

OPEN BOOK
EXTRACTS



VOLUNTEER
BOTANICALS

Special Delivery:

Powerful Ingredients and Potent Delivery Systems

Join Forces to Drive Consumer Demand

Joining us today...

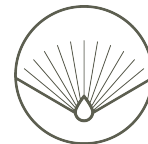


Jason Pickle
Co-Founder & Chief Sales Officer
Volunteer Botanicals

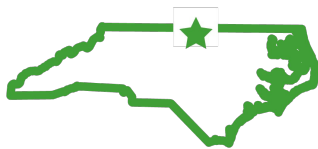


Nicole Brown
Chief Commercial Officer
Open Book Extracts

About Open Book Extracts



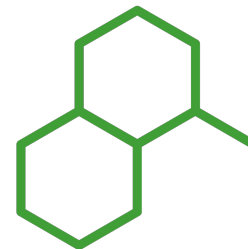
Vertically integrated grower, processor & manufacturer of CBD ingredients



76,000 square foot facility in Roxboro, NC



GMP certified facility

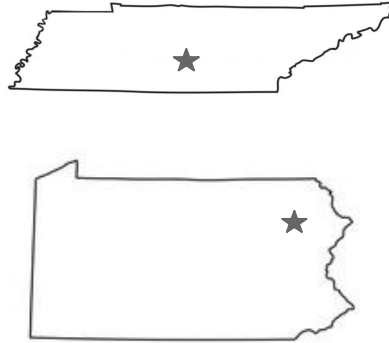


Premium genetics grown by network of carefully vetted farmers in North Carolina and Virginia

About Volunteer Botanicals



Intermediate
Manufacturer of
cannabinoid and
terpene-based
ingredients.



Two post-conversion
facilities. Christiana,
TN and Dunmore, PA.



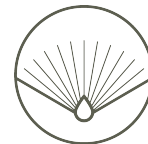
Cannabis and
Pharmaceutical roots.



Patent-pending
post-conversion
technology.

The (Not-So)
Minor
Cannabinoids

Market Potential



New Frontier Data recently compiled data around the market potential, and the numbers are compelling. The six top applications alone currently represent a **\$72 billion drug therapy market** - in America, alone.

\$49.4b

DIABETES

\$9.3b

RHEUMATOID
ARTHRITIS

\$6.2b

WEIGHT LOSS

\$5.3b

PAIN RELIEF
(OTC)

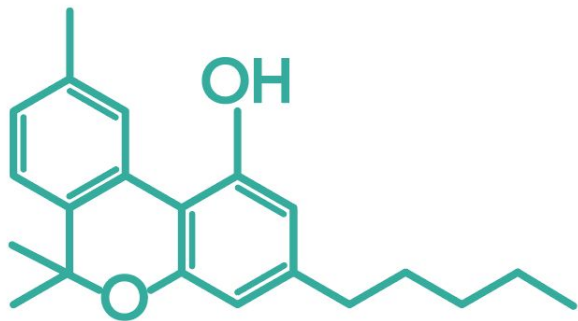
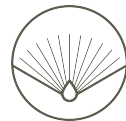
\$314m

MULTI-SYMPATOM GI
(OTC)

\$1.9b

GLAUCOMA

CBN (cannabinol)



CBN is considered a mildly psychoactive cannabinoid known for its powerful sedative and relaxing properties. CBN may help relieve symptoms of anxiety, insomnia, and stress. Similar to opiate receptors, the activation of CB1 and CB2 by CBN result in suppression of neurotransmission. Therefore, using CBN may mimic endocannabinoids which have been shown to promote rapid-eye-movement sleep by interacting with melanin-concentrating hormone neurons in the lateral hypothalamus.

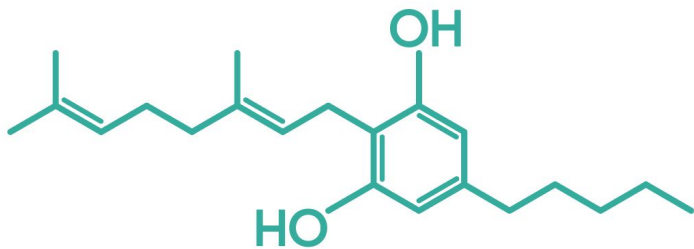
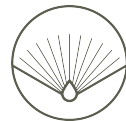
POTENTIAL APPLICATIONS

Pain Relief, Cancer, Anti-bacterial,
Sleep & Anxiety, Osteoporosis



*Research on rare cannabinoids is relatively new. While recent, early findings are promising, these statements have not been evaluated by the FDA. These products are not intended to diagnose, treat, cure or prevent any diseases.

