CanaQuest MEDICAL CORP

Therapeutic Potential of CBD Formulated Products backed by Science and Pre-clinical Trials for Neuropsychiatric Disorders

Mentanine® CBD-based formulation

September 1, 2021

CanaQuest Medical Corp.

OUR COMPANY

A life science and pharmaceutical company developing cannabinoid and botanical-based medical formulations to treat neurological conditions and mental health ailments.

OUR VISION

To be a global leader in the formulation and development of transformative pharmaceutical and health products from cannabinoids and botanical derivatives.

What we do

| Scientifically developed cannabinoid-based Rx drugs

- Develop scientific formulations, supported by clinical trials
- Obtain Rx drug approvals from the US-FDA, Health Canada and European Medicines Agency
- Deliver superior proprietary drug formulations for healthcare

Current focus

Pharmaceutical Rx Drug Pipeline

- Two master formulations that are pharma drug candidates targeting neurological conditions: CQ-001 Rx and CQ-002 Rx, derived from **Mentanine**® and **Mentabinol**® respectively
- Four pre-approved clinical trial programs for CQ-001 Rx
- Following pre-established regulatory pathways and Orphan Drug and Rare Disease Status for faster approvals

Commercially Ready Products

- **Mentanine**® and **Mentabinol**®, respectively - CBD and THC proprietary formulations. Both classified as medical-grade cannabis formulations.

Winner of the 2021 *Best Medical Cannabis and Botanical Oils Product Development Company – North America*, awarded by Global Health & Pharma, UK

Winner of the *International CBD Life Science R&D Excellence Award 2020*, given by Global Health & Pharma, UK

About Mentanine®

| Pharmaceutical Grade CBD Omega-3 formulation

- **Scientifically developed** by CanaQuest's lead scientist and university-based experts in neuroscience

- **Pre-clinical trial results** – published in peer-reviewed European Journal of Neuroscience, Oct 2020

EJN
European Journal of Neuroscience

Received: 3 June 2020 | Revised: 8 September 2020 | Accepted: 16 October 2020

DOI: 10.1111/ejn.15023

ORIGINAL ARTICLE

EJN European Journal of Neuroscience FENS WILEY

Functional interactions between cannabinoids, omega-3 fatty acids, and peroxisome proliferator-activated receptors: Implications for mental health pharmacotherapies

Tony Jung[1,2] | Roger Hudson[1,2] | Walter Rushlow[1,2,3] | Steven R. Laviolette[1,2,3]

[1]Addiction Research Group, Schulich School of Medicine & Dentistry, University of Western Ontario, London, ON, Canada

[2]Department of Anatomy & Cell Biology, Schulich School of Medicine & Dentistry, University of Western Ontario, London, ON, Canada

Abstract

Cannabis contains a plethora of phytochemical constituents with diverse neurobiological effects. Cannabidiol (CBD) is the main non-psychotropic component found in cannabis that is capable of modulating mesocorticolimbic DA transmission and may possess therapeutic potential for several neuropsychiatric disorders. Emerging evi-

The Scientific Difference | Pre-clinical results

Mentanine®

Scientifically developed proprietary formula

vs. CBD

Pure Cannabidiol

New pathway discovery: Synergistically attaches to PPAR receptor allowing CBD to cross the blood-brain barrier to interact with the central nervous system (the brain) for amplified effects.	Higher concentrations required to achieve efficacy through PPAR substrates. Nominal bioavailability to interact with the central nervous system.
Addresses neurological conditions including anxiety, depression, PTSD, schizophrenia and addiction, as well as inflammation.	Addresses inflammation. Nominal effect on neurological conditions.
Requires minimum doses of CBD, yielding increased efficacy since it attaches to the PPAR receptors	Requires high doses of CBD to achieve minimal efficacy

* CBD by itself has nominal functionality at the PPAR or CB1 receptor and does not effectively reach the section of the brain that regulates emotion. Thus, CBD alone is not as effective for treating mental health ailments.

* Data derived from scientific research and pre-clinical trials by Dr. Steven Laviolette, Neuroscientist, Western University.

