 --> 00:32:01.760 And, we also see,

NOTE Confidence: 0.9735755

00:32:02.300 --> 00:32:04.240 significant ROI by group interaction.

NOTE Confidence: 0.9874633

00:32:06.345 --> 00:32:07.625 And this is a table

NOTE Confidence: 0.9874633

00:32:07.625 --> 00:32:08.505 I would like to spend

NOTE Confidence: 0.9874633

00:32:08.505 --> 00:32:09.725 a little bit of time,

NOTE Confidence: 0.956927

00:32:10.745 --> 00:32:12.265 because to me, this is

NOTE Confidence: 0.956927

00:32:12.265 --> 00:32:14.205 the most interesting part of,

NOTE Confidence: 0.99852705

00:32:14.585 --> 00:32:15.785 of what we are starting

NOTE Confidence: 0.99852705

00:32:15.785 --> 00:32:16.424 to see with,

NOTE Confidence: 0.93397117

00:32:17.385 --> 00:32:19.085 s v two a. So

NOTE Confidence: 0.93397117

00:32:19.360 --> 00:32:20.720 we did two two set

NOTE Confidence: 0.93397117

00:32:20.720 --> 00:32:21.460 of analysis.

NOTE Confidence: 0.9805186

00:32:22.399 --> 00:32:23.120 We did,

NOTE Confidence: 0.9295489

00:32:23.760 --> 00:32:25.220 we included all the ROIs

NOTE Confidence: 0.9295489

00:32:25.279 --> 00:32:25.779 here,

NOTE Confidence: 0.9176593

00:32:26.320 --> 00:32:27.600 that I mentioned previously. I

NOTE Confidence: 0.9176593

00:32:27.600 --> 00:32:29.220 just wanna show you prefrontal

NOTE Confidence: 0.9176593

00:32:29.360 --> 00:32:30.500 cortex, ACC,

NOTE Confidence: 0.948866

00:32:30.880 --> 00:32:31.380 hippocampus,

NOTE Confidence: 0.92775226

00:32:31.840 --> 00:32:33.299 and then the striatal,

NOTE Confidence: 0.9998001

00:32:33.919 --> 00:32:34.419 subdivisions

NOTE Confidence: 0.99706

00:32:35.044 --> 00:32:36.505 based on the functional subdivisions,

NOTE Confidence: 0.99706

00:32:36.645 --> 00:32:37.385 the AST,

NOTE Confidence: 0.9560315

00:32:37.924 --> 00:32:39.225 SMST, and LST.

NOTE Confidence: 0.9860814

00:32:40.085 --> 00:32:42.184 And, this is including all,

NOTE Confidence: 0.9948697

00:32:42.725 --> 00:32:44.885 cortical and subcortical regions. As

NOTE Confidence: 0.9948697

00:32:44.885 --> 00:32:45.784 you can see,

NOTE Confidence: 0.9842568

00:32:46.325 --> 00:32:47.445 this is the model fit

NOTE Confidence: 0.9842568

00:32:47.445 --> 00:32:48.885 for the parameters, and this

NOTE Confidence: 0.9842568

00:32:48.885 --> 00:32:49.845 is the one with no

NOTE Confidence: 0.9842568

00:32:49.845 --> 00:32:50.345 covariates,

NOTE Confidence: 0.9793313

00:32:50.890 --> 00:32:52.250 which is similar to what

NOTE Confidence: 0.9793313

00:32:52.250 --> 00:32:54.429 has been presented before. Although,

NOTE Confidence: 0.97389317

00:32:55.929 --> 00:32:57.530 in reality, what has been

NOTE Confidence: 0.97389317

00:32:57.530 --> 00:32:59.690 presented before has only been

NOTE Confidence: 0.97389317

00:32:59.690 --> 00:33:01.230 this model here where,

NOTE Confidence: 0.9967602

00:33:02.490 --> 00:33:04.590 only cortical regions are investigated.

NOTE Confidence: 0.95208395

00:33:05.535 --> 00:33:06.655 And in this case, you

NOTE Confidence: 0.95208395

00:33:06.655 --> 00:33:07.855 can see there is a

NOTE Confidence: 0.95208395

00:33:07.855 --> 00:33:09.715 drop of almost, half

NOTE Confidence: 0.96364945

00:33:10.095 --> 00:33:11.795 of the model fit parameters.

NOTE Confidence: 0.96364945

00:33:11.855 --> 00:33:13.055 And I find this quite

NOTE Confidence: 0.96364945

00:33:13.055 --> 00:33:14.995 important because it suggests that

NOTE Confidence: 0.96364945

00:33:15.135 --> 00:33:16.115 in many ways,

NOTE Confidence: 0.9312753

00:33:16.415 --> 00:33:17.935 we are better able to

NOTE Confidence: 0.9312753

00:33:17.935 --> 00:33:19.295 quantify SV two a in

NOTE Confidence: 0.9312753

00:33:19.295 --> 00:33:19.795 cortex,

NOTE Confidence: 0.86551875

00:33:20.669 --> 00:33:21.809 versus in striatum,

NOTE Confidence: 0.9692616

00:33:22.190 --> 00:33:22.990 as you can see by

NOTE Confidence: 0.9692616

00:33:23.070 --> 00:33:24.029 as I've said, by the

NOTE Confidence: 0.9692616

00:33:24.029 --> 00:33:25.250 drop in the model fit.

NOTE Confidence: 0.9840538

00:33:25.870 --> 00:33:27.149 So these are the effect

NOTE Confidence: 0.9840538

00:33:27.149 --> 00:33:28.750 of group when we include

NOTE Confidence: 0.9840538

00:33:28.750 --> 00:33:29.570 different covariates

NOTE Confidence: 0.9187757

00:33:30.269 --> 00:33:32.110 here and here, and these

NOTE Confidence: 0.9187757

00:33:32.110 --> 00:33:32.909 are the,

NOTE Confidence: 0.9952513

00:33:33.725 --> 00:33:35.105 the effects of the covariates

NOTE Confidence: 0.9995012

00:33:35.405 --> 00:33:35.905 themselves.

NOTE Confidence: 0.9169019

00:33:37.245 --> 00:33:38.285 So when are we looking

NOTE Confidence: 0.9169019

00:33:38.285 --> 00:33:39.725 to this here? This is

NOTE Confidence: 0.9169019

00:33:39.725 --> 00:33:41.185 what has been done previously.

NOTE Confidence: 0.940271

00:33:42.045 --> 00:33:44.305 This is, when, no covariates

NOTE Confidence: 0.940271

00:33:44.445 --> 00:33:45.985 are included in the analysis.

NOTE Confidence: 0.92619765

00:33:46.480 --> 00:33:47.940 We can see a significant

NOTE Confidence: 0.92619765

00:33:48.000 --> 00:33:49.200 group effect in terms of

NOTE Confidence: 0.92619765

00:33:49.200 --> 00:33:51.039 the groups between healthy fat

NOTE Confidence: 0.92619765

00:33:51.039 --> 00:33:51.539 and,

NOTE Confidence: 0.9352476

00:33:52.480 --> 00:33:53.940 and first episode psychosis.

NOTE Confidence: 0.96782655

00:33:54.559 --> 00:33:55.539 Adding antipsychotic,

NOTE Confidence: 0.95989424

00:33:56.320 --> 00:33:58.019 to the model, reduces,

NOTE Confidence: 0.9465112

00:33:58.880 --> 00:34:00.080 or reduces the effect size

NOTE Confidence: 0.9465112

00:34:00.080 --> 00:34:00.899 and the significance.

NOTE Confidence: 0.9849993

00:34:01.934 --> 00:34:02.995 However, antipsychotics

NOTE Confidence: 0.9723603

00:34:03.534 --> 00:34:04.815 do not have an effect

NOTE Confidence: 0.9723603

00:34:04.815 --> 00:34:06.095 on SV two a, and

NOTE Confidence: 0.9723603

00:34:06.095 --> 00:34:07.375 this is a replication of

NOTE Confidence: 0.9723603

00:34:07.375 --> 00:34:09.135 previous findings. So this can

NOTE Confidence: 0.9723603

00:34:09.135 --> 00:34:10.175 be a proxy of,

NOTE Confidence: 0.9991341

00:34:10.895 --> 00:34:11.875 some other measure.

NOTE Confidence: 0.95208436

00:34:12.255 --> 00:34:13.855 We started to explore these

NOTE Confidence: 0.95208436

00:34:13.855 --> 00:34:15.315 other measures. We look at,

NOTE Confidence: 0.9015996

00:34:15.775 --> 00:34:16.275 age,

NOTE Confidence: 0.97949237

00:34:16.610 --> 00:34:18.230 group effect is still present,

NOTE Confidence: 0.92305964

00:34:18.690 --> 00:34:20.790 no effect on SV two

NOTE Confidence: 0.89356685

00:34:21.250 --> 00:34:22.070 a, sex.

NOTE Confidence: 0.9176502

00:34:23.810 --> 00:34:25.510 Again, no effect on group,

NOTE Confidence: 0.9176502

00:34:25.570 --> 00:34:26.770 no effect on SV two

NOTE Confidence: 0.9176502

00:34:26.770 --> 00:34:27.270 a.

NOTE Confidence: 0.9956101

00:34:28.545 --> 00:34:29.505 When I say no effect

NOTE Confidence: 0.9956101

00:34:29.505 --> 00:34:30.464 of of group, what I

NOTE Confidence: 0.9956101

00:34:30.464 --> 00:34:31.265 mean is that the group

NOTE Confidence: 0.9956101

00:34:31.265 --> 00:34:32.165 is still significant

NOTE Confidence: 0.9879033

00:34:32.704 --> 00:34:34.244 even when adding this covariate.

NOTE Confidence: 0.9750827

00:34:34.785 --> 00:34:35.765 Same with BMI.

NOTE Confidence: 0.9912955

00:34:37.424 --> 00:34:39.184 Again, no effect on the

NOTE Confidence: 0.9912955

00:34:39.184 --> 00:34:40.165 s b two a.

