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FARM TO HEALTH

"Growing hemp as nature designed it is vital to our urgent need to reduce greenhouse gases & ensure the survival of our planet." Jack Herer

t looks like 2019 may be the year that the levee breaks on cannabis prohibition. This is a fairly common sentiment in the cannabis world following the sweeping success seen in 2018. Voters in Michigan passed adult-use legalization, adult-use sales began in Massachusetts, Canada became the first country in North America to legalize adult-use, Utah and Missouri (both conservative havens) passed medical cannabis measures, and a number of elected officials came out in support of adult-use cannabis legalization. Here in Colorado, we elected our most vocally supportive congressman, Jared Polis, to be governor, replacing cannabis detractor-turned-reluctant-booster John Hickenlooper, who was term limited. 2018 may have been the year that forced politicians to realize the overwhelming popularity of cannabis, and that if they won't take steps to support this wildly popular movement, we'll find representatives who will.

All of that progress in personal liberty and sensible policy may be dwarfed by the passage of the 2018 Farm Bill, however, which at long last legalized hemp on the federal level. While this story doesn't grab headlines as well as the legalization of intoxicating varieties of cannabis does, the impact will likely be monumental. Hemp farmers will now have access to federal programs, like subsidies and crop insurance, moving hemp into the same realm as every other agricultural crop, furthering the economic and environmental possibilities of this amazing plant.

But this groundbreaking development isn't without its confusion. While the bill contained language addressing hempderived CBD, there is still much confusion thanks to the DEA, the organization tasked with protecting us from dangerous substances, which still considers CBD to be a Schedule I controlled substance unless it is part of an FDA-approved medicine (so far, only Epidiolex) in which case it slides down to Schedule V. That confusion has already manifest in the recent seizure of hemp material bound for Colorado but intercepted by local authorities in Oklahoma. How this and similar scenarios play out remains to be seen — that case had not been resolved at the time of this writing — but the Farm Bill contains language seeming to address this.

If there is one negative to come out of the Farm Bill, though, it is in the positive attention it has granted to Kentucky Sen. Mitch McConnell, who has been credited with authoring the hemp provisions. McConnell, who worked tirelessly against healthcare reform and now works to abed President Trump as he subverts our democracy, has been lauded for championing this common-sense cause, one that will disproportionately benefit his home state of Kentucky, which boasts the second most well-developed hemp farming program after Colorado.

Will 2019 be the year that cannabis progress finally steamrolls the remaining detractors? Hopefully. But it would be truly shameful if the people who have dedicated their lives to human and environmental degradation can co-opt the movement.

Here's to a prosperous year ahead.

Christianna Brown Editor-in-Chief



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Matthew writes about all sorts of things from energy, to pot and hemp, to primitive skills. He also writes content for businesses, is working on a podcast, thinking about a sci-fi novel and what embarrassing story he should use for his first time doing stand-up.

IN THIS ISSUE | WINTER 2019



10 Winter 2019

In This Issue

13	THE GREEN SCENE Events, Good Reads & High Fashion
18	FEATURED PRODUCTS We Did tbe Searching for You
37	LIFESTVLE Livin' that Cannabis Life
38	RECIPES Hemp Eats
42	CANNABIS EATS With Chef Karin Lazarus
5 4	FEATURED GLASS ARTIST Heat for the Streetz
5 8	FASHIONABLY HEMP An Interview with Hemp Activist and Model Cait Curley
66	SUSTAINABLE ROCK & ROLL Hemp Guitars are the Future
73	BUSINESS & POLITICS Cannabusiness in Full Bloom
71	DYNAMIC DUOS Partnerships that Work
86	LOOKING FORWARD What Federal Legalization Could Mean for Hemp
90	WHAT'S BREWING IN THE MARIJUANA BEVERAGE INDUSTR Potentially a Corporate Takeover
94	MICHIGAN ADULT USE CANNABIS What's in Store for the Wolverine State?
99	SCIENCE & TECHNOLOGY For Your Information
100	CBD FOR AGING PETS Improve your Pet's Life with CBD
104	CANNABINOID TOPICALS What Can They Treat?
108	A CASE FOR EXPANDED CBD RESEARCH More Research is Needed on the Effects of CBD
110	POT-LITICALLY INCORRECT Running the Numbers
114	5 CANNABIS PAIRINGS What Goes Well with Cannabis



hcmagazine.com 11

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THE GREEN SCENE Our top picks for winter

Events, Featured Products, In the Spotlight, Good Reads & High Fashion

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hcmagazine.com 15

Gannabis Events

FOR A COMPLETE LIST OF EVENTS VISIT *HCMAGAZINE.COM/EVENTS*

NCIA SEED TO SALE SHOW 2019 February 12th - 13th Craneway Pavillion Boston, Mass.

DETAILS: There aren't many organizations that can match the tireless advocacy that the National Cannabis Industry Association has put forth in support of the cannabis plant and those seeking to make a living form it. The NCIA's Seed to Sale Shows are a reflection of that, offering savvy entrepreneurs the chance to learn from the best the industry has to offer and network with other professionals. www.seedtosaleshow.com

CANNATECH: CANNABIS INNOVATION SUMMIT February 12th - 13th Panama

DETAILS: Panama sits at an important nexus for global trade, and once the global cannabis trade inevitably comes online it will surely serve that purpose for international cannabusinesses. This event brings experts in fields of science, medicine, finance, ag-tech, innovation and government policy together for a rousing two-day conference in the gateway to the Americas. www.panama.canna-tech.co



MICHIGAN HEMP SYMPOSIUM March 23rd Grand Rapids, Michigan

DETAILS: It may not get the attention that states like California or Colorado do, but the recent passage of adult-use legalization in Michigan proves that there has always been strong undercurrent of cannabis progress in the state. The one-day Michigan Hemp Symposium will offer folks a chance to get a jump on the nascent hemp industry, a proposal made more tantalizing by the passage of the Farm Bill. www.facebook.com/ events/629441577511631/

CENTRAL US HEMP GROWERS CONFERENCE & EXPO February 25th & 26th ROCHESTER, MINNESOTA

DETAILS: Hemp is booming in the Midwest, and Minnesota is getting in on the action. The second annual Central US Hemp Growers Conference and Expo should offer plenty of opportunities for future hemp farmers looking to take part in the 2019 season, and give veteran hempsters a chance to build their networks and their businesses. www.ushempexpos.com

HEMP & CBD EXPO March 2nd - 3rd Birmingham, United Kingdon

DETAILS: The jolly old chaps across the pond aren't content to sit out the explosion of hemp and CBD. This is set to be the UK's first dedicated hemp and CBD event, and as such is sure to attract the most forward-thinking entrepreneurs. Both B2B and B2C guests are invited, so check it out whether you're planning on selling or buying hemp products. www. hempandcbdexpo.co.uk



NOCO HEMP EXPO March 29th - 30th Denver, Colorado

DETAILS: In 2013, the first legal hemp crop in the nation was grown in Colorado, and this development was followed shortly by the creation of the NoCo Hemp Expo. Since then, NoCo has grown into the preeminent display of the hemp industry, attracting capitalistic businessmen and dreadlocked hippies alike. It's an eclectic mix, but definitely worth attending for anyone interested in the domestic hemp market. nocohempexpo.com