Unique Formulation. Not a Generic Knockoff

| Comparison with similar FDA approved product

CanaQuest MEDICAL CORP

GW pharmaceuticals

Proprietary formulation from Mentanine®, CQ-001 R_x US$650/100ml	Pure CBD, Epidiolex® Rx US$1,400/100ml
Pending Rx approval: Health Canada (200 days after start of clinical trials); US FDA (45-52 weeks after clinical trial completion)*	FDA approved as a drug for epileptic seizures; Sales $510M in 2020 (75% annual growth over the next 4 years**).
CBD 22.2 mg /ml, with Omega-3 active ingredients Scientific formula with 10X more efficacy. Lower dose of CBD required.	CBD 100mg /ml, sesame as a carrier oil Formula: 99% CBD, relying on CBD action
• Sublingual delivery - bypassing digestive system, eliminating liver toxicity • 80% to 90% of formula enters bloodstream – crossing the blood-brain barrier for greater efficacy • Quick onset	• Oral delivery - can lead to liver toxicity • Only 10% of the formula enters the blood stream • Effect in hours
Double acting formula – on the center nervous system and endocannabinoid system	Acts on the endocannabinoid system, requiring high dosage to reach desired results at the central nervous system level

* Timing estimates confirmed by 3rd party regulatory specialists- based on pre-existing pathways established by the approval of Epidiolex® and the timing of clinical trials. With Orphan Drug Status from the US FDA and no comparable approved product in Canada, CQ-001 R_x will be eligible for Priority Review Status and is expected to receive Health Canada's approval as a pharmaceutical drug under the term Notice of Compliance with Conditions (NOC/c)

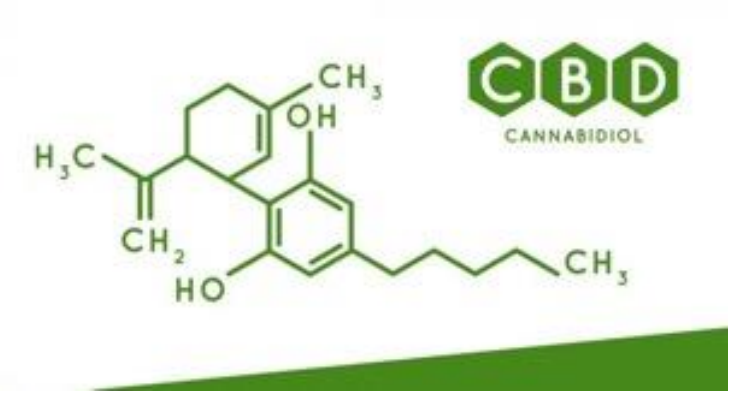
** New Frontier Data projected estimate

What is next for Mentanine®

| Commercial roll out and used as formulation base for Rx drug candidate

Commercially ready

- Medical cannabis product, IP protected, patent pending.
- Formulation includes CBD. All other ingredients are approved for human consumption and are categorized as ”GRAS” Generally Recognized as Safe by US, Canadian and EU regulatory agencies.
- Q4, 2021 market launch in USA under the 2018 US Farm Bill authorization; Q4, 2021 launch in Canada
- Can be delivered through sublingual, spray, soft gels, capsules (timed release).
- Available for co-branding opportunities



Rx Formulation

Mentanine® to be used as formulation base for Rx drug candidate CQ-001 and to conduct human clinical trials to treat:

- $ Anxiety & Depression
- $ PTSD, Schizophrenia
- $ Pain Management
- $ Addiction
- $ Other neurological conditions

Rx Drug Clinical Trials

| Preapproved human trials for CQ-001 Rx and CQ-002 Rx candidates

				TRIAL DATE	TRIAL DURATION	TIME TO OBTAIN DIN & Rx APPROVALS
Ontario Brain Institute	Epilepsy Specifically: Dravet and Lennox Gastaut Syndromes	Clinical trial 60 patients double blind Using CQ-001 R_x	Dr W. McIntyre Burnham, Co-Director of EPLINK and Director of the U of Toronto Epilepsy Research Program	6 months after financing	3 months	USA: + 45-52 weeks after trials **Canada:** DIN issued ~1 year with conditions NOC/c at which time it can be sold as Rx **USA:** ~2 years
CRCHUM CENTRE DE RECHERCHE University of Montreal Hospital Research Centre	Cannabis use disorder & addiction	Therapeutic purpose early phase trial Using CQ-001 & CQ-002 R_x separately & combined	Dr Didier Jutras-Aswad	6 months after financing	3 months	After DIN is obtained for CQ-001 Rx, approval will be sought to add this ailment to its Rx label + 12-48 months USA (TBD) + 12-48 months in Canada (TBD)
McMaster University	Anxiety	Clinical study 30 patients Using CQ-001 R_x	Dr Michael Van Ameringen Dr Arun V. Ravindran *joint program with U of Toronto	6 months after financing	**Phase 1:** 3 months **Phase 2:** 12 months	After DIN is obtained for CQ-001 Rx, approval will be sought to add this ailment to its Rx label + 12 months USA + 12 months in Canada
McGill UNIVERSITY	Autism	Clinical trial & pilot study Using CQ-001 R_x	Dr Gabriella Gobbi	6 months after financing	**Phase 1:** TBD **Phase 2:** TBD	After DIN is obtained for CQ-001 Rx, approval will be sought to add this ailment to its Rx label + 12-24 months USA + 12-24 months in Canada