NOTE Confidence: 0.948438

00:34:40.944 --> 00:34:42.325 Nicotine and cannabis,

NOTE Confidence: 0.96670175

00:34:42.704 --> 00:34:44.100 you can see there is

NOTE Confidence: 0.96670175

00:34:44.100 --> 00:34:45.880 no change in the group

NOTE Confidence: 0.96670175

00:34:46.020 --> 00:34:46.520 differences,

NOTE Confidence: 0.99550986

00:34:47.460 --> 00:34:47.960 and,

NOTE Confidence: 0.98230165

00:34:48.580 --> 00:34:49.780 no effect on s v

NOTE Confidence: 0.98230165

00:34:49.780 --> 00:34:51.540 two a either in cortical

NOTE Confidence: 0.98230165

00:34:51.540 --> 00:34:52.040 regions.

NOTE Confidence: 0.8770444

00:34:52.500 --> 00:34:53.860 When we look into the

NOTE Confidence: 0.8770444

00:34:53.860 --> 00:34:55.320 whole brain, and this includes

NOTE Confidence: 0.8770444

00:34:55.540 --> 00:34:57.300 cortical regions and perhaps in

NOTE Confidence: 0.8770444

00:34:57.300 --> 00:34:59.085 order for this presentation, I,

NOTE Confidence: 0.90795964

00:34:59.645 --> 00:35:00.945 and no one asked actually,

NOTE Confidence: 0.90795964

00:35:01.244 --> 00:35:02.445 when we published the paper,

NOTE Confidence: 0.90795964

00:35:02.445 --> 00:35:03.825 what happens only in estuarial

NOTE Confidence: 0.90795964

00:35:03.885 --> 00:35:04.385 regions?

NOTE Confidence: 0.9531125

00:35:04.685 --> 00:35:05.405 I think this would be

NOTE Confidence: 0.9531125

00:35:05.405 --> 00:35:06.364 a good question now that

NOTE Confidence: 0.9531125

00:35:06.364 --> 00:35:07.405 I think about this. But,

NOTE Confidence: 0.9531125

00:35:07.405 --> 00:35:07.905 anyways,

NOTE Confidence: 0.96057504

00:35:08.285 --> 00:35:09.185 here you see,

NOTE Confidence: 0.980921

00:35:09.724 --> 00:35:11.905 the group effects. They're unaltered,

NOTE Confidence: 0.98435223

00:35:12.525 --> 00:35:14.224 when adding different covariates

NOTE Confidence: 0.928016

00:35:14.690 --> 00:35:16.290 except when adding nicotine and

NOTE Confidence: 0.928016

00:35:16.290 --> 00:35:16.790 cannabis.

NOTE Confidence: 0.8997737

00:35:17.650 --> 00:35:19.410 And that likely, it's,

NOTE Confidence: 0.99411684

00:35:19.890 --> 00:35:21.410 potentially driven by,

NOTE Confidence: 0.85547477

00:35:22.050 --> 00:35:22.550 estriatal

NOTE Confidence: 0.9965598

00:35:23.330 --> 00:35:23.830 effects

NOTE Confidence: 0.8700779

00:35:24.210 --> 00:35:25.570 of cannabis on s b

NOTE Confidence: 0.8700779

00:35:25.570 --> 00:35:26.230 two a,

NOTE Confidence: 0.9888663

00:35:26.785 --> 00:35:27.905 which is here. You can

NOTE Confidence: 0.9888663

00:35:27.905 --> 00:35:29.025 see it. It's the only

NOTE Confidence: 0.9888663

00:35:29.025 --> 00:35:30.385 one that's significant in terms

NOTE Confidence: 0.9888663

00:35:30.385 --> 00:35:31.605 of the effect of covariates

NOTE Confidence: 0.9888663

00:35:31.665 --> 00:35:32.785 on the outcome measure, which

NOTE Confidence: 0.9888663

00:35:32.785 --> 00:35:34.005 is SV two a.

NOTE Confidence: 0.96994585

00:35:35.265 --> 00:35:36.705 To me, also, what was

NOTE Confidence: 0.96994585

00:35:36.705 --> 00:35:37.844 really, really interesting

NOTE Confidence: 0.9341908

00:35:38.305 --> 00:35:39.425 is that the there was

NOTE Confidence: 0.9341908

00:35:39.425 --> 00:35:41.700 a significant association between negative

NOTE Confidence: 0.9341908

00:35:41.780 --> 00:35:43.239 symptoms and synaptic density,

NOTE Confidence: 0.90925825

00:35:43.780 --> 00:35:45.140 and we saw that. And

NOTE Confidence: 0.90925825

00:35:45.140 --> 00:35:45.859 here you can see in

NOTE Confidence: 0.90925825

00:35:45.859 --> 00:35:46.980 the y axis, you have

NOTE Confidence: 0.90925825

00:35:46.980 --> 00:35:47.780 SV to a. And on

NOTE Confidence: 0.90925825

00:35:47.780 --> 00:35:48.739 the x axis, you have

NOTE Confidence: 0.90925825

00:35:48.739 --> 00:35:50.440 the PANS negative scores

NOTE Confidence: 0.92484546

00:35:50.739 --> 00:35:52.099 and you have the SANS

NOTE Confidence: 0.92484546

00:35:52.099 --> 00:35:54.260 scores. This was replicated with

NOTE Confidence: 0.92484546

00:35:54.260 --> 00:35:55.640 two different measures.

NOTE Confidence: 0.95668936

00:35:56.715 --> 00:35:59.114 And indeed, also, we found

NOTE Confidence: 0.95668936

00:35:59.114 --> 00:36:00.235 the same when looking at

NOTE Confidence: 0.95668936

00:36:00.235 --> 00:36:02.075 the SOPS negative scores in

NOTE Confidence: 0.95668936

00:36:02.075 --> 00:36:03.775 the clinical high risk group.

NOTE Confidence: 0.99962616

00:36:04.075 --> 00:36:04.735 To me,

NOTE Confidence: 0.9910273

00:36:05.035 --> 00:36:05.535 this

NOTE Confidence: 0.7380922

00:36:05.835 --> 00:36:06.335 suggests

NOTE Confidence: 0.9537588

00:36:06.875 --> 00:36:08.095 that there might be,

NOTE Confidence: 0.9386254

00:36:08.555 --> 00:36:10.075 really an effect of synaptic

NOTE Confidence: 0.9386254

00:36:10.075 --> 00:36:10.575 density,

NOTE Confidence: 0.9735968

00:36:11.280 --> 00:36:12.880 of negative symptoms or synaptic

NOTE Confidence: 0.9735968

00:36:12.880 --> 00:36:13.380 negative

NOTE Confidence: 0.6987611

00:36:13.760 --> 00:36:15.540 of on negative symptoms

NOTE Confidence: 0.61608016

00:36:16.000 --> 00:36:17.140 or rather way around,

NOTE Confidence: 0.9820501

00:36:18.400 --> 00:36:20.320 but clearly shows across three

NOTE Confidence: 0.9820501

00:36:20.320 --> 00:36:22.160 different scales, that this may

NOTE Confidence: 0.9820501

00:36:22.160 --> 00:36:22.900 be related.

NOTE Confidence: 0.99380416

00:36:23.214 --> 00:36:24.175 And we are now,

NOTE Confidence: 0.9387955

00:36:24.494 --> 00:36:25.535 in in the work that

NOTE Confidence: 0.9387955

00:36:25.535 --> 00:36:26.655 we're going to be presenting

NOTE Confidence: 0.9387955

00:36:26.655 --> 00:36:27.395 in SOBP,

NOTE Confidence: 0.9885564

00:36:28.335 --> 00:36:30.755 trying to explore other facets,

NOTE Confidence: 0.9640941

00:36:31.214 --> 00:36:32.594 of these, relationships.

NOTE Confidence: 0.973974

00:36:34.335 --> 00:36:35.934 So in summary, we showed

NOTE Confidence: 0.973974

00:36:35.934 --> 00:36:37.620 lower synaptic density in FEP

NOTE Confidence: 0.973974

00:36:37.700 --> 00:36:39.300 and CHR with a significant

NOTE Confidence: 0.973974

00:36:39.300 --> 00:36:40.280 effect of cannabis.

NOTE Confidence: 0.9597861

00:36:41.460 --> 00:36:43.220 PHEP cohorts, mean duration of

NOTE Confidence: 0.9597861

00:36:43.220 --> 00:36:44.900 illness in our study was,

NOTE Confidence: 0.9597861

00:36:45.220 --> 00:36:47.060 lower than what or shorter

NOTE Confidence: 0.9597861

00:36:47.060 --> 00:36:48.340 with from what has been

NOTE Confidence: 0.9597861

00:36:48.340 --> 00:36:49.780 shown previously. In ours, it's

NOTE Confidence: 0.9597861

00:36:49.780 --> 00:36:50.900 less than one year versus

NOTE Confidence: 0.9597861

00:36:50.900 --> 00:36:52.020 three years or two point

NOTE Confidence: 0.9597861

00:36:52.020 --> 00:36:52.520 seven.

NOTE Confidence: 0.998293

00:36:53.165 --> 00:36:54.225 The other study,

NOTE Confidence: 0.99320614

00:36:54.605 --> 00:36:55.425 we showed,

NOTE Confidence: 0.9558624

00:36:56.205 --> 00:36:57.484 for the first time evidence

NOTE Confidence: 0.9558624

00:36:57.484 --> 00:36:58.385 of alterations,

NOTE Confidence: 0.98311365

00:36:58.925 --> 00:37:00.305 in the CHR state

NOTE Confidence: 0.87707406

00:37:00.765 --> 00:37:02.465 as well as significant associations

NOTE Confidence: 0.87707406

00:37:02.605 --> 00:37:04.125 between synaptic and neck negative

NOTE Confidence: 0.87707406

00:37:04.364 --> 00:37:06.305 synaptic density and negative symptoms

NOTE Confidence: 0.87707406

00:37:06.364 --> 00:37:08.065 across, across the board.

NOTE Confidence: 0.9559164

00:37:09.359 --> 00:37:10.559 So SV two a may

NOTE Confidence: 0.9559164

00:37:10.559 --> 00:37:12.180 serve as a molecular target

NOTE Confidence: 0.9559164

00:37:12.239 --> 00:37:14.260 in the, in intervention trials

NOTE Confidence: 0.9559164

00:37:14.319 --> 00:37:16.260 in CHR and FEP, especially,

NOTE Confidence: 0.99816895

00:37:16.719 --> 00:37:17.859 for negative symptoms,

NOTE Confidence: 0.9997277

00:37:18.160 --> 00:37:18.739 I think.

