

# Neurotech

7 September 2020

## Neurotech to proceed with cannabinoid *in vitro* trials after positive results with cannabis strains for treatment of neuro disorders

### Highlights

- Final results from Neurotech's analysis of 80 cannabis samples from the Dolce Cann Global genetic portfolio return a variety of cannabinoids, including newly discovered phytocannabinoids CBDP and CBDB
- Recent research suggests phytocannabinoids may be more medicinally effective than CBD
- All 80 samples contained varying amounts of all major cannabinoids – CBDV, CBDA, CBGA, CBG, CBD, THCV, CBN, THC, d8-THC, CBC and THCA
- Neurotech's samples contained CBDA levels up to approx. 12% — CBDA can act as a regulator in neuro-modulation, with powerful anti-anxiety and anti-inflammatory properties
- Results support Neurotech's option to acquire an exclusive worldwide licence to use Dolce Cann Global's proprietary cannabis strains for medicinal use in treating neurological disorders such as autism, epilepsy and ADHD
- NTI to commence *in-vitro* testing (using human derived cell lines) on key priority strains this month
- If *in-vitro* testing is successful, Neurotech will commence clinical trials with an Australian university, utilising Dolce cannabis strains and its own proprietary *Mente* neurofeedback device which analyses brain wave activity

Neurotech International Limited (ASX: NTI) ("Neurotech" or "the Company") is pleased to announce it has received full results from ACS Laboratories' ("ACS") genetic profiling and full potency analysis on 80 cannabis samples, with results supporting Neurotech's research into the potential of cannabinoids for medicinal use in treating neurological disorders including autism, epilepsy and ADHD.

Neurotech now plans to move to well established *in vitro* cell trials using human-derived cell lines on the key priority strains, with this research scheduled to commence later this month.

Neurotech submitted 80 cannabis samples for analysis in July 2020 after it secured an option to acquire an exclusive worldwide licence to utilise proprietary cannabis strains from Australian cannabis company Dolce Cann Global Pty Ltd ('Dolce'). The samples were analysed at ACS Laboratories, a NATA (National Association of Testing Authorities) and ISO accredited facility in Melbourne, using the latest approved technology and methods for detection and quantitation.

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ACS found all 80 samples submitted by Neurotech contained varying amounts of all major cannabinoids, including CBDV, CBDA, CBGA, CBG, CBD, THCV, CBN, THC, d8-THC, CBC and THCA. However, analysis found Neurotech's lead samples contained levels of cannabinoid CBDA of up to approx. 12%, which is promising for the Company's planned research.

"CBDA is a powerful active in the regulation in areas of neuro-modulation, anti-anxiety and anti-inflammatory," Neurotech Chairman Mark Davies said.

"It shows promise for treating disorders such as ADD and seizure control. We believe it is significantly more potent than CBD."

"In addition to and most importantly in our lead samples, researchers were able to identify the presence of the novel phytocannabinoids: cannabidiphorol (CBDP) and cannabidibutol (CBDB). These were only recently discovered by an Italian scientific team in early 2020. These new phytocannabinoids, together with CBDA, are all related – "cousins" to CBD, which is most commonly known for its powerful medicinal properties. Recent studies have shown these phytocannabinoids have greater binding affinity with specific receptors in our body and may therefore have the ability to be much more effective than CBD.

"The presence of the novel phytocannabinoids is very exciting and we will be working with global experts to further assess their efficacy in our upcoming *in vitro* cell trials, which we expect to commence later this month."

Mr Davies said Neurotech was very pleased with the results of ACS' analysis, which had identified the top leads from the 80 samples provided by Dolce.

"We have demonstrated that Dolce's plants do exhibit a wide profile of active cannabinoids and we are now focusing on the next stage of our development program. We are now well-positioned to assess our lead samples in well-established neuronal cell lines. This program will be carried out in collaboration with academic and scientific experts."

The *in vitro* cell trials are expected to take up to six weeks to complete. Based on the findings of this work, Neurotech plans to commence clinical trials, using the key cannabis strains from Dolce and its own proprietary Mente autism neurofeedback device which analyses brain wave activity.

"We look forward to publishing the next results and sharing our findings with the broader cannabis scientific community," Mr Davies said.

## **Authority**

This announcement has been authorised for release by the Board of Directors of the Company.