Pipeline for Future Rx Drugs

| Scientific Research

	Project	Description	Specialists	Status
Western	Neurological Conditions & Mental Health Focus on anxiety, PTSD, addiction	Research and pre-clinical trials; new formulated product development with synergistic botanicals	Dr Steven Laviolette + team of 13 scientists	Ongoing
Western	Alzheimer's	New program based on research & pre-clinical trials from Mentanine®	Dr Shawn Whitehead	New Program
University of Guelph	Anxiety & Pain management for cats and dogs	Research and pre-clinical trials Clinical trials with CQ-001 R_x Mentanine® and CQ-002 R_x Mentabinol® derived formula	Dr David Ma Dr Adronie Verbrugghe + team of 4 scientists	Federal research program approved (Mitacs grant $350,000) Starts after financing

Scientific Partners & Regulatory Advisors

Dr. Steven Laviolette, B.Sc., Ph.D., a Professor and Neuroscientist in the Schulich School of Medicine & Dentistry at Western University, Addiction Research Group Dept. of Anatomy & Cell Biology, Dept. of Psychiatry **R & D Program - 14 scientists**
http://www.schulich.uwo.ca/anatomy/people/bios/faculty/laviolette_steve.html

For a short video on the research, visit https://www.youtube.com/watch?v=O_D4wkHHbDg

The investigator leading the research is Dr. Steven Laviolette, a Professor and Neuroscientist in the Schulich School of Medicine & Dentistry at Western University in London, Ontario. Dr. Laviolette is a leader in the study of cannabinoids in mental health and was recently awarded "Faculty Scholar" status at Western University. Dr. Laviolette's research team has previously made numerous fundamental discoveries related to how cannabinoids impact and may serve as treatments for mental health disorders including schizophrenia, depression, post-traumatic stress disorder and anxiety. Dr. Laviolette's primary research focus is in characterizing how specific phytochemical derivatives of cannabis may interact with specific brain pathways and molecular mechanisms whereby they may improve symptoms associated with various mental health disorders. Research from Dr. Laviolette's team has been published in the top tier of neuroscience and psychiatry journals in the world. The following is a link to Dr. Laviolette's profile on the Western University website.

Dr. Tom Ng, B.S., Ph.D., COO, BioPharma Global, **Regulatory Consultants - 7 Leadership Team Members**
https://www.biopharmaglobal.com/about-us/
Dr. Ng's academic background includes a B.S. in Biochemistry from the **University of Maryland** and a Ph.D. in Molecular Biology from **Johns Hopkins University**. He is also an Executive Board Member and President Emeritus of the CMNS Alumni Association Chapter at the University of Maryland.
BioPharma Global is a full-service regulatory affairs consulting firm specializing in orphan products to treat rare diseases and non-orphan products to treat indications with unmet medical needs. Services include orphan drug designations, other expedited review programs, support for meetings with the FDA and EMA, IND filings, and comprehensive consulting on projects for regulatory strategy. The team is comprised of globally recognized experts in rare diseases and other under-served disease areas, **including former FDA staff and** a variety of scientists with many successful FDA interactions, orphan drug designations and other expedited program submissions to their credit.

Scientific Partners & Pharmaceutical Advisor

Dr. David W.L. Ma, Ph.D. Professor, Department of Human Health and Nutritional Sciences, University of Guelph

R & D Program - 5 scientists https://www.uoguelph.ca/hhns/people/dr-david-wl-ma

Dr. Ma obtained his PhD in Medical Sciences in 2001 at the **University of Alberta** conducting research on the role of dairy fat and breast cancer. He pursued postdoctoral training examining the linkage between diet and cancer at **Texas A&M University** studying the role of omega-3 fatty acids and folate in colon cancer. In 2004, he took up a faculty position in the Department of Nutritional Sciences at the **University of Toronto** as an Assistant Professor. Later, in 2007 he joined the faculty in the Department of Human Health and Nutritional Sciences at the **University of Guelph** where he is currently a full Professor and Director of the Guelph Family Health Study. His present research program spans experimental and human studies investigating the role of diet and lifestyle in human health with a focus on health promotion and disease prevention. To date, Dr. Ma has authored over 130 peer reviewed publications.