NOTE Confidence: 0.9990222

00:37:19.200 --> 00:37:20.099 And with this,

NOTE Confidence: 0.8032317

00:37:21.525 --> 00:37:23.864 again, always recruiting postdocs,

NOTE Confidence: 0.8024595

00:37:24.405 --> 00:37:24.905 and,

NOTE Confidence: 0.9780443

00:37:26.325 --> 00:37:27.204 none of this can be

NOTE Confidence: 0.9780443

00:37:27.204 --> 00:37:28.424 done with a million,

NOTE Confidence: 0.9225039

00:37:28.885 --> 00:37:29.385 people,

NOTE Confidence: 0.9827936

00:37:29.765 --> 00:37:31.605 really working together. And thank

NOTE Confidence: 0.9827936

00:37:31.605 --> 00:37:32.105 you

NOTE Confidence: 0.96641004

00:37:33.364 --> 00:37:34.964 for listening, and happy to

NOTE Confidence: 0.96641004

00:37:34.964 --> 00:37:36.025 answer any questions.

NOTE Confidence: 0.96457875

00:37:40.180 --> 00:37:42.260 So thank you, Romina for,

NOTE Confidence: 0.96457875

00:37:42.579 --> 00:37:43.559 a great presentation.

NOTE Confidence: 0.99147666

00:37:44.420 --> 00:37:45.539 What I I'm going to

NOTE Confidence: 0.99147666

00:37:45.539 --> 00:37:46.280 ask you,

NOTE Confidence: 0.9993969

00:37:46.739 --> 00:37:47.239 is

NOTE Confidence: 0.93317753

00:37:48.420 --> 00:37:49.559 given that this,

NOTE Confidence: 0.98055583

00:37:50.815 --> 00:37:52.094 our center is focused on

NOTE Confidence: 0.98055583

00:37:52.094 --> 00:37:52.594 cannabis,

NOTE Confidence: 0.99897987

00:37:53.455 --> 00:37:54.335 a lot of what you

NOTE Confidence: 0.99897987

00:37:54.335 --> 00:37:54.835 presented

NOTE Confidence: 0.8592603

00:37:55.215 --> 00:37:55.715 was,

NOTE Confidence: 0.999413

00:37:56.735 --> 00:37:57.235 about

NOTE Confidence: 0.89495075

00:37:57.695 --> 00:37:58.195 psychosis,

NOTE Confidence: 0.92951256

00:37:58.895 --> 00:38:00.735 clinically high risk first episode

NOTE Confidence: 0.92951256

00:38:00.735 --> 00:38:02.815 psychosis and cannabis. Can you

NOTE Confidence: 0.92951256

00:38:02.815 --> 00:38:03.315 distill

NOTE Confidence: 0.9715956

00:38:03.614 --> 00:38:04.355 and crystallize

NOTE Confidence: 0.98929864

00:38:05.640 --> 00:38:06.859 all what you presented

NOTE Confidence: 0.9863119

00:38:07.160 --> 00:38:09.319 that's related to cannabis per

NOTE Confidence: 0.9863119

00:38:09.319 --> 00:38:09.819 se?

NOTE Confidence: 0.9860649

00:38:10.760 --> 00:38:12.039 Right. Yeah. This is an

NOTE Confidence: 0.9860649

00:38:12.039 --> 00:38:13.880 excellent question. So the the

NOTE Confidence: 0.9860649

00:38:13.880 --> 00:38:15.319 first study, the study that

NOTE Confidence: 0.9860649

00:38:15.319 --> 00:38:16.039 we've done,

NOTE Confidence: 0.9809779

00:38:17.239 --> 00:38:19.079 on cannabis users, this one

NOTE Confidence: 0.9809779

00:38:19.079 --> 00:38:20.815 here, This is, regular

NOTE Confidence: 0.9859948

00:38:21.355 --> 00:38:23.114 it's only cannabis users and

NOTE Confidence: 0.9859948

00:38:23.114 --> 00:38:24.174 cannabis use disorder.

NOTE Confidence: 0.9914936

00:38:24.635 --> 00:38:25.835 This is these are not

NOTE Confidence: 0.9914936

00:38:25.835 --> 00:38:27.355 psychotic patients. These are only

NOTE Confidence: 0.9914936

00:38:27.355 --> 00:38:28.954 cannabis users and cannabis use

NOTE Confidence: 0.9914936

00:38:28.954 --> 00:38:29.934 disorder patients.

NOTE Confidence: 0.9543712

00:38:31.610 --> 00:38:33.210 And in this case, we

NOTE Confidence: 0.9543712

00:38:33.210 --> 00:38:34.750 found an increase in TSPO.

NOTE Confidence: 0.9543712

00:38:34.969 --> 00:38:36.830 This is specifically about cannabis

NOTE Confidence: 0.9543712

00:38:36.890 --> 00:38:38.910 use. No, no psychotic,

NOTE Confidence: 0.99483764

00:38:39.690 --> 00:38:41.790 differences. The MAOB study

NOTE Confidence: 0.977021

00:38:42.250 --> 00:38:44.114 in cannabis use disorder, so

NOTE Confidence: 0.977021

00:38:44.275 --> 00:38:45.795 the second study I presented

NOTE Confidence: 0.977021

00:38:45.795 --> 00:38:46.695 here with MAOB,

NOTE Confidence: 0.9994852

00:38:47.075 --> 00:38:47.975 it's a combination

NOTE Confidence: 0.9865149

00:38:48.435 --> 00:38:48.915 of,

NOTE Confidence: 0.9744848

00:38:49.635 --> 00:38:51.094 cannabis use in patients.

NOTE Confidence: 0.9959074

00:38:51.955 --> 00:38:53.635 But the the study on

NOTE Confidence: 0.9959074

00:38:53.635 --> 00:38:55.975 MAOB and cannabis use disorder,

NOTE Confidence: 0.99944043

00:38:56.515 --> 00:38:58.035 we are finishing up right

NOTE Confidence: 0.99944043

00:38:58.035 --> 00:38:58.530 now.

NOTE Confidence: 0.9776683

00:38:59.730 --> 00:38:59.890 So,

NOTE Confidence: 0.9821542

00:39:00.610 --> 00:39:02.230 this is the critical question.

NOTE Confidence: 0.9821542

00:39:02.370 --> 00:39:03.730 What happens in cannabis use

NOTE Confidence: 0.9821542

00:39:03.730 --> 00:39:05.250 disorder and in cannabis users?

NOTE Confidence: 0.9821542

00:39:05.250 --> 00:39:06.070 So we are,

NOTE Confidence: 0.9840169

00:39:06.530 --> 00:39:08.930 we've done already about maybe

NOTE Confidence: 0.9840169

00:39:08.930 --> 00:39:10.070 fifteen subjects

NOTE Confidence: 0.91228414

00:39:11.715 --> 00:39:12.995 here, and we've scanned them

NOTE Confidence: 0.91228414

00:39:12.995 --> 00:39:14.455 with SL twenty five,

NOTE Confidence: 0.9115343

00:39:15.395 --> 00:39:16.595 the same protocol that you

NOTE Confidence: 0.9115343

00:39:16.595 --> 00:39:17.255 see here.

NOTE Confidence: 0.97214466

00:39:17.875 --> 00:39:19.475 And now we are, we

NOTE Confidence: 0.97214466

00:39:19.475 --> 00:39:19.975 are

NOTE Confidence: 0.9154288

00:39:20.595 --> 00:39:21.955 finalizing the study and we

NOTE Confidence: 0.9154288

00:39:21.955 --> 00:39:23.255 hopefully will be presenting,

NOTE Confidence: 0.99916315

00:39:23.555 --> 00:39:24.535 the data soon.

NOTE Confidence: 0.9579264

00:39:25.650 --> 00:39:26.849 And for SV two a

NOTE Confidence: 0.9579264

00:39:26.849 --> 00:39:28.609 and cannabis use, that study

NOTE Confidence: 0.9579264

00:39:28.609 --> 00:39:29.569 was done by you, so

NOTE Confidence: 0.9579264

00:39:29.569 --> 00:39:30.290 there was no point in

NOTE Confidence: 0.9579264

00:39:30.290 --> 00:39:31.270 doing it again.

NOTE Confidence: 0.99376404

00:39:35.410 --> 00:39:37.250 Any specific questions for,

NOTE Confidence: 0.9964602

00:39:37.730 --> 00:39:38.390 for Romina?

NOTE Confidence: 0.9888282

00:39:43.244 --> 00:39:44.465 May I ask a question?

NOTE Confidence: 0.9038598

00:39:45.005 --> 00:39:45.744 Hi, Romina.

NOTE Confidence: 0.9505308

00:39:47.085 --> 00:39:48.445 Thank you, Garrett. This was

NOTE Confidence: 0.9505308

00:39:48.445 --> 00:39:49.805 really great presentation. Thank you

NOTE Confidence: 0.9505308

00:39:49.805 --> 00:39:50.445 so much.

NOTE Confidence: 0.9156165

00:39:51.325 --> 00:39:52.364 I just had a question

NOTE Confidence: 0.9156165

00:39:52.364 --> 00:39:53.265 about TSPO,

NOTE Confidence: 0.9944387

00:39:54.020 --> 00:39:55.380 and you mentioned that,

NOTE Confidence: 0.9800585

00:39:55.780 --> 00:39:57.859 it was increased in cannabis

NOTE Confidence: 0.9800585

00:39:57.859 --> 00:39:59.080 users. It was the higher

NOTE Confidence: 0.9800585

00:39:59.380 --> 00:40:00.920 levels in cannabis users.

NOTE Confidence: 0.9635139

00:40:01.300 --> 00:40:02.900 How do I interpret this

NOTE Confidence: 0.9635139

00:40:02.900 --> 00:40:04.260 finding? Like, what does that

NOTE Confidence: 0.9635139

00:40:04.260 --> 00:40:04.760 mean?

NOTE Confidence: 0.9462526

00:40:05.955 --> 00:40:07.875 So I'm I was surprised

NOTE Confidence: 0.9462526

00:40:07.875 --> 00:40:08.755 when we saw that. I

NOTE Confidence: 0.9462526

00:40:08.755 --> 00:40:10.114 was expecting the opposite. We

NOTE Confidence: 0.9462526

00:40:10.114 --> 00:40:11.495 hypothesized the opposite.

