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ANANDA DEVELOPMENTS PLC

("Ananda" or the "Company")

Ananda's ambition is to be a leading UK grower and manufacturer of consistent, high-quality medical cannabis for UK patients.

Medical Cannabis Research Roundup

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Compiled by Dr Lorena Cabrera, Cannabis Scientist, Ananda Developments plc

Summary:

- A long-term medical research study shows that medical cannabis reduces pain intensity in fibromyalgia patients.
- CBD-rich medical cannabis found to be safe, effective and well tolerated in children with treatment-resistant developmental and epileptic encephalopathy.
- A study shows that a combination of CBD and morphine is effective in the treatment of neuropathic pain.

A LONG-TERM MEDICAL RESEARCH STUDY SHOWS THAT MEDICAL CANNABIS REDUCES PAIN INTENSITY IN FIBROMYALGIA PATIENTS.

Fibromyalgia (FM) is a disease of unknown cause and is characterised by nociplastic pain, also known as central sensitisation. This causes the pain that an individual feels to be either out of proportion to the extent of an injury or unrelated to any damage. The cause of nociplastic pain is not well understood, but it is suggested that the central nervous system (CNS) is sensitised, where neurons become more responsive and develop abnormally elevated sensitivity and activity to stimulation (central sensitisation), turning pain into a chronic (long-term) condition. Nociplastic pain differs from nociceptive pain, caused by tissue damage and inflammation, and neuropathic pain, caused by nerve injury.

FM symptoms are associated with muscle pain and stiffness, hypersensitivity to mechanical stimuli, cold and heat, negative affect (i.e., mood changes, anxiety, depression), and sleep problems. FM is mostly common among women, with an incidence of 0.5 – 5 %. Medically, managing FM is extremely challenging, with no standard treatment, and medications provide minimal symptomatic relief.

A long-term prospective cohort study in the province of Quebec evaluated the effects of medical cannabis on patients diagnosed with FM over one year. In this study, 323 patients were assessed at baseline (before commencing medical cannabis), where physicians recorded the pain type, duration, other symptoms and the use of other drugs. The FM patients were then prescribed medical cannabis and reviewed every three months. Most patients (82.0%) used tinctures, and a smaller group (36.5%) used dried formulations. More than half of all patients in the study used at least one balanced product containing THC and CBD (1:1). Only 16.4% of patients used THC-dominant products, whereas 35.6% used CBD-based formulations. This study concluded that the significant decrease in pain intensity was mainly associated with reduced sleep problems and negative affect.

CBD-RICH MEDICAL CANNABIS FOUND TO BE SAFE, EFFECTIVE AND WELL TOLERATED IN CHILDREN WITH TREATMENT-RESISTANT DEVELOPMENTAL AND EPILEPTIC ENCEPHALOPATHY.

Developmental and epileptic encephalopathies (DEEs) start early in childhood and refer to a group of disorders defined by severe epilepsy, which is characterised by seizures, and developmental encephalopathies, a term used to describe intellectual disability, developmental delay and motor decline. Seizures are the leading cause of cognitive and behavioural deterioration; therefore, eradicating seizure activity could improve mental and developmental decline. In addition, DDEs are resilient to traditional anti-epileptic treatment, and various studies have proven that CBD is effective in treating severe treatment-resistant epilepsy.

This study in Canada recruited 59 children between the ages of 2 and 16 years with drug-resistant DDE in order to investigate the effectiveness, tolerance and safety of a CBD-based oil (CBD:THC, 25:1) at a dose of 4 - 25 mg/kg/day added to their regular anti-seizure medication. The study lasted 2 years, and a non-significant number of children (17) discontinued CBD due to a weak response (13.6%), intolerance (10%) or poor compliance (5.1%). However, 78% of the children had more than a 50% reduction in seizure frequency, and 47.5% had more than a 75% decrease in the number of seizures. Remarkably, 11.9% of participants (seven patients) had no seizures during the study. In conclusion, this study proved that long-term treatment (approximately 20 months) with a CBD-enriched tincture, in conjunction with regular anti-seizure medication in DDE children, is safe, effective in reducing the frequency of seizures, and well tolerated.

A STUDY SHOWS THAT A COMBINATION OF CBD AND MORPHINE IS EFFECTIVE IN THE TREATMENT OF NEUROPATHIC PAIN.

Pain is a subjective and unpleasant feeling, experience or perception generally caused by damaging stimuli, and can be classified as nociceptive, inflammatory or neuropathic. Nociceptive pain is caused by activating the sensory receptors of the peripheral nervous system (PNS), nociceptors. Inflammatory pain is associated with the release of inflammatory mediators, such as growth factors, cytokines and chemokines, which interacts with neurons and intensifies pain perception. And lastly, and perhaps the most challenging to manage, is neuropathic pain, which is characterised by neuronal damage from injury, infection or inflammation, resulting in hypersensitisation and the delivery of pain signals to the central nervous system (CNS) without the presence of any noxious

stimulus. There are current unmet needs in the management of neuropathic pain since available therapies fail to achieve satisfactory pain relief in a high number of patients.

A study at the University of Paraná, Brazil, used the animal model of chronic constriction injury of the sciatic nerve (CCI) to replicate neuropathic pain. This investigation aimed to evaluate the effect of combining CBD and morphine on evoked (before and 7 days after surgery) and ongoing (6–9 days after surgery) pain, and CBD on morphine-induced tolerance in the CCI rat model.

Rats treated with morphine (2 and 4 mg/kg) or CBD (30 mg/kg) induced a significantly reduced evoked pain. On the other hand, CBD (30 mg/kg) and morphine (1 mg/kg) combined increased the number of positive scores, did not affect motility and had an enhanced analgesic effect when compared to rats given morphine alone (1 mg/kg). Additionally, rats treated with CBD reduced morphine-induced tolerance. This study support that CBD contributes to the analgesic effects of opioid therapy and diminishes opioid-induced analgesic resistance.

-Ends-

The Directors of the Company accept responsibility for the contents of this announcement.

ANANDA DEVELOPMENTS PLC +44 (0)7463 686 497

Chief Executive Officer
Melissa Sturgess

Investor Relations
Jeremy Sturgess-Smith

PETERHOUSE CAPITAL LIMITED +44 (0)20 7469 0930

Corporate Finance
Mark Anwyl

Corporate Broking
Lucy Williams
Duncan Vasey

Market Abuse Regulation (MAR) Disclosure

The information contained within this announcement is deemed by the Company to constitute inside information. Upon the publication of this announcement via a Regulatory Information Service, this inside information is now considered to be in the public domain.

About Ananda Developments

Ananda is an AQSE-listed medical cannabis company creating UK-based operations to grow and provide carbon zero, consistent, medical cannabis for the UK and international markets.

The UK medical cannabis market is predicted to be worth £450m by 2025 and the European market is predicted to be worth USD4.2bn by 2027.

For more information, please visit: https://anandadevelopments.com/