Dr. Adronie Verbrugghe, Ph.D., Associate Professor, Veterinary College, University of Guelph

https://ovc.uoguelph.ca/clinical-studies/faculty/Adronie-Verbrugghe

Dr. Verbrugghe graduated as a companion animal veterinarian (DVM) from **Ghent University, Belgium** in 2005. She completed her PhD focusing with nutritional modulation of carbohydrate metabolism in cats in 2009 and stayed at the same university for 2 additional years as a postdoctoral fellow. She became board certified for the **European College of Veterinary and Comparative Nutrition** in 2010. In 2011, Dr. Verbrugghe joined the Ontario Veterinary College (OVC), **University of Guelph**, as Royal Canin Veterinary Diets Endowed Chair in Canine and Feline Clinical Nutrition. To date, Dr. Verbrugghe has authored 35 peer-reviewed publications.

- Developed R & D Partnership Program (Pets - Dogs, Cats) **– leveraging from Western University, Dr. Steven Laviolette's science and pre-clinical trial results**
- Established expertise in nutrition, food science, cannabinoid biology and veterinary medicine
- Secured approval and **matching funding** from MITACS, a Government of Canada, Academia-Industry research and training program
- Commencement upon CanaQuest, as industry partner, securing funding.

Remi A Menes, BSc, MBA, Chairman of the CanaQuest, Advisory Committees – Vice-President, Specialty Patient Programs, McKesson Canada. Extensive commercial, operations and business development experience in the biopharmaceutical, biotech, pharmaceutical, medical cannabis and the hemp-derived CBD sectors. Experience with new indications and launching pharmaceutical products; developing product life-cycle management strategies; establishing head office, division and field capabilities-- in Canada, USA, Japan, Latin America and Western Europe.

Executive Team & Board of Directors

| 100+ Years of Management & Product Development Experience

Richard Rusiniak, Mechanical Engineer, CEO – Director

Over 35 years of management, design and process experience. Co-founder and former President, CFO, and CTO of Cymat Corp (TSX: CYM) with a market valuation over $150 million. Negotiated an Aluminum Foam Manufacturing license with Alcan International Ltd., and successfully commercialized proprietary technology. Prepared full documentation and completed a $10 Million technology development program with Industry Canada (TPC). Participated in the completion of $25 million in financing with financial institutions. From 1978 to 1988, he was project manager with Long Manufacturing, as well as The Ontario Research Foundation (Ortech). Projects on which he has consulted include NASA's Zero Gravity Program, Atomic Energy of Canada's Re-tubing Program and Hawker Siddeley's Bi-Level GO Train Modularization.

Paul Ramsay, BBA, President – Chairman

Over 30 years of business development and management experience. Co-founder and former CEO and VP Business Development of Cymat Corp, (TSX: CYM) with a market valuation over $150 million. Was instrumental in securing the Stabilized Aluminum Foam (SAF) license from Alcan International Ltd. Successfully negotiated a $10 Million technology development program with Industry Canada (TPC). Participated in the completion of $25 million in financing with financial institutions. Mr. Ramsay also introduced and sold several newly developed products to major corporations.

Ross Eastley, CA, CFO – Director

Over 35 years of accounting and CFO experience in both private and public sector organizations. Former CEO for the Canadian Society of Immigration Consultants (CSIC) from 2006 – 2009. Mr. Eastley reported to a nine-member Board, responsible for strategic planning, corporate communications, initial regulatory functions, creation of the staffing structure and management of legal processes. Former V P/Controller for Brandon University.

Cameron McDonald, BA, BSc, MBA – Independent Director

Venture capital executive and entrepreneur with over 25 years of corporate finance and business development experience. Currently the CEO of Ocean Trout Canada Inc., a leading Canadian aquaculture company. Prior to joining Coldwater Fisheries Inc. in early 2016, was a founder and executive of Global SeaFarms Corporation. From 2004 to 2009, was an investment banker with Canaccord Adams (now Canaccord Genuity), where he worked on over $500M in public financings on the TSX, TSXV and AIM exchanges as well as M&A advisory assignments. Mr. McDonald has served on numerous public and private boards of directors and has completed the Chartered Financial Analyst "CFA" program.

Philip Blair Mullin, BA, MBA – Independent Director

Over 30 years' experience as CFO, COO, and in consulting and turnarounds. Currently Chief Financial Officer of Redwood Green Corp, a Colorado-based public company. Previously, he was Managing Director of Somerset Associates LLC, a CFO, accounting, tax and financial consulting company from 2018-2020. Began his career in banking in 1982 after completing his MBA from University of Western, London, Ontario, Canada and BA in Economics, Wilfrid Laurier University, Waterloo, Ontario, Canada.