THE GREEN SCENE | EVENTS

CANNATECH: CANNABIS INNOVATION SUMMIT April 1st - 3rd Tel Aviv, Israel

DETAILS: Promising TEDstyle talks about cannabis, the CannaTech Cannabis Innovation Summit will have plenty to offer those interested in investment, research, ag-tech, innovation, and regulatory issues within the global cannabis market. The conference is hosted in the heart of medical cannabis science, Tel Aviv, Israel, and is sure to be packed with innovative thinkers to learn from. hempevents.com

CANNABIS SCIENCE CONFERENCE EAST April 8th – 10th Baltimore, Maryland

DETAILS: It's an unfortunate reality in the cannabis world that scientific understanding isn't always in step with advocacy. The Cannabis Science Conference looks to change that, bringing together researchers, doctors, technological innovators, industry experts and more into an event aimed at advancing cannabis science. While the federal government has impeded scientific advancements around cannabis, the folks that will be at this conference are plowing ahead nonetheless. www. cannabisscienceconference. сот



HANFEXPO 2019 April 26th – 28th Vienna, Austria

DETAILS: The global hemp market should pique the interest of any serious entrepreneur, and the Hanfexpo in Vienna is a good place to see it in action. The three-day expo is said to feature 140 exhibitors displaying the latest trends in the hemp market. The expo is great stop for those looking to do business in Europe. *hempevents.org*

THE HEMP BIZ CONFERENCE May 1st - 2nd Denver, Colo.

DETAILS: With a business-to-business focus, the Hemp Biz Conference should be a great place to learn about the managerial ins and outs of running a hemp business. Whether you're looking to get into CBD, seed or fiber production, or any of the myriad other opportunities provided by the hemp plant, there's sure to be something worth checking out.*thehempbizconference.com*

2ND ANNUAL VERMONT CANNABIS CONVENTION May 17th - 19th Burlington, Vermont

DETAILS: The New England Cannabis Network is back at it, this time bringing an all-encompassing trade show to Vermont. While adult-use sales are not currently allowed under Vermont's cannabis laws, that may soon change, and this event is where the people who will make that happen are going to be. There will be plenty of opportunities for folks interested in the medical marijuana and hemp markets, though. www.necann.com



OREGON HEMP CONVENTION July 7th - 8th Portland, Oregon

DETAILS: Oregon is a cannabis-friendly kind of state. It's also a state with a rich agricultural tradition. This convention will merge those two aspects, offering folks in the Beaver State a chance to check out the innovations in all aspects of hemp and network with others who are making it happen. oregonhempconvention.com



SOLE'S DESIRE REPAIR CREAM | \$20

Tea tree, arnica and hemp seed oil come together to provide a nourishing, hydrating boost for your worn-out skin. Lavender and grapefruit essential oils help give it a soothing aroma that will calm the most calloused parts of your dermis. *hempauthority.com*

Featured Products

★ <u>HVALURONIC ACID CBD NIGHT CREAM | \$70</u> Hyaluronic acid works to maintain a barrier

Hyaluronic acid works to maintain a barrier in skin cells, keeping moisture inside where it belongs. Couple that with the anti-inflammatory, homeostasis-promoting properties of CBD and you've got a cream that will keep skin healthy and happy overnight. *morcheaba.com*

The *HC* staff wants to share our favorite products for the winter season. We hand picked and reviewed every product on this list, highly enjoying each and every one. Enjoy!



CBD DAILY SHAMPOD & CONDITIONER | \$20 There's no shortage of CBD-infused products meant to heal and preserve your skin, but the scalp often goes overlooked. Keep your hair happy and your dander in check with this CBD shampoo and conditioner. hempauthority.com

RECOVERY RELEAF VANILLA PURE CBD OIL | \$150

The use of tinctures for sublingual uptake is one of the most effective means of ingesting cannabinoids. Unfortunately, tinctures often aren't the tastiest, and that can be a problem since you're going to be holding it in your mouth longer than you would other products. Recovery relief addresses this issue with a flavorful vanilla blend that still provides 25 milligrams of hemp-extracted CBD per serving. *recoveryreleaf.com*





THE GREEN SCENE | FEATURED PRODUCTS

RELIEF & RECOVERY SPRAY | \$28

This hands-free spray made with hemp-derived CBD, essential oils and cooling menthol is easy to apply and dries quickly, making it a great option for fast, on-the-go topical CBD application. www.sagelynaturals.com

Photo © Sagely Naturals

SAGELY



All natural ingredients Cooling to the skin Hands-free application dries quickly



TRA STRENGT

50 mg CBD 2 fl oz / 60 ml



HEMP HEART TOPPERS, ONION, GARLIC & ROSEMARY | \$5 <

We all need to eat more leafy greens, but salads get boring quickly. Add some variety to your salads as well as the added protein and omega fatty acids found in hemp hearts by sprinkling these on top of your mix. www.walmart.com

HEMP ORGANIC MICRO GREENS KIT | \$24

Grow micro greens for at home in hemp mats. A great addition to salads or other healthy recipes, freshly sprouted greens add vitality to your culinary creations. The kit includes six hemp mats that fit inside two domed trays. Seeds sold separately. www.harrisseeds.com





HEMPCRETE DIV KIT | \$30

If you've ever wanted to play around with some of the practical applications of hemp, this DIY kit gives you a chance to try your hand at hempcrete, a versatile material made from hemp hurd and a binding agent. You won't be making houses, but it's neat to play around with and will certainly get you thinking about larger projects. www.etsy.com, LDAYshop



HEMP & GREENS SUPERFOOD CEREAL |\$8

A productive day starts on a healthy foundation, and this nutrient-packed cereal is about as healthy as it gets. Combining hemp seed with chlorella, spirulina, sprouted buckwheat and a plethora of other healthy greens, this lightly sweetened cereal is fuel for success. nuts.com



THE GREEN SCENE | FEATURED PRODUCTS



MAJOR HEMP BROWN ALE | \$45 Hemp is becoming a staple ingredient in beer these days,

and this homebrew kit gives you



GET OUTSIDE HEMP SWEATER | \$79

Made from 45 percent organic cotton, 36 percent hemp and 19 percent viscose, this sweater will keep you toasty during winter activities. While we're not big fans of viscose (look it up) it allows the sweater a bit more stretch than it would have otherwise. *www.moosejaw.com*



HEMP F.O.M SHORT SLEEVE SHIRT | \$50

The Duluth Trading Company makes clothes for rugged men who can still manage not to smell bad, and this hemp-blend shirt is a solid embodiment of that. Made of 55 percent hemp and 45 percent organic cotton, it's a good look no matter where you are. *www.duluthtrading.com*



THE JACK DRESS SHIRT | \$125

Offering a sophisticated yet rugged look, this shirt blends 55 percent hemp fiber with 45 percent organic cotton. Relaxed but not too relaxed, this shirt works as well at the office as it does on a night out. *www.taylorstitch.com*





HEMP KNIT HEADBAND | \$15

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Keep your hair out of your face while working out or keeping busy with these 35/65 hemp-wool blend headbands. Available in four different colors, you're sure to find one that matches your style and your outfit. *hempauthority.com*

THE GREEN SCENE | FEATURED PRODUCTS

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LADIES' FURRY HOODIE | \$208 HoodLamb is the premier designer brand of hemp clothing, maintaining a focus on thoughtfully designed, environmentally friendly apparel. This hoodie is lined with their signature Satifur lining, making it as plush and comfortable as it is stylish. us.hoodlamb.com