NOTE Confidence: 0.9962458

00:40:12.195 --> 00:40:12.995 It was really

NOTE Confidence: 0.9642355

00:40:13.875 --> 00:40:15.155 it was clear. It was,

NOTE Confidence: 0.9642355

00:40:15.155 --> 00:40:16.215 like, to me,

NOTE Confidence: 0.950706

00:40:16.515 --> 00:40:17.255 I remember,

NOTE Confidence: 0.952661

00:40:18.130 --> 00:40:19.170 it had happened to me

NOTE Confidence: 0.952661

00:40:19.170 --> 00:40:20.210 before when I was looking

NOTE Confidence: 0.952661

00:40:20.210 --> 00:40:21.910 at dopamine and was dopamine

NOTE Confidence: 0.952661

00:40:22.050 --> 00:40:23.650 function, and I thought we

NOTE Confidence: 0.952661

00:40:23.650 --> 00:40:24.310 would find

NOTE Confidence: 0.67606187

00:40:24.850 --> 00:40:25.350 increase,

NOTE Confidence: 0.967711

00:40:25.810 --> 00:40:27.650 dopamine release, and we found

NOTE Confidence: 0.967711

00:40:27.650 --> 00:40:28.310 the opposite.

NOTE Confidence: 0.92045516

00:40:29.570 --> 00:40:30.935 So, it happens,

NOTE Confidence: 0.98843277

00:40:31.795 --> 00:40:33.395 that, we see the opposite.

NOTE Confidence: 0.98843277

00:40:33.395 --> 00:40:34.114 So in this case, what

NOTE Confidence: 0.98843277

00:40:34.114 --> 00:40:35.315 does it mean? So it

NOTE Confidence: 0.98843277

00:40:35.315 --> 00:40:36.355 means that we don't really

NOTE Confidence: 0.98843277

00:40:36.355 --> 00:40:37.395 understand what cannabis,

NOTE Confidence: 0.9665987

00:40:37.795 --> 00:40:39.415 use does in the brain.

NOTE Confidence: 0.9665987

00:40:39.475 --> 00:40:40.835 That that to me what

NOTE Confidence: 0.9665987

00:40:40.835 --> 00:40:42.055 it is what it means.

NOTE Confidence: 0.9570906

00:40:42.540 --> 00:40:43.739 There are some newer studies

NOTE Confidence: 0.9570906

00:40:43.739 --> 00:40:45.100 which are starting to suggest

NOTE Confidence: 0.9570906

00:40:45.100 --> 00:40:46.940 that, indeed, cannabis use may

NOTE Confidence: 0.9570906

00:40:46.940 --> 00:40:48.080 be pro inflammatory.

NOTE Confidence: 0.9905646

00:40:48.620 --> 00:40:50.060 And in my view, the

NOTE Confidence: 0.9905646

00:40:50.060 --> 00:40:51.260 fact that the fact that

NOTE Confidence: 0.9905646

00:40:51.260 --> 00:40:52.320 cannabis use

NOTE Confidence: 0.9855714

00:40:52.780 --> 00:40:53.440 has been,

NOTE Confidence: 0.99732244

00:40:53.900 --> 00:40:56.535 associated with increased stress levels,

NOTE Confidence: 0.96524173

00:40:57.395 --> 00:40:59.335 as well as, mood disorders,

NOTE Confidence: 0.99647677

00:40:59.955 --> 00:41:02.215 in mostly clinical and epidemiological

NOTE Confidence: 0.9977062

00:41:02.594 --> 00:41:03.094 studies

NOTE Confidence: 0.88596016

00:41:03.635 --> 00:41:05.395 suggest that, at least for

NOTE Confidence: 0.88596016

00:41:05.395 --> 00:41:06.295 some people,

NOTE Confidence: 0.94377923

00:41:07.475 --> 00:41:09.150 there is there an interaction

NOTE Confidence: 0.94377923

00:41:09.549 --> 00:41:10.910 between what we used to

NOTE Confidence: 0.94377923

00:41:10.910 --> 00:41:12.049 call neuroinflammation,

NOTE Confidence: 0.955675

00:41:13.549 --> 00:41:14.609 cannabis use,

NOTE Confidence: 0.8928709

00:41:14.910 --> 00:41:16.849 and likely depression and suicide

NOTE Confidence: 0.9560901

00:41:17.150 --> 00:41:17.950 depression and,

NOTE Confidence: 0.9520466

00:41:18.430 --> 00:41:20.049 depression and, anxiety,

NOTE Confidence: 0.98606753

00:41:21.390 --> 00:41:22.450 which is why,

NOTE Confidence: 0.9935175

00:41:22.910 --> 00:41:24.555 I wanted to highlight this

NOTE Confidence: 0.9935175

00:41:24.875 --> 00:41:26.015 relationship between,

NOTE Confidence: 0.89066195

00:41:27.755 --> 00:41:28.255 TSPO

NOTE Confidence: 0.87831163

00:41:28.555 --> 00:41:29.775 and stress measures.

NOTE Confidence: 0.9721621

00:41:31.835 --> 00:41:32.815 We had,

NOTE Confidence: 0.9375124

00:41:33.114 --> 00:41:34.075 and we are trying we

NOTE Confidence: 0.9375124

00:41:34.075 --> 00:41:35.375 are working now in collaboration

NOTE Confidence: 0.9285825

00:41:35.675 --> 00:41:36.974 with, a group,

NOTE Confidence: 0.9923822

00:41:37.675 --> 00:41:38.815 in California.

NOTE Confidence: 0.9536326

00:41:39.675 --> 00:41:40.820 There we have so much

NOTE Confidence: 0.9536326

00:41:40.820 --> 00:41:43.140 data that, I'm I'm always

NOTE Confidence: 0.9536326

00:41:43.140 --> 00:41:44.440 happy to give it away,

NOTE Confidence: 0.9949697

00:41:45.140 --> 00:41:47.380 for, someone to analyze it

NOTE Confidence: 0.9949697

00:41:47.380 --> 00:41:48.900 and work with us. So

NOTE Confidence: 0.9949697

00:41:48.900 --> 00:41:50.360 she's looking into,

NOTE Confidence: 0.9727647

00:41:50.900 --> 00:41:53.300 the relationship between TSPO and

NOTE Confidence: 0.9727647

00:41:53.300 --> 00:41:53.800 trauma,

NOTE Confidence: 0.96092856

00:41:54.725 --> 00:41:56.805 because we also obtained, measures

NOTE Confidence: 0.96092856

00:41:56.805 --> 00:41:58.725 of, childhood trauma. So we

NOTE Confidence: 0.96092856

00:41:58.725 --> 00:42:00.245 are trying to look into

NOTE Confidence: 0.96092856

00:42:00.245 --> 00:42:00.745 that.

NOTE Confidence: 0.94562846

00:42:01.125 --> 00:42:01.925 But to me, what it

NOTE Confidence: 0.94562846

00:42:01.925 --> 00:42:03.145 means is that really,

NOTE Confidence: 0.98593825

00:42:03.925 --> 00:42:04.425 this

NOTE Confidence: 0.8912219

00:42:04.805 --> 00:42:05.785 group this,

NOTE Confidence: 0.88183165

00:42:07.489 --> 00:42:08.450 to me what it means

NOTE Confidence: 0.88183165

00:42:08.450 --> 00:42:10.069 is that new neuroinflammation

NOTE Confidence: 0.9271388

00:42:10.450 --> 00:42:11.829 or neuroimmune function,

NOTE Confidence: 0.99425566

00:42:12.849 --> 00:42:13.910 cannabis use,

NOTE Confidence: 0.8762767

00:42:15.089 --> 00:42:16.869 depression and anxiety, or,

NOTE Confidence: 0.9714246

00:42:17.489 --> 00:42:18.390 or the inflammasome

NOTE Confidence: 0.788001

00:42:18.930 --> 00:42:19.829 are are actually,

NOTE Confidence: 0.9967608

00:42:20.849 --> 00:42:21.349 interrelated

NOTE Confidence: 0.92118925

00:42:21.650 --> 00:42:23.234 in some way, and likely

NOTE Confidence: 0.92118925

00:42:23.234 --> 00:42:24.295 not in everyone,

NOTE Confidence: 0.9399131

00:42:25.474 --> 00:42:27.494 because not everyone actually developed

NOTE Confidence: 0.9399131

00:42:27.555 --> 00:42:29.494 high stress levels and higher,

NOTE Confidence: 0.8963388

00:42:30.755 --> 00:42:31.494 mood symptoms,

NOTE Confidence: 0.92622024

00:42:32.114 --> 00:42:33.474 but some people do and

NOTE Confidence: 0.92622024

00:42:33.474 --> 00:42:34.994 perhaps it is through,

NOTE Confidence: 0.97643876

00:42:36.275 --> 00:42:37.414 neuroimmune activation.

NOTE Confidence: 0.9700764

00:42:38.820 --> 00:42:40.180 Mhmm. Do you have any

NOTE Confidence: 0.9700764

00:42:40.180 --> 00:42:41.940 measure of the acute versus

NOTE Confidence: 0.9700764

00:42:41.940 --> 00:42:43.460 chronic effects of cannabis? Like,

NOTE Confidence: 0.9700764

00:42:43.460 --> 00:42:45.460 if cannabis users stop using

NOTE Confidence: 0.9700764

00:42:45.460 --> 00:42:47.239 cannabis or haven't used cannabis,

NOTE Confidence: 0.8901418

00:42:47.700 --> 00:42:48.840 like, recently,

NOTE Confidence: 0.995088

00:42:49.460 --> 00:42:50.840 do you see any difference?

NOTE Confidence: 0.96552604

00:42:51.565 --> 00:42:53.185 Yes. So we we obtained

NOTE Confidence: 0.96552604

00:42:53.245 --> 00:42:54.844 information on cannabis use,

NOTE Confidence: 0.9851551

00:42:55.245 --> 00:42:56.465 like, it's a long questionnaire.

NOTE Confidence: 0.92810535

00:42:57.485 --> 00:42:59.165 We also look into hours

NOTE Confidence: 0.92810535

00:42:59.165 --> 00:43:00.785 since since last use,

NOTE Confidence: 0.9991083

00:43:01.565 --> 00:43:02.685 and I don't remember the

NOTE Confidence: 0.9991083

00:43:02.685 --> 00:43:03.185 results

NOTE Confidence: 0.89880335

00:43:03.565 --> 00:43:04.285 of that.