## **Further Information**

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## **About Neurotech**

Neurotech International Limited is a medical device and solutions company incorporated in Australia and operating through its wholly-owned, Malta-based subsidiary AAT Research Limited. Neurotech's primary mission is to improve the lives of people with neurological conditions, with in home-use and clinical neurotechnology solutions that are both accessible and affordable. Through flagship device Mente and its associated platform, Neurotech is focused on facilitating the development and commercialisation of technological solutions for the screening and treatment of symptoms associated with conditions such as autism. Mente is the world's first home therapy that is clinically proven to increase engagement and improve relaxation in autistic children with elevated Delta band brain activity. For more information about Neurotech and Mente Autism please visit:

<http://www.neurotechinternational.com>.

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## Annexure A – Laboratory Testing Results



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## Certificate of Analysis

### Results-Final

Analysis by HPLC  
 All results listed as weight percent

| ID           | SampleName | CBDV | CBDA  | CBGA | CBG  | CBD  | THCV | CBN | THC  | d8-THC | CBC  | THCA |
|--------------|------------|------|-------|------|------|------|------|-----|------|--------|------|------|
| PC-171       | 24455-1    | 0.05 | 3.68  | 0.25 | 0.05 | 0.27 |      |     | 0.06 | 0.05   |      | 0.17 |
| PC-21        | 24455-2    | 0.1  | 5.79  | 0.34 |      | 0.39 | 0.06 |     | 0.07 |        |      | 0.24 |
| PC-459       | 24455-3    | 0.12 | 6.65  | 0.51 | 0.09 | 0.29 |      |     | 0.06 | 0.05   |      | 0.28 |
| PC-212       | 24455-4    | 0.12 | 1.94  | 0.26 |      | 0.11 | 0.05 |     | 0.06 |        |      | 0.13 |
| PC-61        | 24455-5    | 0.08 | 2.55  | 0.39 |      | 0.14 | 0.07 |     | 0.17 | 0.06   |      | 1.19 |
| PC-20 (b)    | 24455-6    | 0.09 | 4.87  | 0.3  |      | 0.46 |      |     | 0.08 | 0.06   |      | 0.21 |
| PC-2020 (OP) | 24455-7    | 0.08 | 5.3   | 0.32 | 0.11 | 0.42 |      |     | 0.12 | 0.06   |      | 0.43 |
| PC-20        | 24455-8    | 0.07 | 5.35  | 0.33 | 0.07 | 0.5  | 0.05 |     | 0.08 | 0.05   | 0.09 | 0.22 |
| PC-528       | 24455-9    | 0.06 | 9.46  | 0.49 | 0.13 | 0.41 | 0.08 |     | 0.14 | 0.09   |      | 0.36 |
| PC-21        | 24455-10   | 0.08 | 6.55  | 0.46 |      | 0.29 | 0.05 |     | 0.09 | 0.07   |      | 0.26 |
| PC-155       | 24455-11   | 0.04 | 5.93  | 0.73 | 0.09 | 0.26 | 0.07 |     | 0.07 | 0.05   |      | 0.25 |
| PC-20 (a)    | 24455-12   | 0.06 | 7.43  | 1    |      | 0.2  | 0.06 |     | 0.25 |        |      | 2.9  |
| PC-30        | 24455-13   | 0.05 | 5.49  | 0.32 | 0.1  | 0.32 | 0.09 |     | 0.09 | 0.06   |      | 0.24 |
| PC-18        | 24455-14   | 0.12 | 2.83  | 0.31 |      | 0.19 | 0.06 |     | 0.06 | 0.05   |      | 0.16 |
| PC-51        | 24455-15   | 0.05 | 9.82  | 0.59 |      | 0.17 | 0.06 |     | 0.07 | 0.07   |      | 0.39 |
| PC-164       | 24455-16   | 0.06 | 11.86 | 0.44 | 0.12 | 0.37 | 0.1  |     | 0.08 |        |      | 0.45 |
| PC-19        | 24455-17   | 0.06 | 2.34  | 0.29 | 0.07 | 0.1  | 0.06 |     | 0.14 | 0.05   |      | 1.11 |
| PC-34        | 24455-18   | 0.09 | 4.98  | 0.68 | 0.09 | 0.24 | 0.07 |     | 0.06 | 0.07   |      | 0.22 |
| PC-204       | 24455-19A  | 0.09 | 4.73  | 0.22 | 0.07 | 0.16 | 0.12 |     | 0.06 |        |      | 0.23 |
| PC-204       | 24455-19B  | 0.08 | 4.87  | 0.22 | 0.08 | 0.12 | 0.06 |     | 0.08 | 0.1    |      | 0.24 |

