Novel Drug Delivery Technologies

Medical Cannabis and Opioids

Quick Dissolving Oral Thin Wafers

for Cancer and Breakthro’ Pain Management

Dr. Pankaj Modi, President/CEO and CSO
Forward Looking Statement Disclosure

Except for the historical information contained herein, the matters discussed in this news release are forward looking statements within the meaning of the federal securities laws. Important factors could cause our actual results to differ materially from those contained in the forward looking statements including our growth strategies, our ability to successfully and economically explore for and develop oil and gas resources, anticipated trends in our business, our liquidity and ability to finance our exploration and development activities, market conditions in the oil and gas industry, our ability to make and integrate acquisitions, the impact of governmental regulation and other risks more fully described in the company’s filings with the Securities and Exchange Commission. Forward-looking statements are typically identified by use of terms such as “may,” “will,” “expect,” “anticipate,” “estimate” and similar words, although some forward-looking statements may be expressed differently. All forward looking statements contained in this release, including any forecasts and estimates, are based on management’s outlook only as of the date of this release, and we undertake no obligation to update or revise these forward looking statements, whether as a result of subsequent developments or otherwise.
Exchange: OTCPK

Ticker: CTTH

No. of Shares
Outstanding : 21,319,302

Market Cap: $1,065,965

Percentage owned by
Management: 45%

Founded: 2014

Headquarters: Hamilton, Ontario

Projected Revenue: To commence next 6-12 months

Key Assets: Canadian Patent #2624110 and US Patent #8623401 Issued
Canadian Patent pending #’s 2910206 and 2922959
US Patent pending #’s 14921501 and 15059444
(Oral Thin Wafers and Topical Creams for Pain Management)

CTT Pharmaceutical Holdings Inc. “CTT” has invented and developed an oral fast-dissolving drug delivery system “the Wafer”, for Breakthro’ Cancer, Post-Surgical and dermatologic pain Management conditions. Our patented Wafer or oral thin film is placed on the top or floor of the tongue, is retained at the site of application and rapidly releases a variety of opioids such as Morphine, Codeine, Fentanyl etc. as well as narcotics such as Marijuana and its derivatives.

CTT FOCUS:

MedWafe – Medical Marijuana and OPIOIDS FOR PAIN MANAGEMENT
CTT believes that - its film strip, encapsulated with a novel opioid reduction formula (combination of THC + CBD + Opioid). This combination will reduce the opioids dosages and will help reduce addiction and improve the patients safety.

CannaWafe – ORAL THIN WAFER: CBD and THC FOR PAIN MANAGEMENT
Oral Thin wafer for pain management and inflammation indications such as Arthritis

While medical use of Cannabis is growing, the current delivery systems of smoking and vaporizing are unhealthy, inconvenient and lack proper dosage control. Our flavored would provide users with a smoke-free, alternative with a proper dosage control that would increase patient use worldwide.

VetWafe – ORAL THIN FILM: PAIN MANAGEMENT
Pain Management for Pet Markets. Thin Films for Treating Dogs and Cats; (Opioids based, Non-Opioids Drugs and Medical Marijuana). Vetwafer product is easy to administer orally as thin film which dissolves within few seconds.

Topical Creams – CBD WITH LOW THC
Topical creams for Dermatologic indications such as psoriasis, eczema

CTT Pharma is targeting commercialization and licensing of the drug delivery system technology to major pharmaceutical companies.
The Cannabis industry is one of the fastest growing business in North America and has potential for explosive global growth.

Legal U.S. sales of cannabis to reach $6.7 billion in 2016.

Canadian sales of cannabis could reach $5-10 billion when approved for recreational use.

CTT’s pioneering method for administrating cannabis through the thin wafer has already been issued patents in both Canada and U.S.

Animal studies at the University of Guelph have been completed with the wafer containing fentanyl showing the effectiveness of the wafer.

Human clinical studies on Canna Wafe were successfully completed in 2015 in Spain University on subjects that were provided the cannabis wafer for specific pain reduction indications.

Production of wafer can be contracted out to certified manufacturing facilities. Also manufacturing facilities can be created if capital and licenses are in place.

In-house leading edge industry expertise relating to drug delivery systems.

LOI signed with CanniMed Ltd., a subsidiary of Prairie Plant Systems Inc. (Sole supplier of medical cannabis to Health Canada from 2002-2013) to commercialize product in Canada.

Licensing opportunities exist to major pharmaceutical companies within U.S., Europe and Asia to bring the products to market world-wide through collaborative efforts and joint venture arrangements.