MEOWIJUANA® CATNIP | \$20

We all know that joyous feeling of popping the top off of a fresh jar of well-cured buds, now your cat can get in on the action with a jar of Meowijuana. Trimmed catnip buds evoke their cannabis counterpart, making this a fun product for the whole cat fam. *www.petsmart.com*

FIREFLY 2 PORTABLE VAPORIZER | \$330

A sleek and compact option for total vapor discretion, the Firefly 2 improves on the original design to be smaller and lighter than the previous model. It works with flower or extract, and temperatures can be adjusted via the companion app. *smokea.com*



\checkmark

5" ROCKER STEAMROLLER | \$26

There's something to be said for the simplicity of a steamroller. This pipe doesn't pack a lot of frills, but if you like to smoke on the go you probably won't be missing anything. The smaller bowl makes it ideal for a quick hit whenever you can catch a break. *smokea.com*



BUD BOMB PIPE | \$25

The Bud Bomb is a great choice for smokers on the go, keeping everything packed and ready to go at a moment's notice. The internal cooling helix helps prevent those overheated hits and can be kept in the freezer prior to use for even smoother hits. www. everyonedoesit.com



THE GREEN SCENE | FEATURED PRODUCTS



In the Spotlight



CBD LUXE CBD INHALER | \$80

When it comes to cannabinoid intake, the fastest and most effective method is to simply inhale it. Unfortunately, smoking and vaporizing cannabis products isn't allowed in many places, which can make this method of uptake a little more difficult than it needs to be. Fortunately, this line of CBD inhalers offers a solution. Each puff off of this inhaler contains 5.5 milligrams of CBD, allowing for discreet usage just about anywhere. With a variety of blends intended for a variety of different purposes, you're sure to find one that will fit your needs. cbdluxe.com



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DOPE CUP 2017

IST PLACE SATIVA - COOKIE DOUGH IST PLACE INDICA - HOLY GRAIL KUSH IST PLACE HYBRID - GRANOLA FUNK



2 GRAND CHAMPION, 15 1^{st} place, and 47 awards overall



Good Reads



Reviewed by Christie Lunsford

E xciting new opportunities for the hemp industry have come out of the 2018 Farm Bill. Anyone interested in how CBD and other medical applications of the cannabis plant are contributing to that by breaking down stereotypes will want to check out an important new book, *The Medicalization of Marijuana: Legitimacy, Stigma, and the Patient Experience.*

This engaging book uses in-depth interviews to describe what it means to participate in medical cannabis programs from the patient perspective. It captures experiences of patients in Colorado as they gather information, make decisions, talk to doctors, and decide how and when to use cannabis. Extensive excerpts from individual stories animate the book and convey the unique personalities and common concerns of both patients and industry insiders. As compelling as these voices are, the strength of this book is in the way it uses these accounts to illuminate the medical, social, and historical context of the expansion of modern-day cannabis programs and policies.

The first chapters provide a terrific cultural and policy analysis of the trajectory of cannabis over the 20th century, from folk medicine to criminalized recreational substance and into the state medical programs that began in the 1990s. Unlike journalistic accounts of the social history of cannabis, this book reveals how much the last century of controversy over cannabis has revolved around its role as a medicine versus its role as an intoxicant. Throughout, the authors build a case that cannabis has been subject to a "single story," backed by and enforced through authority, that has insisted all plants, all users, and all uses are equivalent. Medicalization is changing that. State medical cannabis programs and the expanding awareness of how cannabis may help treat serious conditions when other medicines can't have driven a wedge into this single story of cannabis as a

drug of abuse, breaking out a recognition of the diversity of this plant.

The experience and expertise of the authors, Michelle Newhart and William Dolphin, is evident as the book builds across the chapters, starting with fairly simple, concrete questions that patients face in their choices and routines, and building up to more complex and abstract questions. In the last chapters, the authors turn to the risks and stigma associated with cannabis, showing how cannabis patients manage these aspects by relying on similar strategies, both individually and collectively. At once moving and deeply informative, this book is ideal for anyone who wants a deeper understanding of how the medicinal use of cannabis fits with what behavioral research has established about how people deal with illness and medicine. Seeing it in that context gives us new ways of talking about what's happening with hemp and insight on what the future may hold.



10am-5pm

HEMP AND CBD AUCTION



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KIEF HOODIE \$35 We think that Kief is a beautiful word that looks great on a sweatshirt.

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Sizing: S-XL Material: 50/50 cotton poly blend with comfort in mind. Colors: sport grey, white, ash, black, pink, light blue

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CANNABIS IS FOR CLOSERS

KEN AHBUS LOGO SNAPBACK | \$30

One size fits all Material: Classic embroidered snapback design. 80% acrylic/ 20% wool. Green under visor. Colors:Black/Black, Black/Teal, Black/Red, Black/Silver, Natural/ Black, Heather Black

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KEN AHBUS

Sizing: S-XL Material: 50/50 cotton poly blend with comfort in mind. Colors: sport grey, white, ash

GRAMS& SHIRT | \$25

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LIFESTYLE

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SHERRE HEALTHY, DELICIOUS

HEMP CHALLAH BREAD

Makes 2 loaves

Ingredients:

2 1/2 cups warm water (110° F/45° C) 1 Tablespoon active dry yeast 1/2 cup honey 4 Tablespoons vegetable oil 3 eggs 1 Tablespoon salt 1/2 cup hemp hearts 7 cups unbleached all-purpose flour 1 cup hemp flour

Directions:

In a large mixing bowl, pour in your warm water and sprinkle yeast over it. Beat in the honey, vegetable oil, 2 eggs, salt and hemp hearts. In a separate bowl mix together the all-purpose flour and the hemp flour. Add the flour mixture to the wet mix one cup at a time, beating after each cup is added, and switch to kneading with your hands as the dough becomes thicker. Knead until the dough is smooth and stretchy and no longer sticky to the touch, adding more flour as needed. Cover the dough in the bowl with a clean damp cloth and let it rise for an hour and a half or until the dough has doubled in volume.

Press down the risen dough and then dump it out onto a floured work surface. Divide the dough in half and knead each half individually for five minutes, add flour as needed to reduce stickiness. Divide each half into thirds, and then roll the newly divided pieces into long rope-like rolls about one and a half inches thick. Pinch the ends of the three ropes together tightly and begin braiding. Once braided, pinch the other end closed. Grease two baking sheets and place the finished braids on them, tucking the ends underneath. Again, cover with a towel and let rise for approximately one hour.

Heat the oven to 375° F. In a small bowl, beat the remaining egg and using a pastry brush, apply a generous coat over the top of both braids.

Bake for approximately 40 minutes. The baked bread should be golden brown and have a hollow sound when thumped on the bottom. Transfer the loaves to a cooling rack for at least one hour before serving.

CREAMY PESTO SHRIMP

Makes 8 servings

Ingredients:

pound linguine pasta (hemp pasta if possible)
 1/2 cup butter
 cups heavy cream
 1/2 teaspoon ground white pepper
 cup grated Parmesan cheese
 1/3 cup pesto
 pound large shrimp, peeled and deveined
 Sea salt

Pesto Ingredients:

3 cups packed fresh basil leaves 4 cloves garlic 3/4 cup grated Parmesan cheese 1/2 cup hemp oil 1/4 cup hemp hearts

Pesto directions:

Combine all ingredients in a food processor or blender. Blend until smooth.