NOTE Confidence: 0.9737618

00:43:04.765 --> 00:43:05.805 But but we did do

NOTE Confidence: 0.9737618

00:43:05.805 --> 00:43:06.810 it. I think in the,

NOTE Confidence: 0.9737618

00:43:07.050 --> 00:43:08.110 Dasilva study,

NOTE Confidence: 0.9631556

00:43:10.410 --> 00:43:12.090 there was no relationship with

NOTE Confidence: 0.9631556

00:43:12.090 --> 00:43:13.370 last hour or maybe there

NOTE Confidence: 0.9631556

00:43:13.370 --> 00:43:14.650 was with hours of last

NOTE Confidence: 0.9631556

00:43:14.650 --> 00:43:15.150 use.

NOTE Confidence: 0.9764287

00:43:15.450 --> 00:43:16.989 We always have this information

NOTE Confidence: 0.9764287

00:43:17.050 --> 00:43:18.110 because we obtained,

NOTE Confidence: 0.87679374

00:43:18.995 --> 00:43:20.275 URI so what we tell

NOTE Confidence: 0.87679374

00:43:20.275 --> 00:43:21.015 all participants

NOTE Confidence: 0.9858707

00:43:21.475 --> 00:43:23.315 is not to, come high

NOTE Confidence: 0.9858707

00:43:23.315 --> 00:43:24.695 to the scan, which means,

NOTE Confidence: 0.9827894

00:43:25.155 --> 00:43:26.515 we ask them not to

NOTE Confidence: 0.9827894

00:43:26.515 --> 00:43:28.135 change their patterns of use,

NOTE Confidence: 0.9995659

00:43:28.594 --> 00:43:29.094 but

NOTE Confidence: 0.97481513

00:43:29.395 --> 00:43:30.515 to we scan them in

NOTE Confidence: 0.97481513

00:43:30.515 --> 00:43:31.635 the morning, and we tell

NOTE Confidence: 0.97481513

00:43:31.635 --> 00:43:32.435 them not to,

NOTE Confidence: 0.99488723

00:43:32.995 --> 00:43:34.650 smoke in the morning, basically.

NOTE Confidence: 0.9514467

00:43:35.030 --> 00:43:36.390 And we ask them when

NOTE Confidence: 0.9514467

00:43:36.390 --> 00:43:37.350 was the last time they

NOTE Confidence: 0.9514467

00:43:37.350 --> 00:43:38.869 used, and sometimes they may

NOTE Confidence: 0.9514467

00:43:38.869 --> 00:43:40.150 use the night before, although

NOTE Confidence: 0.9514467

00:43:40.150 --> 00:43:41.270 we tell them, you know,

NOTE Confidence: 0.9514467

00:43:41.270 --> 00:43:42.310 not to change the pattern.

NOTE Confidence: 0.9514467

00:43:42.310 --> 00:43:42.969 And sometimes,

NOTE Confidence: 0.92695785

00:43:43.430 --> 00:43:45.030 you know, they if they're

NOTE Confidence: 0.92695785

00:43:45.030 --> 00:43:46.390 regular use our our people

NOTE Confidence: 0.92695785

00:43:46.390 --> 00:43:46.869 are really,

NOTE Confidence: 0.9969953

00:43:47.355 --> 00:43:49.195 heavy users or meet criteria

NOTE Confidence: 0.9969953

00:43:49.195 --> 00:43:50.655 for cannabis use disorder.

NOTE Confidence: 0.99217176

00:43:51.114 --> 00:43:52.075 And when I say heavy

NOTE Confidence: 0.99217176

00:43:52.075 --> 00:43:53.755 users, it means at least

NOTE Confidence: 0.99217176

00:43:53.755 --> 00:43:55.375 four times a week.

NOTE Confidence: 0.9644124

00:43:56.555 --> 00:43:58.395 Right? So it depends on

NOTE Confidence: 0.9644124

00:43:58.395 --> 00:43:59.614 when the scan falls.

NOTE Confidence: 0.9266092

00:44:00.075 --> 00:44:01.035 It could be the night

NOTE Confidence: 0.9266092

00:44:01.035 --> 00:44:01.770 they smoke.

NOTE Confidence: 0.9345373

00:44:02.330 --> 00:44:03.690 And we don't change that.

NOTE Confidence: 0.9345373

00:44:03.690 --> 00:44:04.590 We just quantify,

NOTE Confidence: 0.9423172

00:44:05.450 --> 00:44:07.070 the hours since last use.

NOTE Confidence: 0.9423172

00:44:07.130 --> 00:44:08.730 And in many occasions, we

NOTE Confidence: 0.9423172

00:44:08.730 --> 00:44:09.630 have attempted,

NOTE Confidence: 0.92734206

00:44:10.010 --> 00:44:11.469 as we've done in the

NOTE Confidence: 0.92734206

00:44:11.610 --> 00:44:13.610 Dasilva study to look at

NOTE Confidence: 0.92734206

00:44:13.610 --> 00:44:15.070 concentration of THC,

NOTE Confidence: 0.99520767

00:44:16.155 --> 00:44:16.815 and CBD

NOTE Confidence: 0.8815664

00:44:17.114 --> 00:44:18.575 in, in the periphery,

NOTE Confidence: 0.96226484

00:44:19.195 --> 00:44:20.155 and we did not find

NOTE Confidence: 0.96226484

00:44:20.155 --> 00:44:21.515 the relationship with THC. From

NOTE Confidence: 0.96226484

00:44:21.515 --> 00:44:22.635 what I remember, we could

NOTE Confidence: 0.96226484

00:44:22.635 --> 00:44:24.175 not, at the time, quantify

NOTE Confidence: 0.96226484

00:44:24.235 --> 00:44:24.735 CBD,

NOTE Confidence: 0.9991931

00:44:25.755 --> 00:44:27.135 in our cannabis users.

NOTE Confidence: 0.99609125

00:44:27.835 --> 00:44:29.215 Okay. Thank you so much.

NOTE Confidence: 0.9638589

00:44:30.020 --> 00:44:31.300 Romina, can you remind me,

NOTE Confidence: 0.9638589

00:44:31.300 --> 00:44:32.760 was there a clear relationship

NOTE Confidence: 0.9998325

00:44:33.140 --> 00:44:33.640 between

NOTE Confidence: 0.9976405

00:44:34.500 --> 00:44:36.680 the lifetime exposure to cannabis

NOTE Confidence: 0.9976405

00:44:36.739 --> 00:44:37.480 and TSPO?

NOTE Confidence: 0.97810245

00:44:38.420 --> 00:44:39.700 I don't think so. Not

NOTE Confidence: 0.97810245

00:44:39.700 --> 00:44:41.700 lifetime exposure. There wasn't a

NOTE Confidence: 0.97810245

00:44:41.700 --> 00:44:42.760 lifetime exposure?

NOTE Confidence: 0.9997631

00:44:43.485 --> 00:44:44.685 I don't remember. I don't

NOTE Confidence: 0.9997631

00:44:44.685 --> 00:44:45.425 think so.

NOTE Confidence: 0.9955471

00:44:46.045 --> 00:44:47.005 Okay. And,

NOTE Confidence: 0.9987106

00:44:47.485 --> 00:44:48.785 and related to that,

NOTE Confidence: 0.9996576

00:44:49.245 --> 00:44:50.625 do you have any data

NOTE Confidence: 0.9996576

00:44:50.765 --> 00:44:51.265 on

NOTE Confidence: 0.9420101

00:44:51.805 --> 00:44:52.305 PSPO

NOTE Confidence: 0.9949685

00:44:52.605 --> 00:44:53.105 in

NOTE Confidence: 0.9783141

00:44:53.565 --> 00:44:55.485 former cannabis users as a

NOTE Confidence: 0.9783141

00:44:55.485 --> 00:44:57.005 as a some proxy measure

NOTE Confidence: 0.9783141

00:44:57.005 --> 00:44:57.825 of what happens

NOTE Confidence: 0.99702746

00:44:58.205 --> 00:44:59.190 when someone stops

NOTE Confidence: 0.9225567

00:45:01.190 --> 00:45:01.849 using cannabis?

NOTE Confidence: 0.9502322

00:45:02.230 --> 00:45:03.989 That's an excellent question. I,

NOTE Confidence: 0.9502322

00:45:04.230 --> 00:45:05.770 we don't have that information,

NOTE Confidence: 0.9502322

00:45:06.069 --> 00:45:07.430 actually, in our in our

NOTE Confidence: 0.9502322

00:45:07.430 --> 00:45:07.930 samples.

NOTE Confidence: 0.9957995

00:45:09.109 --> 00:45:10.950 But from other molecular targets

NOTE Confidence: 0.9957995

00:45:10.950 --> 00:45:12.230 that have been have gone

NOTE Confidence: 0.9957995

00:45:12.230 --> 00:45:13.510 through abstinence, I think you

NOTE Confidence: 0.9957995

00:45:13.510 --> 00:45:14.250 would expect

NOTE Confidence: 0.9494151

00:45:15.965 --> 00:45:17.485 norm there would be, it

NOTE Confidence: 0.9494151

00:45:17.485 --> 00:45:18.765 would come to normal levels

NOTE Confidence: 0.9494151

00:45:18.765 --> 00:45:19.825 after six weeks.

NOTE Confidence: 0.93990326

00:45:20.525 --> 00:45:21.805 But I'm not I'm not

NOTE Confidence: 0.93990326

00:45:21.805 --> 00:45:22.844 sure. I mean, it has

NOTE Confidence: 0.93990326

00:45:22.844 --> 00:45:24.045 been reported for c b

NOTE Confidence: 0.93990326

00:45:24.045 --> 00:45:25.425 one, if I remember correctly,

NOTE Confidence: 0.96633404

00:45:26.605 --> 00:45:28.525 or other molecular targets for

NOTE Confidence: 0.96633404

00:45:28.525 --> 00:45:29.025 TSPO.

NOTE Confidence: 0.9706655

00:45:29.405 --> 00:45:31.250 We have not looked into

NOTE Confidence: 0.9706655

00:45:31.310 --> 00:45:31.810 that,

NOTE Confidence: 0.9983359

00:45:33.550 --> 00:45:34.670 but I have to say

NOTE Confidence: 0.9983359

00:45:34.670 --> 00:45:35.170 that

NOTE Confidence: 0.9954898

00:45:35.790 --> 00:45:37.010 our healthy controls

NOTE Confidence: 0.9991074

00:45:37.310 --> 00:45:38.370 are super healthy.