Revenues to commence within next 6-12 month.
Valuation Of Cannabis Stocks

1) CW Pharmaceuticals, Ticker: GWPH  
   Market cap: $2.7 B

2) Canopy Growth Corp, Ticker: CGC.TO  
   Market cap: $550 mil

3) Medical Marijuana Inc., Ticker: MJNA  
   Market cap: $245 mil

4) Terra Tech Corp., Ticker: TRTC  
   Market cap: $225 mil

5) Cannabis Science Inc., Ticker: CBIS  
   Market cap: $112 mil
BOARD & MANAGEMENT TEAM

DR. PANKAJ MODI, PHD, MD – President and CEO and CSO
• PhD: Biotechnology-Biochemistry-Photobiology
• MD: Internal Medicine with specialization in Endocrinology and Pain Management
• MS: Polymer Science and Engineering
• Author of over 30 US and worldwide patents on various drug delivery systems
• Published over 30 papers and book chapters
• Oral trans-mucosal fentanyl wafer – currently at the licensing stage
• Developed ORAL-LYN (Oral Insulin Spray Delivery)

DR. ALLEN GREENSPOON, Director, MD
• Physician in the Hamilton area for 27-years
• Participated in numerous clinical studies related diabetes, lipids (cholesterol) management, dermatology, obesity, oncology related research and cardiovascular diseases
• Founder of Wellington@Work and the owner of Wellington Medical Centre
• Serves as a director and medical director in many privately held biotech companies.
Letter of Intent “LOI “signed between CTT “The Licensor” and Cannimed (licensed) Medical Marijuana producer through Health Canada’s MMPR program “The Licensee”. The Licensee is an expert in growing various types of Cannabinoids and Cannabis Plants and extracts. The Licensee would like to develop, manufacture and market CTT’s novel Orally Dissolvable Thin Films “ODF” for smoke free delivery of medical marijuana (Cannabinoids and Cannabis derivatives) “The Technology”. Deal is specific to Canadian Jurisdictions. Anything beyond these regions will be subject to new terms. (Deal not released to public. Terms of deal available upon demand)

Filed Cannabis patents (US and Canada for wafer technology) through law firm –Gowlings patent agents.

Patent Application Serial No;
[a ] Opioids Patents
  - Canadian Issued; 2624110 (provides strong Canadian Protection for any Pharmaceuticals including Cannabinoids)
    - US Issued; 8623401

[b ] Cannabinoid/Steroid
  - Canadian; 2910206
  - US pending; 14921501

[c ] Nanonized Cannabinoids Patent;
  - US Pending; 15059444
  - Canadian Pending; 2922959
Medical efforts to treat pain address a large market:

Breakthrough pain is a worldwide problem with serious health and economic consequences.

In the United States: medical economists estimate that the effects of pain result in approximately $100 billion of costs annually, including costs associated with an estimated $515 million lost work days;

According to the National Institutes of Health, approximately 40 million Americans are unable to find relief from their pain;

More than 30 million Americans suffer chronic pain for which they visit a doctor; approximately one million cancer patients suffer from severe pain at any given time
IMPORTANCE OF PAIN MANAGEMENT

Pain control merits a high priority not only for those with advanced disease but also those whose condition is stable and life expectancy is long.

Causes unnecessary suffering.

Weakens will power and body.

Impinges on work, leisure, role in society and family.

Diminishes hope.
MARKET OVERVIEW
CANNABIS Treatment for Various Diseases

**CANCER:** works to slow down tumor growth in the lungs, breasts & brain considerably.

**SEIZURES:** Marijuana is a muscle relaxant & has “antispasmodic” qualities which have proven to be a very effective treatment of seizures.

**MIGRAINES:** have been able to treat more than 300,000 cases of migraines that conventional medicine couldn’t through marijuana.

**GLAUCOMA:** there is not a single valid study that exists that disproves marijuana’s very powerful & popular effects on glaucoma patients.

**MULTIPLE SCLEROSIS:** it works to stop the neurological effects & muscle spasms that come from the fatal disease

**TOURETTE’S & OCD:** the effects slow down the tics in those suffering from Tourette’s and the obsessive neurological symptoms in people with OCD

**ADD & ADHD:** alternative for Ritalin & treats the disorder without any of the negative side effects of the pharmaceutical

**IBS & CROHN’S:** helps with symptoms of the chronic diseases as it stops nausea, abdominal pain & diarrhea.

**ALZHEIMER’S:** blocks the deposits in the brain that cause this disease

Premenstrual Syndrome: used to treat cramps & discomfort
Legal marijuana is the fastest-growing industry in the United States and if the trend toward legalization spreads to all 50 states, marijuana could become larger than the organic food industry, according to a new report obtained by The Huffington Post.

Researchers from The ArcView Group, a cannabis industry investment and research firm based in Oakland, California, found that the U.S. market for legal cannabis grew 74% in 2014 to $2.7 BILLION, up from $1.5 BILLION in 2013. Over the next five years, the marijuana industry is expected to continue to grow.

The report also breaks out some interesting marijuana trends from around the nation. California still has the largest legal cannabis market in the U.S., at $1.3 BILLION. Arizona was found to have the fastest-growing major marijuana market in 2014, expanding to $155 MILLION, up more than $120 MILLION from the previous year. More than 1.5 million shoppers purchased legal marijuana from a dispensary, either medical or recreational, in 2014. Five states now boast marijuana markets that are larger than $100 MILLION, and in Colorado and Washington -- the first states to open retail marijuana shops in the U.S. - consumers bought $370 MILLION in marijuana products last year. Oregon and Alaska are expected to add a combined $275 MILLION in retail marijuana sales in their first year of operation, the report projects.