Directions:

Boil a large pot of lightly salted water. Add the linguine and cook for 8 to 10 minutes, or until al dente; then drain.

In a large skillet on medium heat, melt the butter. Mix in the heavy cream and add the white pepper. Stir consistently for 6 to 8 minutes. Then add in the Parmesan cheese, stirring until the sauce is thoroughly combined. Add in the previously prepared pesto, stir well and cook for 3 to 5 minutes until it reaches the desired thickness.

Add the shrimp to the skillet and cook for about 5 minutes, or until they turn pink. Serve over the cooked linguine.

photo © vanillaechoes

LIFESTYLE | HEMP EATS

STUFFED MUSHROOMS

Makes 12 Servings

Ingredients:

- 12 whole mushrooms
- 1 Tablespoon hemp oil
- 1 Tablespoon minced garlic
- 1 8-ounce pack cream cheese, softened
- 1/4 cup hemp hearts
- 1/2 cup grated Parmesan cheese
- 1/4 teaspoon ground black pepper
- 1/4 teaspoon onion powder
- 1/4 teaspoon ground cayenne pepper

Directions:

Preheat oven to 350° F. Grease a baking sheet. Wash the mushrooms with a damp paper towel. Gently break off the stems. Chop up the stems extremely fine, throw away the tough end of the stems.

In a large skillet, heat the hemp oil over medium heat, keeping it under 350° F. Add in the garlic and the chopped mushroom stems. Cook until the moisture has disappeared, be careful not to burn the garlic. Set aside to cool.

Once the garlic and mushroom has cooled, mix in the softened cream cheese, hemp hearts, 1/4 cup of Parmesan cheese, black pepper, onion powder and cayenne pepper. This mixture should be thick. Using a small spoon, fill each mushroom with a generous amount of stuffing then dip the top in the remaining Parmesan cheese. Arrange the mushrooms on the prepared baking sheet.

Bake for approximately 20 minutes, or until the mushrooms are hot and liquid begins to form under them.

RICE PUDDING

Makes 4 servings

Ingredients:

3/4 cup uncooked white rice 1/4 teaspoon sea salt 1 cup water 1/4 cup white sugar 1 1/3 cups hemp milk 1/2 teaspoon vanilla extract 1/8 teaspoon ground cinnamon A dash of cardamom 1 large egg yolk 1 Tablespoon cold butter

Directions:

In a sauce pan, bring the rice, salt, and water to a boil, over medium-high heat. Reduce to low heat, cover, and cook about 20 minutes until tender. Remove from heat, add in sugar and hemp milk. Stir using a whisk until the layer of cooked-on starch coating the bottom of the pan is incorporated into the mixture, approximately 2 or 3 minutes.

Return to the stove top and cook over medium heat, be sure to stir frequently, until it reaches the desired level of creaminess, 8 to 10 minutes. Remove from heat. Add in the vanilla, cinnamon and cardamom. Very quickly whisk in the egg yolk (doing it very quickly will prevent it from cooking immediately). Whisk for an additional minute, add butter and stir thoroughly.

Transfer the warm pudding to serving dishes. Cool to room temperature before covering and placing in the refrigerator for 3 to 4 hours, until fully chilled.

Gannabis Bansais Bansa

8

LIFESTYLE | CANNABIS EATS

arin Lazarus has always had a sweet tooth. She developed her love of baking with the help of a Mix Master electric mixer and a Betty Crocker cookbook gifted to her by her mother during her childhood. But while homemade treats are undoubtedly delicious, the reaction to her work is what truly attracted her.

"I think what hooked me was just that people loved everything," says Lazarus from her modest office in Boulder, Colorado.

As the founder of Sweet Mary Jane, Lazarus been making THC-infused treats commercially since 2010, but her fondness for baking runs much deeper. When other children were opening lemonade stands during warm summer months, Lazarus was putting that Mix Master to work, selling homemade cookies on the side of the street. It's a passion that continued to guide her life, and high school saw her first fold that passion into the realm of edible infusions that would eventually make her a household name in Colorado's legal cannabis industry, experimenting with the incorporation of cannabis into some of her baked goods.

"Of course, we didn't know what we were doing then, just adding weed to mixes," Lazarus reflects, fondly. "If there would have been a guide for me, I think it would have gone smoother."

Lazarus carried the love of crafting confections through college and her early work at the head of a catering company, ultimately discovering her career trajectory more than a decade after settling in Colorado. The advent of Colorado's medical cannabis program in the early 2000s helped introduce to her the idea of cannabis as medicine.

"I just started becoming more and more fascinated the more I read about what cannabis can do," says Lazarus.

In 2009, Lazarus entered one of her recipes into the Scharffen Berger Chocolate Adventure Contest, never expecting to win. Much to her surprise, she won, taking home the \$10,000 prize, enough to serve as seed money for an edible company that would combine her developing understanding of cannabis medicine with her lifelong love of baking.

"Everybody said, 'You are insane, do not do that," recalls Lazarus. But nearly a decade since taking that step and she's proven the naysayers wrong with a flourishing edible company serving clientele all over Colorado.

These days, the adult-use market is an entirely different beast than the more forgiving, experimental medical cannabis industry that birthed Sweet Mary Jane, but Lazarus has managed to hold her place as a seminal figure in the state, publishing a cookbook through Random House.

The adult-use market has made for smaller serving sizes than what was demanded in the nascent days of the medical market, something that Lazarus sees as a benefit to novice consumers looking for an entry point other than smoking cannabis. She also sees the proliferation of products like THC distillate as advantageous to amateur edible makers, allowing for more precise estimations of potency when cooking at home. Whether you're using distillate purchased from a licensed dispensary or your own infusion from homegrown trim, her advice for fledgling cannabis cooks holds true: "Go slow, don't be stoned and cook, don't eat the whole thing, don't taste it as you're [making it]."

What follows are a selection of recipes from Lazarus's book. Enjoy them responsibly and do your best to follow that advice. \square



"Go slow, don't be stoned and cook, don't eat the whole thing, don't taste it as you're [making it]."

HEY SUGAR! LEVEL 1

Yields 1/4 cup of infused sugar About 150 mg THC total 1 teaspoon = approx. 12.5 mg THC

Ingredients:

1 1/2 grams cannabis buds, ground or finely crushed 1/4 cup granulated sugar

Infusion tools:

Digital temperature gun 2 mason jars Funnel Coffee Filter Small heat-proof baking dish Heat-proof glass pie dish High-proof alcohol: Everclear works best – however, not every state sells it; if you can't purchase it, use any high proof alcohol.

Directions:

Decarboxylate the cannabis: Preheat the oven to 250° F. Put the cannabis in a small, heat-proof baking dish and place in the oven. After 15 to 20 minutes, check the temperature of the cannabis with your digital temperature gun; once it has reached 250° F, let it bake for 30 minutes, checking the temperature frequently. (In addition to decarboxylating, you are removing any moisture left in the plant material.) If it goes over the correct temperature for too long, it will burn, the THC may convert to CBN and you will lose potency. If not using immediately, store the cannabis in an airtight container in a dark place for up to two months.

Remove the baking dish from the oven and reduce the oven temperature to 200°F. Transfer the cannabis to a mason jar. Pour in just enough alcohol to cover it and seal the jar. Shake the jar every three to five minutes for 20 minutes, and then open the lid.