CBG (cannabigerol)



CBG is a non-psychoactive cannabinoid that plays an important role in the biochemistry of the cannabis plant, acting as a chemical precursor to other cannabinoids. CBG may aid in the hydration and healing of dry skin, psoriasis and eczema. It possesses powerful anti-inflammatory, antibacterial, antimicrobial, antifungal, and antioxidant properties. CBG is also a potent CB2 agonist (activator). CB2 receptors are found in peripheral tissues and gut. Activation of these receptors induces immune suppression and displays analgesic effects.

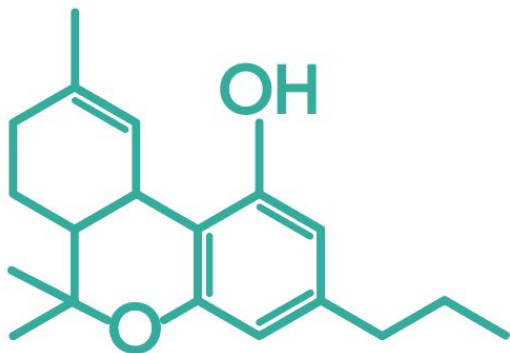
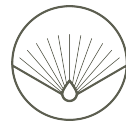
POTENTIAL APPLICATIONS

Neurodegenerative conditions,
Anti-cancer, Colitis & Crohn's,
Antibacterial, Skin Dryness



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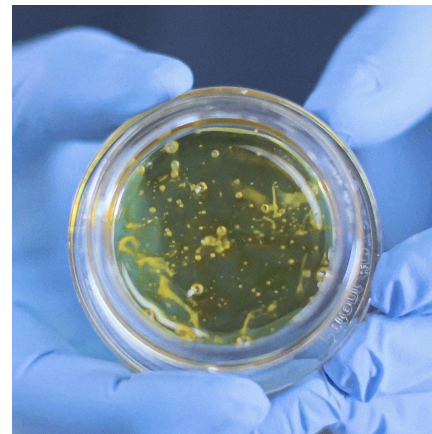
THCV (tetrahydrocannabivarin)



THCV is a powerful appetite-suppressant cannabinoid shown to be very effective in treating inflammation and acne without the psychoactive effects of THC.

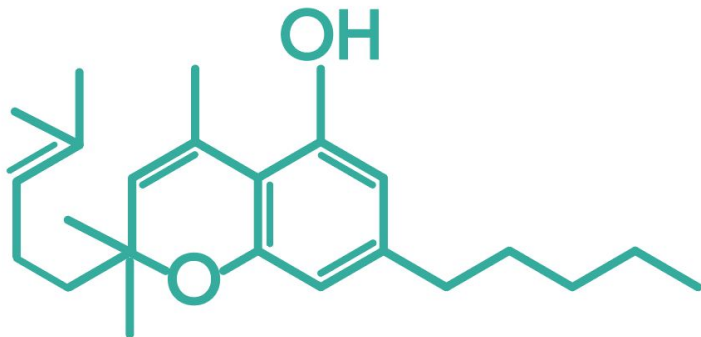
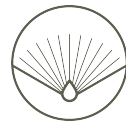
POTENTIAL APPLICATIONS

Metabolic Syndrome, Type 2 Diabetes, Panic Attacks & PTSD, Parkinson's, Anxiety and ADD



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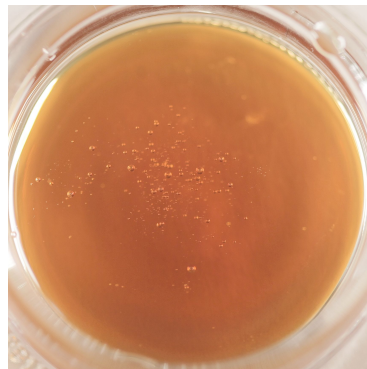
CBC (cannabichromene)



CBC is a non-psychoactive cannabinoid with a host of potential therapeutic applications. CBC may relieve pain, fight acne, act as an antidepressant, and assist with digestive and gastrointestinal disorders.