This year it’s expected to create $6.7 billion of new wealth.

By 2020, Bank of America and Merrill Lynch estimate that will grow to $35 billion a year.

And many experts believe it could eventually become a $150-$200 billion industry.

The New York Times describes what’s taking place as a “gold rush.” And now, one event is going to trigger an explosion for this commodity
74% GROWTH IN 2014
U.S. legal cannabis market GREW from $1.5 BILLION in 2013 to $2.7 BILLION in 2014
$2.7 BILLION U.S. CANNABIS SALES BY STATE IN 2014

- California: 49%
- Colorado: 30%
- Michigan: 4%
- Oregon: 2%
- Washington: 8%
- Arizona: 6%
- All Others: 1%

Source: ArcView Market Research (consumer and wholesale sales)
CANNAWAFE PROJECTS

DESCRIPTION: Is a oral dispersible film retained at the site of application and rapidly releases the THC, Terpenes and Cannabinoids for local and/or systemic absorption. CTT Pharma-orodispensible films technology drug delivery system will work with any strain or species of cannabis and can be provided in various packaging configurations, ranging from unit-dose pouches to multiple-dose blister packages.

BENEFITS:
- Smoke-Free
- Convenient and Discrete (Administer anytime/anywhere)
- Dosage Control (Limits addiction)
- Odorless
- Fast Onset (Enters bloodstream quickly – bypassing lungs and/or stomach)
- Flexibility (Works with any strain of cannabis)
- Easy and Clean Application (No rolling or handling of cannabis)
- Flavoured (Mint, Cannabis, Food, etc.)
- Serialized packaging
- Coloured (Represent strength & dosage)
MEDWAFE (Canna Wafe)

DESCRIPTION: A Fast dissolving, oral, thin film for the administration of opioids and Marijuana and combination of drugs to provide fast and effective pain relief

BENEFITS:
• Novel formulation for chronic pain management
• Improved drug delivery;
• taken without water,
• faster onset,
• better taste
• bypasses stomach reducing delays in the onset of action attributed to ingestion
• Serialized packaging
Wafer Cassette

Single wafer

Wafer Aluminum Pouch packaging
Opioids Global Sales

- United States: 37.1%
- Germany: 17.7%
- Spain: 6.7%
- France: 5.7%
- Canada: 5.3%
- United Kingdom: 3.3%
- Italy: 2.4%
- Japan: 2.1%
- Other countries: 19.7%
Opiates Market

- **Opioids generated $11b in revenues** for pharmaceutical companies - market research firm Frost & Sullivan.
- Americans, which comprise 5% of the world’s population, consume **80% of the world’s opioid supply**. The cost of prescribing opioids is significant.
- **Sales of opioids are up 110% from $3.97b in 2001 to $8.34 b in 2015.**
- In 2017, **254 million prescriptions for opioids were filled in the U.S.**, according to Wall Street analysts Cowen & Co.
- Americans and Canadians, which comprise 11% of the world’s population, consume **80% of the world’s opioid supply**. The cost of prescribing opioids is significant.
CLINICAL STUDIES
The purpose of this study was to determine in a randomized, crossover manner, the efficacy (effect, or bio-availability) of a Cannabis wafers containing THC/CBD medication (pain relieving agents). The secondary objective was to assess the safety, tolerability and the side effects of various doses with the onset of action.

The study was a opened label, randomized, crossover, and dose ranging comparative study of Wafer, Vaporizer and THC wafers administered on different days in 13 healthy subjects (7 men and 6 women).

The wafer was only 1.5-2 cm and approximately 0.05 mm thick. The wafer is made from the FDA approved non-medical ingredients used in several pharmaceutical formulations, The trials were conducted in Spain University Medical Center.
Blood Levels Comparison
Vaporizer, Wafer and Gum

Blood Levels
Time (mins)
Decrease in Pain Score
(High THC 20 mg, 3 times Daily)
Decrease in Pain Score
(THC:CBD 1:1) 3 times Daily
Comparison: Vaporizer, Spray and Wafer

Comparison chart showing THC spray, high THC vaporizer, THC gum 10 mg, and THC gum 20 mg.
CONCLUSIONS

• The dose ranging studies indicated the bioavailability is comparable to i.v. injection or vaporized dosing as the Peak plasma concentrations were achieved Pmax or (Cmax) within 10 minutes.

• no serious adverse events observed during the trials even using higher doses of THC and CBD. The heart rates, respiratory rates and blood pressure remained normal during the entire study period and patients tolerated the taste and drug well.

• These observations conclude this novel drug delivery system is commercially viable for treatment of pain management, and other neurological disorders, like epilepsy, PTSD, breakthrough cancer and post-surgical pain in humans.
Thank You

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