Line a strainer with a coffee filter and place it over a bowl. Pour the alcohol solution through the coffee filter to strain off the plant matter. Gently press with the back of a spoon or your fingertips, being careful not to break the filter.

Place the sugar in a heat-proof glass pie dish. Add the strained alcohol solution to the sugar and bake for 30 to 60 minutes, stirring well every 10 minutes, until all the liquid has evaporated and the sugar is evenly colored. (The color can range from light to dark amber.)

Store in an airtight container, in a cool, dark place. There is no need to refrigerate. Hey Sugar! is good for one year.



BIG BHANG! COOKIES

Makes 12 cookies

Ingredients:

Vegetable shortening for greasing 1/2 cup Buddha Budda (cannabutter), slightly softened 1/2 cup granulated sugar 1/2 cup light brown sugar 1 1/2 teaspoons corn syrup 1 small egg 1/2 teaspoon pure vanilla extract 3/4 cup all-purpose flour 1/4 teaspoon baking powder 1/8 teaspoon baking soda 1/2 teaspoon kosher or coarse sea salt 1/2 cup semisweet chocolate chips 1/4 cup butterscotch chips 1/4 cup graham cracker crumbs 1/4 cup old-fashioned rolled oats 1 1/4 teaspoons freshly ground coffee beans 1 cup thick-cut potato chips, broken into 1/2-inch to 1-inch pieces 1 cup mini pretzels, coarsely chopped 1/2 cup Fritos

Directions:

Weigh the bowl that you will be using to hold the finished batter and write down this number. Grease two baking sheets with vegetable shortening, or line them with parchment paper. In the bowl of a stand mixer fitted with the paddle attachment, cream together the Buddha Budda, granulated and brown sugars, and corn syrup on medium-high speed for 2 to 3 minutes. Scrape down the sides of the bowl, add the egg and vanilla, and beat for 7 to 8 minutes.

Reduce the mixer speed to low and add the flour, baking powder, baking soda, and salt. Mix just until the dough comes together. Add the chocolate chips, graham cracker crumbs, oats, and coffee and mix until just incorporated, about 30 seconds. Add the potato chips, pretzels and Fritos and mix until just combined. Do not overmix.

Weigh the batter, subtract the weight of the bowl and divide by 12: this is your per cookie weight. Place a small piece of parchment paper on your scale. Weigh out the batter for each cookie and form each cookie into a disc. Place the cookies on the prepared baking sheets and with the palm of your hand, flatten each cookie to 1/4-inch thick. Place the cookies at least 4 inches apart on the baking sheets. Wrap the baking sheets tightly with plastic wrap and refrigerate for one hour, or up to one week.

When ready to bake, preheat the oven to 375° F. Bake the cookies, one sheet at a time, for 18 to 20 minutes, or until the cookies puff, crackle and spread, and are golden brown on the edges. Let cool on the baking sheets before transferring to a wire rack to cool completely.

Wrap tightly in aluminum foil and store in the refrigerator for up to one week, or in the freezer for up to three months.





TWIX TRICKS CUPCAKE

Makes 12 cupcakes

Crust:

cup Nilla wafers, broken into pieces
 Tablespoons unsalted butter, melted
 3/4 teaspoon granulated sugar

Chocolate cupcakes:

1 cup all-purpose flour
 6 Tablespoons unsweetened cocoa powder
 3/4 teaspoon baking powder
 1/2 teaspoon salt
 1/2 cup Buddha Budda, slightly softened
 1 cup granulated sugar
 1 large egg
 1/2 cup whole milk
 1 Tablespoon pure vanilla extract
 1/4 cup boiling water

Caramel Buttercream Frosting:

½ cup unsalted butter, slightly softened
2 to 3 cups powdered sugar
1/4 teaspoon salt
1 Tablespoon pure vanilla extract
2 Tablespoons whole milk
2 Tablespoons jarred caramel sauce, warmed
2 to 3 mini Twix candy bars, crushed

Directions:

Preheat the oven to 350° F. Line a 12-cup muffin tin with paper liners. Prepare the crust: In the bowl of a food processor, combine the Nilla wafers, butter, and granulated sugar and pulse until well blended and fine crumbs form. Using your fingers, press 1 Tablespoon of the crumbs evenly into the bottom of each lined well of the muffin tin. Bake for 3 to 5 minutes, or until the crust is just starting to turn light golden brown. Remove from the oven (leave the oven on).

Prepare the chocolate cupcakes: In a medium bowl, stir together the flour, cocoa powder, baking powder, baking soda, and salt. Set aside. In a large bowl using an electric mixer, cream together the Buddha Budda and granulated sugar on medium speed until light and fluffy. Add the egg, milk, and vanilla and beat until well blended. Add the boiling water. Add the flour mixture, blending until just combined.

Divide the batter evenly among the wells of the muffin tin, pouring it over the baked crusts. Bake for 22 to 25 minutes, until a toothpick inserted in the center comes out clean. Transfer to a wire rack and let cool completely.

Prepare the caramel buttercream frosting: In a large bowl using an electric mixer, beat the butter on medium speed until smooth and creamy. Reduce the mixer speed to low and add the powdered sugar, salt, vanilla, milk and caramel sauce. Raise the mixer speed to high and beat until light and fluffy.

Transfers the frosting to a piping bag, fitted with the tip of your choice, and frost the cupcakes, or simply frost them with a butter knife or a small offset spatula. Sprinkle the frosting with the crushed Twix bars. If you are going to freeze these, do not frost them.

Store in an airtight container in the refrigerator for up to 3 days, or freeze for up to 3 months.



LIFESTYLE | CANNABIS EATS

SWEET TEMPTATION MANGO SORBET

Makes 6 servings

Ingredients:

- 4 1/2 to 5 cups diced ripe mango
- 2 Tablespoons plus 2 Tablespoons Hey Sugar! (page 44)
- 1/2 cup plus 2 Tablespoons granulated sugar
- 1/4 cup fresh lime juice
- 1 1/2 teaspoons to 1 Tablespoon chili powder, plus more for serving
- 1/2 teaspoon coarse salt, plus more for serving

Directions:

In the bowl of a food processor, combine the mango and 1/2 cup water and process until smooth, about 30 seconds. Pour through a fine-mesh strainer into a large measuring cup, pushing the puree through the strainer with a spoon, until you have 3 cups of puree.

Transfer the strained puree to a large bowl and whisk in the Hey Sugar!, granulated sugar, lime juice, chili powder, and salt until well blended. Cover with plastic wrap and refrigerate overnight to thoroughly chill.

Pour the chilled sorbet base into the canister of an ice cream maker and process according to the manufacturer's directions. Remove the sorbet from the canister and place in an airtight container.

Serve with a sprinkling of chili powder and coarse salt. Store in the freezer for up to 3 months.