| ID     | SampleName | CBDV | CBDA | CBGA | CBG  | CBD  | THCV | CBN | THC  | d8-THC | CBC  | THCA |
|--------|------------|------|------|------|------|------|------|-----|------|--------|------|------|
| PC-96  | 24445-20   | 0.05 | 4.29 | 0.28 | 0.09 | 0.37 |      |     | 0    |        |      | 0.19 |
| PC-515 | 24445-21   | 0.04 | 6.88 | 0.63 | 0.08 | 0.28 |      |     | 0.03 | 0      |      | 0.28 |
| PC-223 | 24445-22   | 0.04 | 2.38 | 0.16 | 0.04 | 0.12 |      |     | 0.01 |        |      | 0.13 |
| PC-466 | 24445-23   | 0.06 | 4.74 | 0.22 |      | 0.35 |      |     | 0.01 | 0      |      | 0.21 |
| PC-363 | 24445-24   | 0.09 | 3.08 | 0.24 | 0.06 | 0.27 | 0.02 |     | 0    |        |      | 0.16 |
| PC-244 | 24445-25   | 0.08 | 6.17 | 0.18 | 0.06 | 0.54 |      |     | 0.04 | 0      | 0.1  | 0.24 |
| PC-543 | 24445-26   | 0.07 | 6.09 | 0.43 | 0.09 | 0.17 | 0    |     | 0.03 |        |      | 0.26 |
| PC-218 | 24445-27   | 0.06 | 3.79 | 0.28 |      | 0.17 |      |     | 0.01 | 0      |      | 0.19 |
| PC-439 | 24445-28   | 0.18 | 4.45 | 0.47 | 0.12 | 0.41 | 0.01 |     | 0.02 |        |      | 0.2  |
| PC-152 | 24445-29   | 0.15 | 5.78 | 0.36 | 0.09 | 1.09 |      |     | 0.07 | 0      | 0.13 | 0.23 |
| PC-220 | 24445-30   | 0.06 | 6.64 | 0.51 | 0.11 | 0.21 | 0    |     | 0    |        |      | 0.28 |
| PC-322 | 24445-31   | 0.13 | 5.82 | 0.68 |      | 0.19 | 0.01 |     | 0    |        |      | 0.26 |
| PC-483 | 24445-32   | 0.08 | 3.46 | 0.3  | 0.06 | 0.25 |      |     | 0.02 |        |      | 0.18 |
| PC-412 | 24445-33   | 0.06 | 5.03 | 0.33 | 0.12 | 0.37 | 0    |     | 0.03 |        |      | 0.22 |
| PC-417 | 24445-34   | 0.12 | 8.77 | 0.81 | 0.14 | 0.47 | 0.02 |     | 0.04 | 0      | 0.1  | 0.35 |
| PC-192 | 24445-35   | 0.05 | 2.53 | 0.18 |      | 0.32 |      |     | 0.05 | 0.01   |      | 0.14 |
| PC-100 | 24445-36   | 0.06 | 6.38 | 0.37 |      | 0.32 | 0.05 |     | 0.01 |        |      | 0.26 |
| PC-102 | 24445-37   | 0.12 | 3.04 | 0.36 | 0.06 | 0.31 |      |     | 0.01 |        |      | 0.16 |
| PC-410 | 24445-38   | 0.05 | 7.33 | 0.57 | 0.12 | 0.38 | 0.03 |     | 0.02 | 0      |      | 0.3  |
| PC-420 | 24445-39A  | 0.03 | 2.28 | 0.14 |      | 0.12 |      |     | 0.01 |        |      | 0.14 |
| PC-420 | 24445-39B  | 0.05 | 2.13 | 0.13 |      | 0.11 |      |     | 0    | 0.01   |      | 0.14 |
| PC-215 | 24445-40   | 0.09 | 3.87 | 0.22 | 0.09 | 0.46 | 0.05 |     | 0.06 | 0.05   | 0.08 | 0.18 |
