

## CANNABIS GENETICS, TRIPLOIDS, CANNABINOIDS AND TERPENES Looking into the future of Australian Cannabis research

## June 7 2019

On the 31st March 2017, Cann Global Limited ("ASX: CGB", "the company"), formerly Queensland Bauxite Limited (ASX: QBL), reported on a rare Genetic Cannabis find. During cultivation trials of the various Cannabis cultivars, Andrew Kavasilas, MCL's Technical Director, reported that he had identified the very rare and unique 'Triploid' characteristic in a particular species of Cannabis plant.

A 'triploid' plant produces an extra branch where there should be just two. In effect, the plant produces an extra 50% more branches and end products. This is a rare mutation and the genetics will be of great value if successfully bred into commercial crops. At the time, Andrew said, *"it's exciting for us to be achieving such great results so early in this era of cannabis law reforms in Australia. We're finally allowed to study the cannabis plant a lot more closely than ever before, the results are somewhat surprising and leads us to ask more questions than can be answered."* 

During the breeding and selection phase, thousands of seeds were used to produce hundreds of seedlings. After a couple of months of careful indoor growing, individual plants were identified for various characteristics and moved to an outdoor trial crop plot area to observe the results and assess the potential for large-scale commercial cultivation.



As part of Stage 1 of the 'Tabulum Project', the Research Division of MCL, are happy to report on the outdoor results from the Triploid Trial Crops which continue to be assessed as part of a two (2) year seasonal crop rotation program.









During the Stage 1 outdoor trials, Andrew was able to successfully identify and grow to maturity a new Triploid plant from the seed of the first Triploid he encountered.

Andrew Kavasilas said, "The MCL team are investigating plant genetics, larger scale breeding, multiplication, and are presently in discussion with research groups and our farmers in several states to settle on farms that will ultimately provide the ideal agronomic environment to further develop these new Triploid varieties of Cannabis plants."

Andrew went on to say, "CGB/MCL is on track with our plans to further genetic research and development to commercialize these Triploids and regionally adapted cultivars to gradually introduce them into broad acre seed production or Medical Cannabis research opportunities in late 2019/early 2020."



New purple variety Triploid

At the industry level, farmers are looking forward to an increase in yields with the successful broadacre sowing and cultivation of these new Cannabis variety.





## The importance of terpenes in Cannabinotherapies

Purple cannabis plants are an oddity in the new Cannabis world we're entering into. Many may not know that Cannabis plants range in colour from various shades of green through to reds, purple and deeper purple to a black appearance. Distinctively, purple cultivars produce their own unique smell, or terpene profile.



While the Cannabis plant produces more than 140 cannabinoids, the smell of cannabis is generally made up of terpenoids, volatile compounds and some of the 400 complex chemicals which are said to modulate the effects of cannabinoids while exerting their own beneficial properties.

Mr Kavasilas said, "It's crucial to have 'starting genetics' that will produce Cannabis plants which express unique characteristics like this. These may prove to produce distinct cannabinoid and terpene profiles to treat any number of medical conditions in the future".

Modern cannabinoid refinement techniques rely heavily upon the ability to extract and retain increasing amounts of various important terpenoids, by producing cultivars with greater amounts of useful and special agents, these types of cultivars and attention to research will assist CGB to lead the way in Australian based research.

Cann Global remains at the forefront of Australian companies to approach this early stage research in such a thorough manner and finds itself amongst world class investigators in a brave new world of Cannabis genetic identification.





Cann Global with its plant genetics team, headed up by Andrew Kavasilas, and including Plant Genetics expert and Molecular Biotechnologist, Malcolm Lamont and Herbalist/Botanist, John Easterling, continues to push forward in its discovery of important cannabinoids and phyto-chemical compounds that may prove immensely beneficial to the global nutritional and medical industries.

Cann Global looks forward to presenting the market and its shareholders the results of the Stage 2 'Tabulum Project' in early 2020.

## Pnina Feldman Executive Chairperson comments:

"It is pleasing to see MCL is utilising all manners of Cannabis research to improve its Hemp crop stocks. In 2017, Andrew began to investigate larger scale breeding and multiplication and to his credit the MCL team have successfully bred and brought to maturity new Triploid variety Hemp plants. MCL is doing amazing work in relation to research cultivation which will place CGB, as leader in both the Australian and worldwide cannabinoid industries. We went from having a stake in MCL, which was a cannabis company in its infancy of development- to significantly developing all facets of MCL and more, and then finally now to be fully merging the various cannabis businesses into QBL, to form the new Cann Global (ASX: CGB).

We wish our shareholders great success as they join with us in this intriguing and exciting ground-breaking work moving forward."

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Pnina Feldman Executive Chairperson Cann Global Limited (ASX:CGB)

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