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on in @thehempbizconference





THE INTERSECTION OF GLASS PIPES AND HIGH END FUNCTIONAL ART: HEAT FOR THE STREETZ

photos and article by Samuel Farley @THC_Samuel

hat happens when you bring together some of the biggest artists in heady glass including Nathan Miers, Joe Peters, Adam G, Eusheen, WJC and Elbo along with special guests like Darby Holm, Scott Depee, Kevin Quave, Stormin Norman, Daniel Coyle, Sinc Barnes, 2Ba, Contrabasso Glass and more to create some of the most complex, creative and legendary glass art in the world? You get some damn fine functional glass art, that's what, and an underground glass show that's a who's who of industry giants. >>>

The culmination of the weeks of preparation and collaboration was one of the most prestigious glass shows of the year, Heat for the Streetz, which took place on December 15 in Denver. In similar fashion to the annual Wook Show, the show time and venue remained a mystery until the day of the show, only spread via word of mouth the week before to friends of the artists. Collectors flew in from across the country to gather at a nondescript warehouse in downtown Denver so that they could appreciate and purchase some of the most coveted glass artwork in the world. The artists at Everdream Studio, who organized the event, included an early entry option for those who brought a toy to donate to local Denver families in need during the holidays, and the vibe was lively, festive, heady and full of hype.

When the doors opened, collectors and glass art enthusiasts flooded the show floor, with serious collectors scooping up their favorite pieces within minutes. The show included some special guests such as the well-known social media personality Dabbing Granny and artist/clothing designer GZ1 WhateverForever. The event was sponsored by Colorado hash company Lazercat Cannabis, helping to make Heat for the Streetz one of the most spectacular glass shows of the year.







LIFESTYLE | FEATURED ARTIST



FASHIONABLY HEEMIP: An Interview with Model and

Hemp Activist Cait Curley

👸 Evan Hundhausten



When I moved to Colorado there really was that intention to dive into the cannabis industry. That was what I wanted to do.

an you make hemp sexy? What does a photoshoot for a hemp clothing line entail? Is there official sign language for the words cannabis and hemp?

Fashion model, social media influencer and hemp activist, Cait Curley satisfied our curiosity on questions like these during an interview following the passage of the historic hemp legalization in the 2018 Farm Bill.

HC: How'd you feel about watching the farm bill signing?

Cait Curley: Not great, to be honest. I mean it was like, "This is amazing that we are legalizing hemp," but it's not like there is this amazing energy coming from the president... I think there was some unnecessary comments towards people and then not speaking of hemp, it's just like, "Okay. Alright. It's signed. There we go!"

HC: When did you become a model?

CC: I moved to New York (City) when I was 20. I moved there to pursue an acting and modeling career and that's kind of when I started getting in front of the camera. I was a performer prior to that. I was a dancer for a good portion of my life, an Irish dancer, so I did that, but then I was sick of the struggling artist life, so I went back to school and got a corporate job and corporate position and when I was sick of that and decided to drop everything and move to Colorado and jump into the cannabis industry... When I moved to New York that's when I comfortably really started getting in front of the camera.

HC: How did you decide to combine hemp activism with modeling?

CC: When I moved to Colorado there really was that intention to dive into the cannabis in-

dustry. That was what I wanted to do. My corporate position was also within the health care industry. I'm a hearing specialist by school and trade and so while I absolutely loved healing people and bettering their lives it did turn into a corporate style job which I didn't wanna be a part of anymore and by that I really just mean sitting at desk all day, every day and being inside of an office and really not... doing what I want to do and traveling when I want to, kind of thing. So I move out to Colorado, I joined the cannabis industry... What I do, a big piece of it is education and advocacy and so there is just this real natural piece. I had stripped so much of myself when I moved to Colorado that I really just tried to be me and do all the things that I wanted to do even if they kind of seemed eccentric at the time. And so I found this piece of art through photos and videos and I saw that not only did I think it was really cool to create art, but others were really resonating with it. And I saw that, wow, I'm conscious of the fact that in this era of social media you can take an attractive photo and get a lot of attention from it. Let's see what happens when I take something like that, put it out there and then attach cannabis education to it. Will that make people learn more? Listen in? And it just started this trend with my personal brand where that's exactly what was happening. I put an attractive photo out there of myself with attachment of education and, you know, they'd blow up and people started coming to me saying, "Thank you so much for what you're doing! You're really kind of like changing the game," and I started to hone in on the industrial properties of hemp more so also because I felt like it needed it. I felt like hemp wasn't sexy like marijuana and it should be, because of it's amazingness. So yeah, kind of just continued doing that and it felt really good and I saw it was actually making changes and educating people and continued on with it. >>>



HC: You had a photoshoot with the hemp clothing company prAna recently?

CC: I had this idea of creating a shoot, and again, like a lot of these photos and videos that I come out with I feel like they're art and it is art, and I thought to myself, I think it would be really beautiful to have this piece of art where you've got 14 different women all of different ethnicities. So different colored skin, hair, eyes, shapes and sizes; all of this together and similar yet plain clothing, which makes our bodies stand out more so in a raw manner, with a plain backdrop, all of us wearing hemp clothing and potentially some hemp products. So I do have a relationship with prAna, I kind of do some influencing for them... I brought this idea to them. They loved it, so they're like, "We'll send you pieces from our new hemp clothing line for this photoshoot," so they were the clothing sponsor and then I'm sure you're familiar with Jack Herer - his son Dan... Dan just started

the first like "attached" cannabis line to Jack. It was officially released about six months ago and it was called "The Original Jack Herer" ... So the strain that everybody knows, Jack Herer, that was created by a gentleman named Ben Dronkers in Amsterdam thirty years ago through his company Sensi Seeds, not [by] Jack himself; so this is the first line that's actually attached through the family, which is really cool. So they came on as the cannabis sponsor, which is super cool and then Morris Beagle with the NoCo Hemp Expo... He just released a line, Silver Mountain Hemp Guitars, so it's hemp guitars, cabs, straps and picks and he gave us one of his new hemp guitars for a prop. It was super badass. The photos are actually coming to me like tomorrow... It (the photoshoot) was originally called "Separate Now Connected Through the Plant," but we don't really have an official title on it. I don't know if we even will. It's really kind of just this piece of art where you've got 14 women in the cannabis industry all [of] different ethnicities wearing hemp, smoking The Original Jack Herer and then there's some shots of us with the hemp guitar.

HC: How'd you meet Morris Beegle of NoC0 Hemp Expo?

CC: I actually do the social media for that company. WAFLA is their mother brand and then they've got like ten umbrella companies, which I'm sure you know, like Tree Free Hemp and Southern Hemp Expo, and Let's Talk Hemp hemp events, so I do the Instagram for those and some Facebook for some of them. Honestly, I fell in love with the NoCo Hemp Expo at the 2016 Expo. I walked in and was just blown away by the plant. Still to this day, it's the coolest expo for me and it's because it's an expo that's based on the industrial properties of the plant. You know there's not this 420-esque and stoner vibe going around. Nor are we talking about marijuana, which again I'm an activist for the plant as a whole, but this expo is strictly industrial and nutraceutical... I remember walking past Mark Lindy's booth with Green Spring Technologies and the hemp pen. I'm like, "Woah. This is so cool!" and seeing the hemp car, was just blown away, so after that I just started really paying attention to kind of, that industry, more so the hemp industry and the leaders within and Morris always really inspired me even through Facebook and social media just standing up against the DEA and the government and really just fighting for what's right.

HC: You were part of an interesting benefit event, a cannabis inspired silent auction in Denver, Colorado, back in October of 2018. Tell us about that.