| PC-187 | 24445-41   | 0.07 | 3.41 | 0.33 |      | 0.21 | 0.05 |     | 0.06 | 0.04   |      | 0.16 |
| PC-426 | 24445-42   | 0.12 | 5.6  | 0.28 | 0.09 | 0.55 |      |     | 0.07 |        | 0.09 | 0.23 |
| PC-535 | 24445-43   | 0.08 | 2.47 | 0.22 | 0.06 | 0.27 |      |     | 0.07 |        |      | 0.13 |
| PC-170 | 24445-44   | 0.08 | 5.03 | 0.36 |      | 0.17 | 0.06 |     | 0.05 | 0.06   |      | 0.23 |
| PC-96  | 24445-45   | 0.06 | 5.88 | 0.34 | 0.11 | 0.49 | 0.07 |     | 0.08 |        | 0.08 | 0.23 |
| PC-535 | 24445-46   | 0.16 | 6.42 | 0.7  | 0.11 | 0.47 | 0.04 |     | 0.07 |        | 0.08 | 0.25 |
| PC-534 | 24445-47   | 0.06 | 5.85 | 0.32 | 0.09 | 0.32 |      |     | 0.06 | 0.04   |      | 0.24 |
| PC-99  | 24445-48   | 0.06 | 6.62 | 1.27 | 0.18 | 0.28 | 0.08 |     | 0.07 | 0.07   |      | 0.27 |
| PC-231 | 24445-49   | 0.11 | 3.26 | 0.37 | 0.08 | 0.27 | 0.07 |     | 0.05 | 0.04   |      | 0.16 |
| PC-227 | 24445-50   | 0.1  | 4.64 | 0.21 | 0.06 | 0.14 |      |     | 0.07 | 0.08   |      | 0.21 |
| PC-449 | 24445-51   | 0.07 | 4.46 | 0.19 | 0.1  | 0.19 | 0.05 |     | 0.06 | 0.04   |      | 0.2  |
| PC-545 | 24445-52   | 0.11 | 8.09 | 0.45 | 0.13 | 0.4  | 0.06 |     | 0.07 | 0.05   |      | 0.32 |
| PC-298 | 24445-53   | 0.1  | 3.85 | 0.21 |      | 0.18 | 0.07 |     | 0.04 | 0.04   |      | 0.18 |
| PC-483 | 24445-54   | 0.19 | 2.93 | 0.39 | 0.09 | 0.23 | 0.05 |     | 0.05 |        |      | 0.15 |
| PC-169 | 24445-55   | 0.09 | 4.44 | 0.2  |      | 0.66 |      |     | 0.1  | 0.05   | 0.09 | 0.19 |
| PC-453 | 24445-56   | 0.07 | 8.62 | 0.48 | 0.1  | 0.16 |      |     | 0.05 | 0.05   |      | 0.34 |
| PC-451 | 24445-57   | 0.09 | 6.87 | 0.29 | 0.09 | 0.35 | 0.05 |     | 0.06 | 0.05   |      | 0.27 |
| PC-592 | 24445-58A  | 0.05 | 6.08 | 0.34 | 0.12 | 0.21 | 0.05 |     | 0.06 | 0.04   |      | 0.25 |
| PC-592 | 24445-58B  | 0.06 | 6.58 | 0.34 | 0.11 | 0.21 |      |     | 0.05 | 0.05   |      | 0.27 |
| PC-334 | 24445-59   | 0.06 | 3.07 | 0.32 | 0.09 | 0.19 | 0.05 |     | 0.06 | 0.03   |      | 0.16 |
| PC-496 | 24445-60   | 0.09 | 3.95 | 0.29 |      | 0.23 | 0.03 |     | 0.05 |        |      | 0.19 |
| PC-537 | 24445-61   | 0.07 | 5.31 | 0.25 |      | 0.31 |      |     | 0.04 |        |      | 0.22 |
| PC-405 | 24445-62   | 0.18 | 2.87 | 0.19 | 0.08 | 0.37 | 0.03 |     | 0.05 | 0.02   |      | 0.15 |
| PC-382 | 24445-63   | 0.12 | 5.05 | 0.28 |      | 0.33 | 0.03 |     | 0.06 | 0.03   |      | 0.22 |