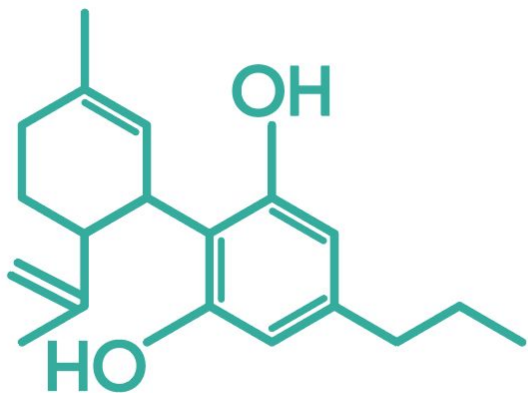
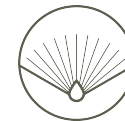
POTENTIAL APPLICATIONS

Pain Relief, Acne, Depression,
Gastrointestinal Disorders,
Alzheimer's



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CBDV (cannabidivarin)



CBDV is a non-psychoactive cannabinoid and homolog of CBD, with the side-chain shortened by two methylene bridges. Like CBD, CBDV significantly reduces the frequency and severity of seizures. It also reduces nausea, inflammation and may be beneficial in the treatment of pain, mood disorders, and acne.

POTENTIAL APPLICATIONS

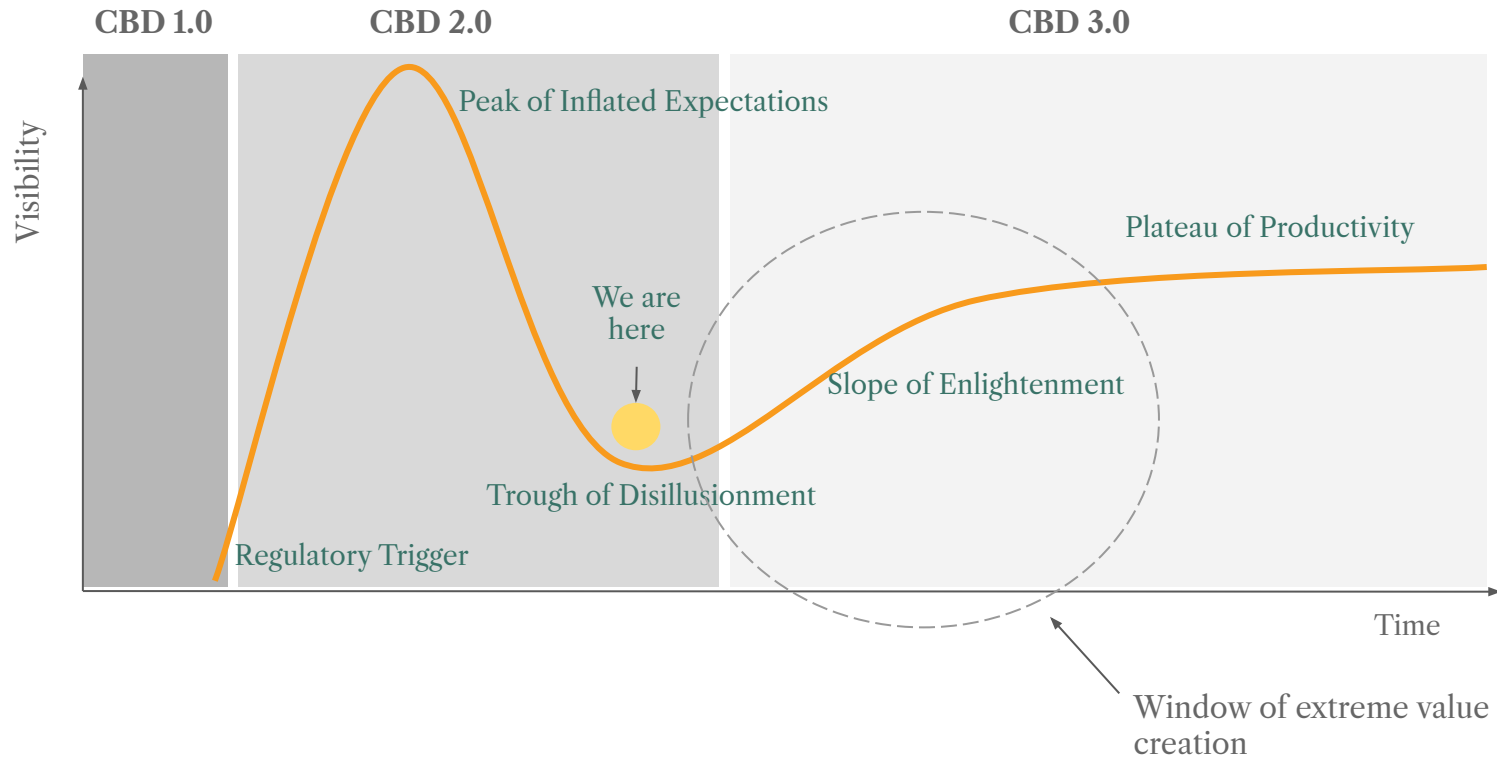
Preventing Seizures, Anti-Nausea,
Autism Spectrum Disorder,
Inflammatory Bowel Disease,
Musculoskeletal Disorders