NOTE Confidence: 0.99207157

00:45:38.910 --> 00:45:40.750 So all the cohorts in

NOTE Confidence: 0.99207157

00:45:40.750 --> 00:45:41.870 all the studies that we've

NOTE Confidence: 0.99207157

00:45:41.870 --> 00:45:43.489 done over two decades,

NOTE Confidence: 0.9712588

00:45:44.045 --> 00:45:45.985 all the healthies are really

NOTE Confidence: 0.9712588

00:45:46.125 --> 00:45:47.745 super healthy individuals.

NOTE Confidence: 0.973591

00:45:48.364 --> 00:45:50.205 Super healthy, which means they've

NOTE Confidence: 0.973591

00:45:50.525 --> 00:45:52.145 almost they've never used cannabis

NOTE Confidence: 0.9729188

00:45:52.685 --> 00:45:53.425 or tobacco

NOTE Confidence: 0.971437

00:45:53.805 --> 00:45:55.265 or seen a psychiatrist.

NOTE Confidence: 0.96341026

00:45:56.445 --> 00:45:57.725 They have no first degree

NOTE Confidence: 0.96341026

00:45:57.725 --> 00:45:58.625 family member,

NOTE Confidence: 0.9946818

00:45:58.925 --> 00:45:59.425 and

NOTE Confidence: 0.9383621

00:46:00.620 --> 00:46:02.000 perhaps this is a problem,

NOTE Confidence: 0.9582398

00:46:03.420 --> 00:46:03.920 because,

NOTE Confidence: 0.99928665

00:46:04.540 --> 00:46:05.760 this is not perhaps

NOTE Confidence: 0.8595726

00:46:06.540 --> 00:46:07.980 the everyone. I mean, that's

NOTE Confidence: 0.8595726

00:46:07.980 --> 00:46:09.820 not really represented the general

NOTE Confidence: 0.8595726

00:46:09.820 --> 00:46:10.320 population.

NOTE Confidence: 0.9882863

00:46:11.580 --> 00:46:13.040 But, yeah, our our samples

NOTE Confidence: 0.9882863

00:46:13.100 --> 00:46:14.860 are usually our healthy cohorts

NOTE Confidence: 0.9882863

00:46:14.860 --> 00:46:15.765 are super healthy.

NOTE Confidence: 0.99546236

00:46:18.305 --> 00:46:18.805 Great.

NOTE Confidence: 0.9852726

00:46:19.425 --> 00:46:21.205 Other questions for Romina?

NOTE Confidence: 0.99314594

00:46:26.065 --> 00:46:27.185 I I if not, I

NOTE Confidence: 0.99314594

00:46:27.185 --> 00:46:28.565 did have a follow-up question,

NOTE Confidence: 0.9824524

00:46:28.945 --> 00:46:30.645 Romina. Given that,

NOTE Confidence: 0.9998616

00:46:31.480 --> 00:46:32.060 one of

NOTE Confidence: 0.95685625

00:46:32.600 --> 00:46:34.700 the leading hypotheses of schizophrenia

NOTE Confidence: 0.95685625

00:46:34.920 --> 00:46:35.880 is that it may be

NOTE Confidence: 0.95685625

00:46:35.880 --> 00:46:36.540 a disorder

NOTE Confidence: 0.90389293

00:46:36.920 --> 00:46:38.060 of altered pruning.

NOTE Confidence: 0.95716596

00:46:39.719 --> 00:46:41.340 Can you speculate on,

NOTE Confidence: 0.9530981

00:46:42.040 --> 00:46:43.500 can you connect your TSPO

NOTE Confidence: 0.9530981

00:46:43.719 --> 00:46:44.219 findings,

NOTE Confidence: 0.9534115

00:46:46.165 --> 00:46:46.665 if,

NOTE Confidence: 0.99796724

00:46:47.245 --> 00:46:47.985 if microglia

NOTE Confidence: 0.9031064

00:46:48.525 --> 00:46:50.465 are important in in pruning,

NOTE Confidence: 0.9974416

00:46:51.805 --> 00:46:53.165 and can you relate that

NOTE Confidence: 0.9974416

00:46:53.165 --> 00:46:53.905 to schizophrenia?

NOTE Confidence: 0.9974022

00:46:55.005 --> 00:46:55.905 Right. So

NOTE Confidence: 0.9905492

00:46:56.285 --> 00:46:57.485 the reason I put in

NOTE Confidence: 0.9905492

00:46:57.485 --> 00:46:59.390 the the c four study

NOTE Confidence: 0.9905492

00:46:59.390 --> 00:47:00.430 is because I think the

NOTE Confidence: 0.9905492

00:47:00.430 --> 00:47:01.550 link has to go through

NOTE Confidence: 0.9905492

00:47:01.550 --> 00:47:02.050 there.

NOTE Confidence: 0.9799534

00:47:03.470 --> 00:47:03.970 So

NOTE Confidence: 0.9594705

00:47:04.590 --> 00:47:06.030 let me just try to

NOTE Confidence: 0.9594705

00:47:06.030 --> 00:47:07.170 find it because

NOTE Confidence: 0.9386948

00:47:07.790 --> 00:47:08.530 it's it's

NOTE Confidence: 0.9937056

00:47:08.830 --> 00:47:10.370 important to note that

NOTE Confidence: 0.998421

00:47:11.405 --> 00:47:13.185 we when we looked into

NOTE Confidence: 0.998421

00:47:13.484 --> 00:47:14.224 the relationship

NOTE Confidence: 0.9432062

00:47:14.685 --> 00:47:16.125 between when we looked into

NOTE Confidence: 0.9432062

00:47:16.125 --> 00:47:17.025 c four a,

NOTE Confidence: 0.97113085

00:47:17.405 --> 00:47:18.765 we did not find group

NOTE Confidence: 0.97113085

00:47:18.765 --> 00:47:19.265 differences.

NOTE Confidence: 0.99932915

00:47:19.885 --> 00:47:20.864 But that's because

NOTE Confidence: 0.99921274

00:47:21.165 --> 00:47:22.065 we did not

NOTE Confidence: 0.99976104

00:47:25.130 --> 00:47:25.630 go

NOTE Confidence: 0.99813265

00:47:26.410 --> 00:47:26.910 and

NOTE Confidence: 0.99756575

00:47:27.530 --> 00:47:28.830 identify the participants

NOTE Confidence: 0.9976803

00:47:29.530 --> 00:47:30.670 who were

NOTE Confidence: 0.97050786

00:47:31.450 --> 00:47:31.950 actually,

NOTE Confidence: 0.98012036

00:47:33.130 --> 00:47:34.910 having high c four a.

NOTE Confidence: 0.9874773

00:47:37.635 --> 00:47:38.935 But in our case,

NOTE Confidence: 0.9947258

00:47:39.235 --> 00:47:40.675 our samples had low c

NOTE Confidence: 0.9947258

00:47:40.675 --> 00:47:41.415 four a.

NOTE Confidence: 0.66382897

00:47:41.875 --> 00:47:42.535 This is,

NOTE Confidence: 0.9577001

00:47:43.475 --> 00:47:44.515 We we can't see that

NOTE Confidence: 0.9577001

00:47:44.515 --> 00:47:45.635 slide, and you probably put

NOTE Confidence: 0.9577001

00:47:45.715 --> 00:47:46.515 need to put it in

NOTE Confidence: 0.9577001

00:47:46.515 --> 00:47:47.495 presenter view.

NOTE Confidence: 0.9214901

00:47:48.275 --> 00:47:49.235 Okay. So anyway, so I

NOTE Confidence: 0.9214901

00:47:49.235 --> 00:47:50.355 won't waste the time. So

NOTE Confidence: 0.9214901

00:47:50.355 --> 00:47:51.960 anyways, so when we look

NOTE Confidence: 0.9214901

00:47:52.200 --> 00:47:53.660 so I think the pathway

NOTE Confidence: 0.98209906

00:47:53.960 --> 00:47:55.500 through which this is happening

NOTE Confidence: 0.99006045

00:47:55.960 --> 00:47:57.340 is through c four a.

NOTE Confidence: 0.99006045

00:47:57.480 --> 00:47:59.239 So the best study design

NOTE Confidence: 0.99006045

00:47:59.239 --> 00:48:00.460 is the one that Rajeev

NOTE Confidence: 0.99006045

00:48:00.600 --> 00:48:02.680 was, trying to implement, which

NOTE Confidence: 0.99006045

00:48:02.680 --> 00:48:03.719 is to go into the

NOTE Confidence: 0.99006045

00:48:03.719 --> 00:48:04.700 general population

NOTE Confidence: 0.99936277

00:48:05.295 --> 00:48:06.755 and identify the participants

NOTE Confidence: 0.9834588

00:48:07.295 --> 00:48:08.575 who have high c four

NOTE Confidence: 0.9834588

00:48:08.575 --> 00:48:09.075 a.

NOTE Confidence: 0.9993536

00:48:09.375 --> 00:48:10.355 In this case,

NOTE Confidence: 0.99744016

00:48:10.974 --> 00:48:12.035 one would expect

NOTE Confidence: 0.99387085

00:48:12.415 --> 00:48:13.315 very high,

NOTE Confidence: 0.89822286

00:48:14.015 --> 00:48:14.515 TSPO.

NOTE Confidence: 0.997908

00:48:15.614 --> 00:48:16.114 And

NOTE Confidence: 0.9992153

00:48:16.575 --> 00:48:18.035 when there is high TSPO,

NOTE Confidence: 0.9244999

00:48:18.655 --> 00:48:20.094 you would expect very low

NOTE Confidence: 0.9244999

00:48:20.094 --> 00:48:20.940 SV two a.

NOTE Confidence: 0.99592096

00:48:22.859 --> 00:48:23.900 The problem that we have

NOTE Confidence: 0.99592096

00:48:23.900 --> 00:48:25.760 had is that our sample

NOTE Confidence: 0.9992444

00:48:26.060 --> 00:48:28.480 has very few with very

NOTE Confidence: 0.9992444

00:48:28.540 --> 00:48:29.040 high

NOTE Confidence: 0.9316578

00:48:29.420 --> 00:48:30.640 c four a expression.