CanaQuest MEDICAL CORP

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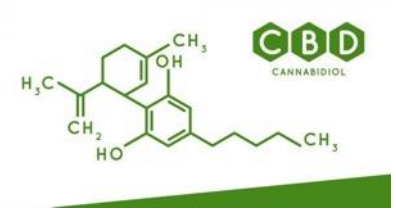
Two Master Formulations

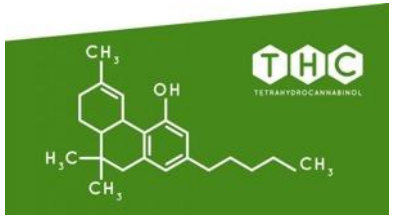
| used as formulation bases for Rx drug candidates

Mentanine®



- Pharmaceutical Grade CBD Omega-3 proprietary formulation
- Medical cannabis product
- Q3, 2021 market launch in USA under the 2018 US Farm Bill authorization; Q4, 2021 launch in Canada

Mentabinol®



- Pharmaceutical Grade THC + L-Theanine proprietary formulation
- Medical cannabis product
- Q4, 2021 market launch in Canada under the Health Canada Cannabis Act

IP protected, patent pending.

Formulation includes CBD. All other ingredients are approved for human consumption and are categorized as ”GRAS” Generally Recognized as Safe by US, Canadian and EU regulatory agencies. Can be delivered through sublingual, spray, soft gels, capsules (timed release).

Master Formulations to be used as formulation bases for Rx drug candidates to conduct clinical trials to treat:

- Anxiety & Depression
- PTSD, Schizophrenia
- Pain Management
- Addiction
- Other neurological conditions

About Mentabinol®

| Pharmaceutical Grade THC + L-Theanine formulation

- **Scientifically developed** by CanaQuest's lead scientist and university-based experts in neuroscience
- **Pre-clinical trial results** – published in peer-reviewed journals

JNeurosci
THE JOURNAL OF NEUROSCIENCE

December 2020

l-Theanine Prevents Long-Term Affective and Cognitive Side Effects of Adolescent Δ-9-Tetrahydrocannabinol Exposure and Blocks Associated Molecular and Neuronal Abnormalities in the Mesocorticolimbic Circuitry

Marta De Felice [1 2], Justine Renard [1 2], Roger Hudson [1 2], Hanna J Szkudlarek [1 2], Brian J Pereira [1 2], Susanne Schmid [2], Walter J Rushlow [1 2 3], Steven R Laviolette [4 2 3]

International Journal of *Molecular Sciences*

July 2021

Reversing the Psychiatric Effects of Neurodevelopmental Cannabinoid Exposure: Exploring Pharmacotherapeutic Interventions for Symptom Improvement

by Marta De Felice [1] and Steven R. Laviolette [1,2,*]

[1] Addiction Research Group, Department of Anatomy and Cell Biology, Schulich School of Medicine & Dentistry, University of Western Ontario, London, ON N6A 5C1, Canada

[2] Department of Psychiatry, Schulich School of Medicine & Dentistry, University of Western Ontario, London, ON N6A 5C1, Canada

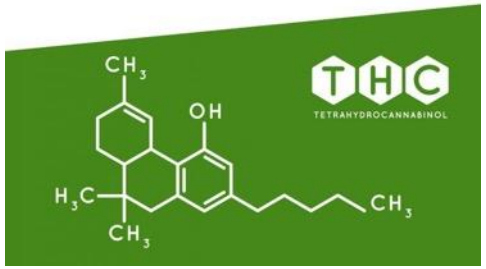
The Scientific Difference | Pre-Clinical Results

Mentabinol®

Scientifically developed proprietary formula

vs. THC

Pure THC



Pre-clinical studies showed:

Complete blockage of memory impairment	→	Memory impairment & possible long-term cognitive side effects
Reduced depression-like and schizophrenia related symptoms such as paranoia, and in some cases, it reversed symptoms	→	Depression-like and schizophrenia-related symptoms
Complete blockage of hyperactive activity and anxiety	→	Can cause anxiety and hyperactive activity
Complete blockage of gene vulnerability related cognitive issues*	→	Schizophrenia due to gene vulnerability

Both- similar efficacy in terms of THC bioavailability, dosage requirements and psychoactive effect. Mentabinol® does not show the negative side effects. Data derived from scientific research and pre-clinical trials by Dr. Steven Laviolette, Neuroscientist, Western University.

* THC can cause long-term memory impairment in people who carry the AKT1 and GSK-3 genes.