CC: I went to school for speech and hearing science and I became a hearing instrument specialist right after. So I would test, diagnose and treat hearing loss. You know, it's a piece of my life that I so deeply wish I could still have and be a part of, but you know you've got the lives of people in your hands in a position like that and it's not something that you can just kind of volunteer two to three hours a week so it really doesn't fit my lifestyle as a hemp and cannabis activist and you know with all the traveling that I do, so that piece, actually, I was quite saddened about. I just couldn't figure out a way to connect the hearing care and hearing industry with cannabis and there have been some studies done stating that hemp and/or cannabis oil does help with some hearing loss... That intrigues me a bit, and the woman I had learned that from was Dr. Regina Nelson from her medical cannabis book and so someone had said to her, "You should really talk to Cait Curley about this project that you have going on." She comes from the hearing care industry and we had a conversation and she had said, "Yeah, there's this

LIFESTYLE | CAIT CURLEY

issue where there is zero language, as in sign language, ASL, American Sign Language, for cannabis." The only sign that's available about that out there right now and that includes giving your three-year-old epilepsy plant medicine cannabis is like the smoking sign and so what she did was create the non-profit "Signs for the Times" and brought in four different deaf professionals that are connected to the plant. [She] did a week-long course of basic cannabis and hemp education. These deaf professionals then went back to the deaf community and they're now creating an official sign language for cannabis. This will help in so many forms and just one example is even just dispensaries used to have someone with hearing loss or deafness go in and try to communicate what they're looking for and it's just super difficult, so just creating these signs, you know, endocannabinoid system, having to spell out each letter, right now, creating this sign and system for the deaf community to start talking about cannabis in the way that the hearing world does. So yeah, I was brought onto that project. I helped bring in some funding for it as well. It was just an incredible, incredible experience. It's a piece of history that I was part of and super grateful for that.

HC: Did they create a sign language word for hemp yet?

CC: The deaf professionals that came to this class, they've now gone back to the deaf community and nothing is official, but they're creating official ASL signs, American sign language signs, for cannabis as we speak.

HC: What does the term "Instagram Model" mean to you?

CC: Oh gosh. So you know, often people will come up to me now and say, "Oh you're the hemp chick! Oh, you're the hemp queen! Oh, you're that hemp influencer on Instagram!" ... The name influencer and model, it doesn't resonate great with me... My objective is not to be a quote unquote influencer and model for Instagram, but at the same time when you look at the term model and what it is going back into that flow of art, creating art, beautiful pieces and pictures, I do love to do that, so the actual term "Instagram model", I mean, a sense of it, what would the word be... I'm so much more than just a model, you know, as an activist and an educator, so a little bit of a chip on my shoulder at the same time?

HC: Do you have photographers taking pictures of you usually?

CC: Usually I have a photographer. I learned the trick of trade. I've definitely learned that in the cannabis industry the power of trade. I do trade work often with photographers where, you know, they'll take the photos then we both have access to them or sometimes even if it's just like a friend or a family member it's just like, "Hey, take this shot real quick for me."

HC: Do you manage yourself?

CC: I do, yeah. For the most part I do. It's definitely turning into a situation where a lot of agencies are reaching out wanting to grab me and its really, really awesome! It's definitely going to happen here within the next couple months... Bigger ones that are outside of the cannabis industry, where I think they're seeing the potential, and kind of the flow of things, which is why they're trying to jump on. But a manager, agency, bookkeeper; all these things are definitely going to be needed, so in addition to pushing the plant and people and products behind it that I believe in. I have some of my own line that I'm coming out with, an apparel line and skin care line. These have been in the pipeline for quite a bit, but I learned my lesson when I first moved out here and started an apparel line in regards to how hard is and I'm kind of going slow and steady to ensure that these businesses are done right... There are companies also that have reached out, hemp companies that want to collaborate on specific products. So that's probably what you're gonna see in 2019 in regards to skin care and myself is you'll see my collaborating with a company first on a product and maybe the end of 2019, 2020, I'll have a product of my own.



LIFESTYLE | CAIT CURLEY

HC: What do you do at all the hemp conferences you go to all over the country?

CC: I was an MC at the Southern Hemp Expo and then also for the Hawaii Hemp Conference and then at the Portland event (NECANN Maine Conference) I was flying into Maine to see my brand-new niece and someone within the hemp industry in Maine caught on social media that I was flying in and they were like "Oh my Gosh! Can we get you on our panel? We need a moderator! You'd be perfect!" I'm like, sure! So I jumped "in" and we had a great conversation. We discussed the future of industrial hemp in Maine. We discussed just hemp in general, its abilities and uses and then we actually discussed equipment quite a bit too and I loved that conversation. You know, there were a lot of people in the audience asking for different types of equipment for different stages of the planting and harvesting and processing. I've learned so much, so it was really cool to be able to speak on that and what companies I trust and would recommend.

HC: Oh! What are some of those?

CC: Well, one that's sticking out to mind specifically is Bish Enterprises also known as Hemp Harvest Works. They debuted their "Hemp Handler" at Hemp on the Slope that was in Collbran this past year, and Colorado Hemp Company and Salt Creek Hemp Co. throw that. They debuted it and I made a little video and learned a lot because of that video and because they're my friends and so I was able to speak on that piece of equipment. They've got another piece that's smaller that I remember we spoke of, which is called the "Bud EZ" and it's really just handheld, so you'll take the plant matter after it's been harvested, kind of just break it apart in to one-offs and then you just flip it right through and buds come off the stalk.

HC: In Hawaii you learned a lot about farming hemp?

CC: One of the coolest things being able to travel around and speak to all these people... Each piece of America, the world, has their own representation of the plant and care, and something that I saw the Hawaiian community really hone in more so is the soil and microbes and using the soil first to kind of heal all and create all, looking at the microbes within the soil to do that...treating it in a very sacred form. [I got] to go to Daniel Anthony's farm (Mana Ai) and he showed us around. It's a regenerative agriculture farm and we actually did some poi pounding, and within that little ceremony, too, it was just being very cautious and sacred of the microbes, and this is something I would like to touch on a little bit... One of the things that I'm loving and finding so amazing about the hemp



industry is the ability to really kind of flipflop the synthetic world and kind of move forward from a farming standpoint to a new era with regenerative agriculture and healthy farming and healthy practices, loving the earth, and using the plant to heal it versus ruin it, using less water; just so many different things. Even just the farming aspect of this industry can really turn our planet for the better and we have the power to do it, and if the leaders that have stepped up to make hemp legal continue to do what they do, which I know they're going to, there's just so much greatness going to turn and so much synthetic fakeness is going to be removed through this plant.

HC: Can you talk about the videos you're creating?

CC: This is actually self-taught. I created a video two years ago on hemp. I went to a farm and helped with a harvest and created an educational video and people loved it and it did really well on the internet, specifically Facebook ... The intention is definitely to continue with hemp education touching all different aspects and pieces of the plant and the industry — educating people in that fun "Cait Curley Presents" type manner. They will be available through all the social media platforms, so Facebook, Twitter, Instagram and I will probably start using LinkedIn a bit more, too. We put the SteepFuze (CBD coffee) video on LinkedIn. It did well, so I think I'll, you know, through the next ones, I'll be doing that.

HC: What was it like the first time you smoked pot?

CC: Well, the first time I consumed I don't necessarily have a pinpoint on that. I think there were probably two to five times that I maybe put my mouth on like a piece, but never did I inhale properly to get high. I most definitely remember the first time I got high and I was anti-cannabis until this first time. I was 17 up in the hills of upstate New York looking at the moon and it was a joint.