NOTE Confidence: 0.9752696

00:48:31.099 --> 00:48:32.300 And, in fact, when you

NOTE Confidence: 0.9752696

00:48:32.300 --> 00:48:33.680 look at the group differences,

NOTE Confidence: 0.9789958

00:48:34.385 --> 00:48:36.065 it's either no significant

NOTE Confidence: 0.9602299

00:48:37.105 --> 00:48:39.285 significantly different between the groups

NOTE Confidence: 0.92857736

00:48:40.785 --> 00:48:42.165 or it's even lower.

NOTE Confidence: 0.9713696

00:48:43.665 --> 00:48:44.385 Do you know what I'm

NOTE Confidence: 0.9713696

00:48:44.385 --> 00:48:45.525 saying? Yep.

NOTE Confidence: 0.94950277

00:48:45.984 --> 00:48:47.849 Yes. So I think the

NOTE Confidence: 0.94950277

00:48:47.930 --> 00:48:49.369 this the study was not

NOTE Confidence: 0.94950277

00:48:49.369 --> 00:48:49.869 designed

NOTE Confidence: 0.99713355

00:48:50.489 --> 00:48:51.230 to actually

NOTE Confidence: 0.951601

00:48:52.010 --> 00:48:53.069 look into this,

NOTE Confidence: 0.7322897

00:48:54.010 --> 00:48:54.510 relationship.

NOTE Confidence: 0.9975695

00:48:55.049 --> 00:48:55.869 And I think

NOTE Confidence: 0.93589234

00:48:56.170 --> 00:48:57.549 the study that Rajiv,

NOTE Confidence: 0.9083707

00:48:58.489 --> 00:49:00.010 was trying or I hope

NOTE Confidence: 0.9083707

00:49:00.010 --> 00:49:01.235 he's he's doing,

NOTE Confidence: 0.98957837

00:49:01.775 --> 00:49:03.135 is the right design to

NOTE Confidence: 0.98957837

00:49:03.135 --> 00:49:04.975 answer this particular question. And

NOTE Confidence: 0.98957837

00:49:04.975 --> 00:49:06.655 I hope it's funded so

NOTE Confidence: 0.98957837

00:49:06.655 --> 00:49:07.155 that,

NOTE Confidence: 0.98255515

00:49:08.335 --> 00:49:09.075 these participants

NOTE Confidence: 0.9408845

00:49:09.455 --> 00:49:10.815 with very high c four

NOTE Confidence: 0.9408845

00:49:10.815 --> 00:49:12.975 a can actually be scanned

NOTE Confidence: 0.9408845

00:49:12.975 --> 00:49:15.455 with, TSPO radio ligand and

NOTE Confidence: 0.9408845

00:49:15.455 --> 00:49:16.335 SV two a at the

NOTE Confidence: 0.9408845

00:49:16.335 --> 00:49:16.469 same

NOTE Confidence: 0.99881667

00:49:17.750 --> 00:49:18.250 time.

NOTE Confidence: 0.9993507

00:49:19.349 --> 00:49:20.170 Sounds good.

NOTE Confidence: 0.98730075

00:49:21.510 --> 00:49:22.250 Other questions?

NOTE Confidence: 0.9989475

00:49:28.310 --> 00:49:29.450 I went too fast.

NOTE Confidence: 0.936024

00:49:32.125 --> 00:49:33.244 Well, I I want I

NOTE Confidence: 0.936024

00:49:33.244 --> 00:49:34.525 just want to remind people

NOTE Confidence: 0.936024

00:49:34.525 --> 00:49:35.585 that in

NOTE Confidence: 0.9856463

00:49:36.605 --> 00:49:37.884 in, you know, the the

NOTE Confidence: 0.9856463

00:49:37.884 --> 00:49:38.285 first,

NOTE Confidence: 0.9795142

00:49:38.844 --> 00:49:39.984 series of webinars,

NOTE Confidence: 0.97572464

00:49:41.644 --> 00:49:43.085 by the Yale Center for

NOTE Confidence: 0.97572464

00:49:43.085 --> 00:49:44.125 the Science of Cannabis and

NOTE Confidence: 0.97572464

00:49:44.125 --> 00:49:45.805 Cannabinoids is focused on the

NOTE Confidence: 0.97572464

00:49:45.805 --> 00:49:46.820 effects of cannabis

NOTE Confidence: 0.9252897

00:49:47.280 --> 00:49:48.260 on the brain.

NOTE Confidence: 0.92285293

00:49:48.560 --> 00:49:49.760 And we've had two great

NOTE Confidence: 0.92285293

00:49:49.760 --> 00:49:51.760 presentations in Yasmin Hurd and

NOTE Confidence: 0.92285293

00:49:51.760 --> 00:49:52.260 Romina.

NOTE Confidence: 0.9960141

00:49:52.800 --> 00:49:53.620 Next month,

NOTE Confidence: 0.98171127

00:49:53.920 --> 00:49:54.580 we have,

NOTE Confidence: 0.98840314

00:49:55.520 --> 00:49:58.340 Romina's colleague from, from McGill,

NOTE Confidence: 0.67226756

00:50:00.105 --> 00:50:01.005 Lina Palianapan,

NOTE Confidence: 0.9987655

00:50:01.545 --> 00:50:03.085 who will be speaking about

NOTE Confidence: 0.9987655

00:50:03.145 --> 00:50:04.205 the role of dopamine

NOTE Confidence: 0.8705317

00:50:05.145 --> 00:50:06.605 and cannabis and psychosis,

NOTE Confidence: 0.9966082

00:50:07.305 --> 00:50:08.265 and that should make for

NOTE Confidence: 0.9966082

00:50:08.265 --> 00:50:10.125 an interesting presentation too.

NOTE Confidence: 0.9987629

00:50:10.425 --> 00:50:11.565 Any last thoughts,

NOTE Confidence: 0.97338104

00:50:12.025 --> 00:50:14.339 Romina, about about your work?

NOTE Confidence: 0.9536432

00:50:15.299 --> 00:50:16.739 And I would imagine that,

NOTE Confidence: 0.9536432

00:50:16.980 --> 00:50:18.019 given that cannabis,

NOTE Confidence: 0.98366225

00:50:18.420 --> 00:50:19.400 cannabis is,

NOTE Confidence: 0.99895275

00:50:20.019 --> 00:50:21.160 is much more available

NOTE Confidence: 0.96573925

00:50:21.619 --> 00:50:23.460 in general in Canada than

NOTE Confidence: 0.96573925

00:50:23.460 --> 00:50:24.359 in the US,

NOTE Confidence: 0.9294054

00:50:24.819 --> 00:50:25.539 are there any,

NOTE Confidence: 0.95418906

00:50:26.465 --> 00:50:28.065 any words of wisdom in

NOTE Confidence: 0.95418906

00:50:28.065 --> 00:50:29.425 in doing these pet studies

NOTE Confidence: 0.95418906

00:50:29.425 --> 00:50:31.364 and how to select patients

NOTE Confidence: 0.99791735

00:50:31.745 --> 00:50:32.945 to pass out these different

NOTE Confidence: 0.99791735

00:50:32.945 --> 00:50:33.445 effects?

NOTE Confidence: 0.9983474

00:50:34.545 --> 00:50:35.285 Right. So

NOTE Confidence: 0.9850345

00:50:35.665 --> 00:50:36.945 I I think, a couple

NOTE Confidence: 0.9850345

00:50:36.945 --> 00:50:37.985 of things. So in terms

NOTE Confidence: 0.9850345

00:50:37.985 --> 00:50:39.205 of, dopamine

NOTE Confidence: 0.9837518

00:50:39.505 --> 00:50:41.520 and, cannabis, you know, the

NOTE Confidence: 0.9837518

00:50:41.520 --> 00:50:43.219 same happened to me, where,

NOTE Confidence: 0.9495048

00:50:43.840 --> 00:50:46.239 I was hypothesizing increased dopamine

NOTE Confidence: 0.9495048

00:50:46.239 --> 00:50:47.440 release and we found the

NOTE Confidence: 0.9495048

00:50:47.440 --> 00:50:47.940 opposite.

NOTE Confidence: 0.9644923

00:50:48.480 --> 00:50:49.520 Then I was doing the

NOTE Confidence: 0.9644923

00:50:49.520 --> 00:50:50.960 studies on TSPO. I thought

NOTE Confidence: 0.9644923

00:50:50.960 --> 00:50:52.260 there's gonna be a reduction

NOTE Confidence: 0.9644923

00:50:52.320 --> 00:50:53.860 and we found an increase.

NOTE Confidence: 0.9184305

00:50:54.815 --> 00:50:55.775 All of this to say

NOTE Confidence: 0.9184305

00:50:55.775 --> 00:50:57.455 again is that we really,

NOTE Confidence: 0.9184305

00:50:57.455 --> 00:50:57.955 really

NOTE Confidence: 0.99946684

00:50:58.495 --> 00:50:59.475 don't understand

NOTE Confidence: 0.9943551

00:51:00.015 --> 00:51:01.395 the role of cannabis,

NOTE Confidence: 0.9312089

00:51:02.015 --> 00:51:02.915 in the brain.

NOTE Confidence: 0.99246484

00:51:03.215 --> 00:51:04.095 And I think,

NOTE Confidence: 0.9877627

00:51:04.415 --> 00:51:05.614 we should really do an

NOTE Confidence: 0.9877627

00:51:05.614 --> 00:51:06.114 effort,

NOTE Confidence: 0.98557043

00:51:06.655 --> 00:51:07.875 to to

NOTE Confidence: 0.92168957

00:51:08.289 --> 00:51:09.029 to understand.

NOTE Confidence: 0.9900635

00:51:09.969 --> 00:51:11.650 And this is because with

NOTE Confidence: 0.9900635

00:51:11.650 --> 00:51:12.150 legalization,

NOTE Confidence: 0.9856555

00:51:12.690 --> 00:51:15.029 the increase of cannabis use

NOTE Confidence: 0.9497164

00:51:15.569 --> 00:51:17.650 has continued to grow across

NOTE Confidence: 0.9497164

00:51:17.650 --> 00:51:18.309 the world.