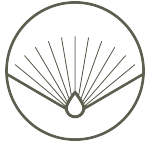
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Are Your Products
Ready for **CBD 3.0?**

Evolution of the CBD Industry

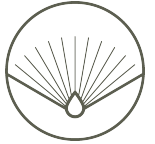


What is Innovation?



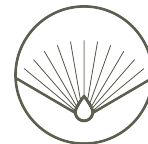
“Product Innovation” is defined as
“the development and market introduction of a new, redesigned, or substantially improved good or service.”

What Do Consumers Want?



- **Efficacy:** CBD customers hold efficacy as their key desire. Customers are motivated to pursue CBD to help them with a range of ailments, so they will want a product that works.
- **Quality:** CBD-dominant users value product quality next. CBD is a premium wellness product. If you offer CBD products, you need the ability to answer critical questions about the CBD that you use and articulate its quality.
- **Form:** Finally, CBD customers prioritize the form of the product they use. As the popularity of CBD continues to expand beyond the mainstream, we can expect for the form to become increasingly important.

3 Ways To Innovate for CBD 3.0



1. **Pure Cannabinoid Blends:** CBD is no longer one-size-fits-all. It is essential to respond to the rising demand for products with defined amounts of each of the rare cannabinoids such as CBN and CBC, whose specific properties and benefits are now widely known by consumers.
2. **Ingredient Advancements:** Novel ingredients will drive new consumers into the CBD category due to its increased bioavailability, faster onset, and delightful sensory experience.
3. **Routes of Administration:** If cannabinoids are going to meet their therapeutic potential, product developers need to be thinking about the most optimal delivery systems to unleash the benefits of cannabinoid ingredients.

That is why OBX joined forces with Volunteer Botanicals, pairing OBX's innovative ingredients with Volunteer's flowable powder technology, allowing us to develop dynamic, efficacious products such as instant release tablets and chewables that will win the hearts and minds of even the most critical consumers.

Special Delivery: The Science Behind Flowable Powders

Flowable Powder Technology

Flowability - how different solids perform in a non-static state. There are many factors that effect or dictate a powders' flowability.



Cannabinoid Ingredient

- Distillates, Isolates
- Less than 0.3% THC
- Highly pure, tracable, & transparent products with OBX



Flowable Powders

- Refined Cannabinoid Ingredient
- Convert each extract individually, test the flowable powder and reconstitute for precise ratios
- Work extremely well when blended with other nutraceuticals



Finished Goods

- Solid oral dose formats; capsules, combo capsules, and various pressed tablets
- Consistent Products & Precise Ratios

Lipid Neutralization System (LNS)



Cannabis
Crude



Distillate Oils



Terpene Oils



Isolates



This patent pending LNS technology allows Volunteer Botanicals to convert a wide range of cannabis ingredients to nearly identical particle size and density.



Finished Goods



Currently Available:

Instant release tablets

Chewable tablets

Oral dissolving tablets

Combo capsules

Extremely high potency straight fill capsules

In Development (Coming Soon):

Tablet coating for extended and modified release

Rare cannabinoid & nutraceutical blends

Product Demo

Q/A

Thank You!

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