



10 12 2019

Companies Announcement Office
ASX Limited
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Dear Sir/Madam

ASX Market Release – Patagonia Genetics

BPH INVESTEE PATAGONIA GENETICS ACQUIRES 18.4% CBD 'CARMAGNOLA' HEMP PHENOTYPE

BPH Energy Limited (ASX: BPH) (**BPH**) is pleased to announce its investee Patagonia Genetics has recently acquired the exclusive rights to a newly discovered high CBD phenotype of the 'Carmagnola' Italian Hemp strain.

Further details are attached.

David Breeze
Executive Director



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10 December 2019

PATAGONIA GENETICS ACQUIRES RARE 18.4% CBD 'CARMAGNOLA' ITALIAN HEMP PHENOTYPE

Patagonia Genetics (Patagonia) is pleased to advise that it has acquired the rights to a recently discovered and rare phenotype of the EU Certified Hemp cultivar 'Carmagnola'.

CARMAGNOLA HEMP STRAIN

Carmagnola is a historical Industrial hemp strain derived from Italy that has been cultivated for more than 15 years. The hemp seeds are dioecious meaning that both male and female plants can be grown. The strain is mainly grown for fibre production as well as for Cannabidiol (CBD) oil extraction and resin.

The Carmagnola cultivar has a historically low Tetrahydrocannabinol (THC) reading (below 0.5%). At the same time, the hemp strain contains a high CBD content of 7-9%, which makes it ideal for CBD resin and oil extraction. This hemp strain is also capable of producing high quality medical CBD flower.

18.4% CBD, 0.11% THC HEMP PHENOTYPE DISCOVERY

After cultivating, testing and phenotype searching literally thousands of Carmagnola plants, the breeder was able to identify a particular phenotype that would be considered a unique find as it carries exceptionally high levels of CBD compared to traditional Carmagnola (and most other cultivars) whilst maintaining THC levels well below 0.3%.

The particular phenotype of Carmagnola that the breeder has discovered carries a cannabinoid profile of **18.4% CBD and 0.11% THC**. This new phenotype discovery was tested by the 'Centro Tecnológico Nacional Agroalimentario Extremadura (CTAEX) and a Certificate of Analysis (COA) produced. An extract of the cannabinoid makeup and COA result is below.

Determinación	Metodología	Resultado
COMPOSICIONAL		
Principios activos de plantas (Cannabinoides completos) (%)		
Cannabidiol (CBD) (%)	HPLC	0.89
Cannabidiol acid (CBDA) (%)	HPLC	18.41
Cannabidiol acid (CBDA) (%)	HPLC	0.02
Cannabidiol acid (CBDA) (%)	HPLC	<0.01
Cannabidiol acid (CBDA) (%)	HPLC	<0.01
Δ9-Tetrahydrocannabinol (THC) (%)	HPLC	0.10
Tetrahydrocannabinol (THC) (%)	HPLC	<0.01
Δ9-Tetrahydrocannabinol acid (THCA) (%)	HPLC	<0.01
Tetrahydrocannabinol acid (THCA) (%)	HPLC	<0.01

This phenotype offers great appeal to Patagonia as the THC reading is substantially lower than the United States Department of Agriculture (USDA) and many other regions THC limit of 0.3%, meaning it can be sold world wide as hemp and with little risk to the cultivator of exceeding THC limits with a lab confirmed content of just 0.11%. The CBD reading is also in the high range at 18.4%, especially when compared to those with as low THC values.

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RELATIONSHIP ESTABLISHED WITH LICENSED SPANISH CULTIVATOR

Patagonia has recently completed due diligence on Calpernia Planters Limited (Calpernia), a business that resides in Gibraltar and is the holder of various licenses which permit it to import and export hemp and cannabis related genetic material, but with a limit on THC content of 0.3% or less.

After review of their data room and genetics available, Patagonia identified a particular phenotype of the Carmagnola Hemp strain as holding commercial potential and has entered into exclusive distribution agreement.

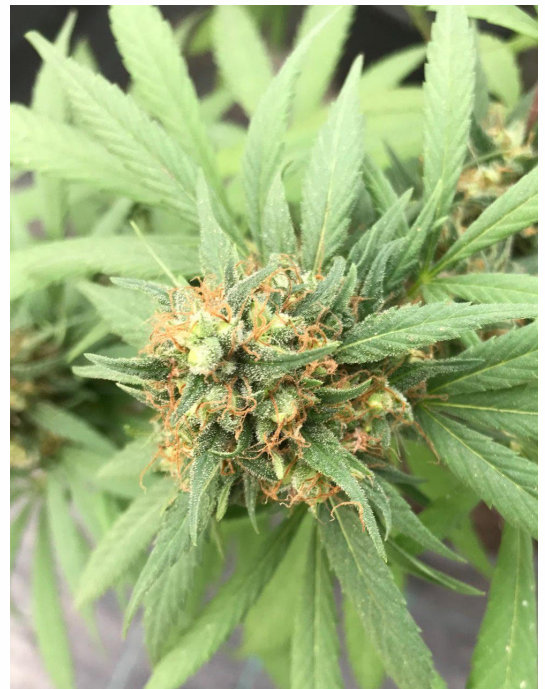
Michael Trinidad (director of Calpernia) holds various cannabis and seed cultivation licenses in Spain which permit him to cultivate and export hemp and cannabis genetic material such as seeds and clones but with a restriction on THC content of less than 0.3%.

Michael has an agreement in place with Calpernia and is contracted to exclusively cultivate their genetics in Spain under his license and supply them. Under current capacity, the licensed Spanish farm can supply feminised seed in the vicinity of 20,000,000-30,000,000 by mid to late 2020, with the ability to scale into 2021 and beyond.

COMMERCIALISATION SCHEDULE

Under the terms of the distribution deal, Patagonia can immediately begin selling this newly discovered genetic phenotype under Calpernia's hemp license.

It is expected the market can be supplied genetic cuttings or clones of this phenotype by Q1 2020 and feminised seeds by Q3 2020. Patagonia has already sent the COA results to major grow shops, distributors and licensed producers world wide and has received significant interest to supply them with genetics for 2020 cultivations.



* Newly discovered phenotypes of the Carmagnola Hemp Cultivar

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EXCLUSIVE RIGHTS OVER NEWLY DISCOVERED CARMAGNOLA HEMP PHENOTYPE

Patagonia has secured the exclusive world wide rights to the newly discovered high CBD phenotype of the Carmagnola Hemp variety, through execution of deal with Calpernia.

Under the terms of the deal, Patagonia has agreed to purchase from Calpernia the following minimum volumes of seeds in order to maintain exclusivity:-

- 2020. 3,000,000 seeds;
- 2021. 10,000,000 seeds; &
- 2022. 15,000,000 seeds (capped onwards).

SALES OF CARMAGNOLA PHENOTYPE

Patagonia will update the market as and when it enters material distributions or sale agreements on this particular phenotype.

BUSINESS DETAILS

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