| ID       | SampleName | CBDV | CBDA  | CBGA | CBG  | CBD  | THCV | CBN | THC  | d8-THC | CBC  | THCA |
|----------|------------|------|-------|------|------|------|------|-----|------|--------|------|------|
| PC-529   | 24445-64   | 0.07 | 7.73  | 0.45 | 0.12 | 0.28 |      |     | 0.08 |        |      | 0.3  |
| PC-399   | 24445-65   | 0.07 | 11.38 | 0.47 | 0.13 | 0.62 | 0.03 |     | 0.05 |        | 0.1  | 0.4  |
| PC-255   | 24445-66   | 0.07 | 2.85  | 0.39 | 0.1  | 0.18 | 0.03 |     | 0.17 |        |      | 1.52 |
| PC-224   | 24445-67   | 0.09 | 4.45  | 0.47 | 0.12 | 0.37 | 0.05 |     | 0.35 | 0.02   |      | 1.96 |
| PC-144   | 24445-68   | 0.12 | 6.9   | 0.61 | 0.14 | 0.42 | 0.03 |     | 0.04 |        | 0.09 | 0.27 |
| PC-199   | 24445-69   | 0.11 | 5.69  | 0.29 | 0.11 | 0.26 | 0.04 |     | 0.07 |        |      | 0.25 |
| PC-186   | 24445-70   | 0.08 | 5.26  | 0.27 |      | 0.24 |      |     | 0.04 | 0.03   |      | 0.23 |
| PC-247   | 24445-71   | 0.09 | 6.58  | 0.38 | 0.13 | 0.47 |      |     | 0.04 | 0.03   | 0.09 | 0.26 |
| PC-221   | 24445-72   | 0.09 | 4.59  | 0.35 | 0.11 | 0.25 | 0.02 |     | 0.04 | 0.05   |      | 0.2  |
| PC-258   | 24445-73   | 0.09 | 4.66  | 0.25 |      | 0.17 |      |     | 0.04 |        |      | 0.22 |
| PC-232   | 24445-74   | 0.2  | 3.6   | 0.44 | 0.1  | 0.23 | 0.04 |     | 0.04 |        |      | 0.18 |
| PC-122   | 24445-75   | 0.07 | 5.82  | 0.45 | 0.1  | 0.33 |      |     | 0.06 | 0.03   |      | 0.24 |
| PC-215   | 24445-76   | 0.07 | 7.47  | 0.57 | 0.13 | 0.51 | 0.03 |     | 0.05 | 0.02   | 0.09 | 0.28 |
| PC-144   | 24445-77   | 0.19 | 4.32  | 0.32 | 0.09 | 0.44 |      |     | 0.04 | 0.03   | 0.09 | 0.2  |
| PC-165   | 24445-78   | 0.08 | 5.97  | 0.28 | 0.12 | 0.84 |      |     | 0.08 | 0.04   | 0.11 | 0.23 |
| PC-130   | 24445-79   | 0.08 | 7.33  | 0.26 | 0.13 | 0.17 | 0.05 |     | 0.05 | 0.02   |      | 0.3  |
| PC-329 A | 24445-80A  | 0.08 | 2.09  | 0.27 | 0.07 | 0.11 | 0.03 |     | 0.12 | 0.03   |      | 0.94 |
| PC-329 A | 24445-80B  | 0.08 | 2.43  | 0.3  | 0.08 | 0.11 | 0.05 |     | 0.13 | 0.05   |      | 1.07 |

Approx wgt% based off UV CBDA result  
and the MS peak areas

| Sample  | PC-61   | PC-528  | PC-21    | PC-20 (a) | PC-51    | PC-164   | PC-19    |
|---------|---------|---------|----------|-----------|----------|----------|----------|
| Job ID  | 24455-5 | 24455-9 | 24455-10 | 24455-12  | 24455-15 | 24455-16 | 24455-17 |
| CBDA-C1 | 0.023   | 0.143   | 0.080    | 0.027     | 0.094    | 0.141    | 0.023    |
| CBDA-C2 | 0.001   | 0.001   | 0.002    | 0.002     | 0.001    | 0.054    | 0.004    |
| CBDA-C3 | 0.582   | 0.443   | 1.206    | 0.279     | 0.233    | 0.320    | 0.581    |
| CBDA-C4 | 0.041   | 0.135   | 0.111    | 0.101     | 0.135    | 0.144    | 0.036    |
| CBDA-C5 | 2.248   | 10.111  | 6.719    | 7.644     | 10.539   | 12.601   | 2.427    |
| CBDA-C7 | 0.006   | 0.009   | 0.006    | 0.011     | 0.007    | 0.018    | 0.006    |