NOTE Confidence: 0.96776044

00:51:18.690 --> 00:51:20.309 In Canada, since legalization,

NOTE Confidence: 0.9715808

00:51:22.305 --> 00:51:23.984 we have found, yes, a

NOTE Confidence: 0.9715808

00:51:23.984 --> 00:51:25.045 decrease in,

NOTE Confidence: 0.99763113

00:51:25.585 --> 00:51:26.085 criminalization

NOTE Confidence: 0.95020485

00:51:27.105 --> 00:51:28.705 of cannabis users. People are

NOTE Confidence: 0.95020485

00:51:28.705 --> 00:51:30.225 not going to the, jails

NOTE Confidence: 0.95020485

00:51:30.225 --> 00:51:32.225 anymore, which is, a good

NOTE Confidence: 0.95020485

00:51:32.225 --> 00:51:32.725 thing.

NOTE Confidence: 0.97049147

00:51:33.505 --> 00:51:34.725 But at the same time,

NOTE Confidence: 0.97049147

00:51:34.945 --> 00:51:36.329 the visits to the emergency

NOTE Confidence: 0.97049147

00:51:36.469 --> 00:51:38.410 room have increased, intoxication

NOTE Confidence: 0.9600346

00:51:38.790 --> 00:51:39.609 has increased,

NOTE Confidence: 0.98048085

00:51:41.190 --> 00:51:42.869 driving under the influence of

NOTE Confidence: 0.98048085

00:51:42.869 --> 00:51:44.489 cannabis use has increased,

NOTE Confidence: 0.9814727

00:51:44.950 --> 00:51:46.869 patient with schizophrenia, the people

NOTE Confidence: 0.9814727

00:51:46.869 --> 00:51:48.230 that I see, and high

NOTE Confidence: 0.9814727

00:51:48.309 --> 00:51:49.750 and very young people are

NOTE Confidence: 0.9814727

00:51:49.750 --> 00:51:50.969 now vaping cannabis.

NOTE Confidence: 0.98803437

00:51:51.565 --> 00:51:52.385 And so,

NOTE Confidence: 0.965164

00:51:52.765 --> 00:51:54.205 this is all to say

NOTE Confidence: 0.965164

00:51:54.205 --> 00:51:55.725 that because so many people

NOTE Confidence: 0.965164

00:51:55.725 --> 00:51:57.245 now are using cannabis because

NOTE Confidence: 0.965164

00:51:57.245 --> 00:51:58.364 there is a perception that

NOTE Confidence: 0.965164

00:51:58.364 --> 00:51:59.265 there is low

NOTE Confidence: 0.9709603

00:51:59.645 --> 00:52:01.485 danger, which is likely true

NOTE Confidence: 0.9709603

00:52:01.485 --> 00:52:03.085 for most people, but not

NOTE Confidence: 0.9709603

00:52:03.085 --> 00:52:03.985 for young people,

NOTE Confidence: 0.9589438

00:52:04.760 --> 00:52:06.200 then we are starting to

NOTE Confidence: 0.9589438

00:52:06.200 --> 00:52:07.980 see a lot of

NOTE Confidence: 0.87458086

00:52:10.440 --> 00:52:12.599 behavioral changes, which are actually

NOTE Confidence: 0.87458086

00:52:12.599 --> 00:52:13.099 presented,

NOTE Confidence: 0.99113464

00:52:14.119 --> 00:52:15.400 in the emergency room and

NOTE Confidence: 0.99113464

00:52:15.400 --> 00:52:16.460 in the in epidemiological

NOTE Confidence: 0.9183918

00:52:16.839 --> 00:52:18.859 studies. That the relationship between

NOTE Confidence: 0.9737794

00:52:19.395 --> 00:52:20.855 cannabis and, suicide,

NOTE Confidence: 0.9541412

00:52:21.235 --> 00:52:22.594 for instance, which we are

NOTE Confidence: 0.9541412

00:52:22.594 --> 00:52:24.035 pursuing in a new grant

NOTE Confidence: 0.9541412

00:52:24.035 --> 00:52:24.775 we have,

NOTE Confidence: 0.9511085

00:52:26.515 --> 00:52:27.395 we we need to do

NOTE Confidence: 0.9511085

00:52:27.395 --> 00:52:29.075 better, actually, because young people

NOTE Confidence: 0.9511085

00:52:29.075 --> 00:52:30.535 really have no clue

NOTE Confidence: 0.97709507

00:52:31.075 --> 00:52:31.875 when they come to the

NOTE Confidence: 0.97709507

00:52:31.875 --> 00:52:33.315 emergency room. They they are

NOTE Confidence: 0.97709507

00:52:33.315 --> 00:52:33.815 clueless.

NOTE Confidence: 0.9402103

00:52:34.489 --> 00:52:35.609 And it's it is our

NOTE Confidence: 0.9402103

00:52:35.609 --> 00:52:36.650 job, really, to do a

NOTE Confidence: 0.9402103

00:52:36.650 --> 00:52:37.390 better job.

NOTE Confidence: 0.96887463

00:52:38.329 --> 00:52:39.609 Is it hard to find,

NOTE Confidence: 0.94766074

00:52:40.489 --> 00:52:42.809 controlled subjects without any cannabis

NOTE Confidence: 0.94766074

00:52:42.809 --> 00:52:43.309 use?

NOTE Confidence: 0.98894006

00:52:47.835 --> 00:52:48.815 It's hard.

NOTE Confidence: 0.97489

00:52:51.355 --> 00:52:53.355 Yes. It's difficult. To find

NOTE Confidence: 0.97489

00:52:53.355 --> 00:52:54.555 people in their twenties with

NOTE Confidence: 0.97489

00:52:54.555 --> 00:52:56.175 no cannabis use is hard.

NOTE Confidence: 0.97758865

00:52:56.555 --> 00:52:57.055 We,

NOTE Confidence: 0.9536179

00:52:57.515 --> 00:52:58.875 have, we usually in our

NOTE Confidence: 0.9536179

00:52:58.875 --> 00:53:01.010 studies, we we exclude if

NOTE Confidence: 0.9536179

00:53:01.010 --> 00:53:03.010 they have used recreational more

NOTE Confidence: 0.9536179

00:53:03.010 --> 00:53:04.310 than three or four times,

NOTE Confidence: 0.98859525

00:53:06.130 --> 00:53:06.630 lifetime.

NOTE Confidence: 0.9476521

00:53:09.410 --> 00:53:10.609 But if they have tried

NOTE Confidence: 0.9476521

00:53:10.609 --> 00:53:11.489 it, you know, lots of

NOTE Confidence: 0.9476521

00:53:11.489 --> 00:53:12.450 people have tried it, they

NOTE Confidence: 0.9476521

00:53:12.450 --> 00:53:13.329 didn't like it, they tried

NOTE Confidence: 0.9476521

00:53:13.329 --> 00:53:14.369 second time, they didn't like

NOTE Confidence: 0.9476521

00:53:14.369 --> 00:53:15.410 it, third time, they didn't

NOTE Confidence: 0.9476521

00:53:15.410 --> 00:53:17.121 like it, And then they

NOTE Confidence: 0.9476521

00:53:17.121 --> 00:53:19.231 don't try again. Those people,

NOTE Confidence: 0.9476521

00:53:19.231 --> 00:53:21.342 we include them in in

NOTE Confidence: 0.96706986

00:53:21.764 --> 00:53:23.874 as healthy controls if they

NOTE Confidence: 0.96706986

00:53:23.874 --> 00:53:25.140 have nothing else.

NOTE Confidence: 0.95652413

00:53:25.563 --> 00:53:27.673 But people who have not

NOTE Confidence: 0.95652413

00:53:27.673 --> 00:53:29.783 tried, almost impossible, I think.

NOTE Confidence: 0.95652413

00:53:29.783 --> 00:53:31.050 Young people. Great.

NOTE Confidence: 0.9978259

00:53:31.450 --> 00:53:33.390 Any other questions for Romina?

NOTE Confidence: 0.96744287

00:53:35.450 --> 00:53:36.810 So, Romina, thank you very

NOTE Confidence: 0.96744287

00:53:36.810 --> 00:53:38.410 much for a a very

NOTE Confidence: 0.96744287

00:53:38.410 --> 00:53:40.330 enlightening talk. I have just

NOTE Confidence: 0.96744287

00:53:40.330 --> 00:53:41.610 one last question for you,

NOTE Confidence: 0.96744287

00:53:41.610 --> 00:53:42.430 and that is

NOTE Confidence: 0.9759203

00:53:42.810 --> 00:53:44.330 whether Canada will be joining

NOTE Confidence: 0.9759203

00:53:44.330 --> 00:53:45.390 the United States.

NOTE Confidence: 0.89349866

00:53:46.545 --> 00:53:48.065 We are joining Europe. Seems

NOTE Confidence: 0.89349866

00:53:48.065 --> 00:53:48.565 that

NOTE Confidence: 0.9223821

00:53:48.864 --> 00:53:50.464 they are, they are being

NOTE Confidence: 0.9223821

00:53:50.464 --> 00:53:51.605 nicer to us.

NOTE Confidence: 0.8273127

00:53:52.224 --> 00:53:53.925 We're joining actually Grow Inlandia

NOTE Confidence: 0.8273127

00:53:54.065 --> 00:53:54.565 first,

NOTE Confidence: 0.9979824

00:53:54.864 --> 00:53:55.905 or maybe we should take

NOTE Confidence: 0.9979824

00:53:55.905 --> 00:53:56.805 over Alaska

NOTE Confidence: 0.93635315

00:53:57.265 --> 00:53:58.705 and Grow Inlandia and then

NOTE Confidence: 0.93635315

00:53:58.705 --> 00:53:59.445 join Europe.

NOTE Confidence: 0.9340295

00:54:00.660 --> 00:54:01.780 Well, good luck with that.

NOTE Confidence: 0.9340295

00:54:01.780 --> 00:54:02.900 Thank you again for your

NOTE Confidence: 0.9340295

00:54:02.900 --> 00:54:03.800 great talk.

NOTE Confidence: 0.9282539

00:54:06.020 --> 00:54:07.480 Alright. And thanks, everyone.

NOTE Confidence: 0.96843666

00:54:07.859 --> 00:54:09.859 Next talk is, scheduled for

NOTE Confidence: 0.96843666

00:54:09.859 --> 00:54:11.160 the eighteenth of March.

NOTE Confidence: 0.97258824

00:54:12.260 --> 00:54:12.760 Bye.

NOTE Confidence: 0.9979273

00:54:13.380 --> 00:54:15.400 Bye. Thanks for having me.