HC: What's your favorite strain?

CC: I'm going to say as of right now the "new" Original Jack Herer that just came out. It really is so good. That's what I've been smoking. I got tons of that flower in a vape pen.

You can find Cait Curley on YouTube and Instagram or visit her website, www.caitcurley.com. This interview was edited for clarity and length.

Gueet MART JANE Taste the flour power:

Wake & Cake Dark chocolate fudge brownie meets birthday cake blondie in a 1:1 ratio of CBD:THC



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SUSTAINABLE ROCK & ROLL Hemp Guitars are the Future

by Erin Hiatt

umans have been using hemp for thousands of years and for thousands of applications. It is estimated that the earliest uses of hemp date all the way to 8,000 BC as cloth. Hemp paper appeared in China around 150 BC, and Buddhist texts written on hemp paper are dated back to 100-299 AD.

Hemp may have seen its heyday during The Age of Sail, when wars, trade, and international travel was dependent on seafaring vessels, often utilizing hemp in canvases, ropes, and rigging. A mixture of hemp and pine tar, called oakum, was even used to quite literally keep the ships seaworthy, acting as a kind of caulking.

Swept in the prohibition net with hemp's intoxicating cousin marijuana in 1937 as part of the Marihuana Tax Act, hemp's potential came to a near standstill. However, a book published in the mid-1980s by hemp legend and advocate Jack Herer, *The Emperor Wears No Clothes*, breathed new life into the hemp plant and its myriad applications.

Since then, people have been working with hemp to make it into things like plastic, hempcrete (hemp mixed with lime), biodiesel and supercapacitors. And now, add to that list guitars.

Jay Burstein is the creator and luthier of BugOut Guitars, and he is a one-man band based in Randolph, Vermont. Burstein is a lifelong musician who studied drumming at the College of Santa Fe in New Mexico. Over the years, he has picked up other instruments, guitar among them. But it was traveling the world that moved him toward hemp. >>>









Above photos by BugOut Guitars

During his travels, Burstein had packed with him a guitar made of wood, which did not travel well. Humidity is very hard on stringed and wooden instruments because even though the instrument has been harvested and cured, wood can still absorb moisture, which will cause the wood to swell and expand. This can cause permanent damage and warping, in addition to making it difficult to play. Dry weather, too, can wreak havoc. When moisture is sucked out of the wood, it shrinks, and can become brittle and crack. "I was in the world's driest climates, to jungles, to deserts, and that guitar I was traveling with was disintegrating," he said. "I always thought, there's got to be a better way to do this." The construction and sales of guitars also have high environmental costs. Many guitars sold in the US are made from rare timber, like mahogany, rosewood, and ebony.

After his travels, Burstein read an article about composite workers using flax, and was attracted to the idea of using an environmentally sustainable material to craft instruments. Burstein decided on hemp, not only because it is stronger than flax, but also for its rebellious quality that goes well with the rock 'n' roll ethos. Finally, he wanted to craft the perfect adventure guitar, durable enough to get tossed in the overhead bin, fall in a river, or get buried in snow, and still be playable.

Hemp guitars are crafted much like wooden guitars, but instead of wood, Burstein uses hemp bast, which is the long fibers inside the hemp plant's stalk. "I line it up to emulate a wood grain for unidirectional strength,"

LIFESTYLE | HEMP GUITARS







"We use hemp because Boyd and I are both environmentally conscious, and want to share that belief with others, while doing something that we love."

Above photos by Canadian Hemp Guitars

Burstein explained. Then, he mixes the fibers and bioresin together to create a kind of plank that he can then manipulate like a woodworker.

Burstein acknowledges that to create the warm, rich, sound acoustic guitars are known for, wood is sonically the best. "But, this isn't a studio live performance instrument. I was never going for a big, warm, killer studio sound," he said. "I didn't know what sound I would get, and I've gotten somewhere between wood and carbon fiber. For a composite, it is warm and has a rich tone, and I've added durability and flexibility. It marries the best of both worlds."

Meanwhile, in Montreal, Canada, the founders of Canadian Hemp Guitars, Stewart Burrows and Boyd Pellow are making electric hemp guitars with hemp sourced from Indiana, and these guitars, Burrows writes in an email, "are designed by guitar players for guitar players."

The underlying philosophy of Canadian Hemp Guitars is that everything should be made out of hemp. "That's perhaps an exaggeration, but it underlies our philosophy," Burrows explained. "We use hemp because Boyd and I are both environmentally conscious, and want to share that belief with others, while doing something that we love."

Both Pellow and Burrows cut their teeth in the Canadian music scene. Burrows is a Celtic musician who gigs around Montreal, and Pellow is a hired-gun guitarist with a long history in the Toronto club scene. "These guitars are no-nonsense, thoughtfully designed (and priced) instruments for working musicians," said Burrows. "We wanted to make a pro-level,





handmade instrument that a working guitarist could afford, and I think we've done that."

Burrows says that working with molded hemp composite gives their guitars the same density, water rejection, and tensile strength as hardwood, and they build their guitars as they would craft one from any other kind of wood. But, crafting electric guitars is somewhat different from building an acoustic. "The biggest challenge we've encountered is the final finish of the material," Burrows said. "It is more challenging to achieve that clear, smooth, mirror finish that people look for in an instrument."

Ultimately, Burrows is hoping that playing hemp guitars will open the minds of others in the industry that historically made guitars exclusively from hardwood. "Maybe they'll consider hemp the next time they're looking for a new way to accomplish and old task," he adds.

Photos: This page - Canadian Hemp Guitars | Opposite page - top - Bug Out Guitars Crew in the sunset | Opposite page - bottom - Canadian Hemp Guitars line up.



LIFESTYLE | HEMP GUITARS

Jeremy Stolle, a singer and musician based in New York City, travels frequently all over the country and abroad with his band, The Unreachable Stars, with many instruments in tow, including several guitars. Though he uses guitars made of different kinds of wood, he was very enthusiastic about using composite guitars, like those made of hemp, as an option for travel. "Humidity is instrument death," he said. "With a composite guitar, humidity is not an option."

Stolle also thinks that using hemp composite could be an avenue for luthiers to be creative with instrument design, and a way for instrument makers to earn money that takes a much smaller toll on the environment. "With hemp [composite], that's laboratory. If people are going to make composite guitars out of hemp, that shit's indestructible. I could fully use a hemp guitar and take it to China, or Hawaii."

Now that Trump has signed the 2018 Farm Bill into law, luthiers will have easier access to hemp materials to craft guitars. So stay tuned for hemp guitars coming soon, hopefully, to a guitar store near you.





FROM BOTANICALS TO BIOPLASTICS • HOW HEMP IS CHANGING THE WORLD



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BUSINESS & POLITICS Cannabusiness in Full Bloom

Dynamic Duos, 2018 Farm Bill, Marijuana Beverages & Michigan Adult–Use

Dynamic Duos

PARTNERSHIPS MAKING MOVES IN THE CANNABIS INDUSTRY

by DJ Reetz and Matthew Van Deventer

BUSINESS & POLITICS | DYNAMIC DUOS



WANDA JAMES & SCOTT DURRAH

Rew names are more revered in cannabis than Wanda James and Scott Durrah. This cannabis power couple made a name for themselves in the space as early operators of a medical cannabis dispensary in Denver as well through a line of edibles sold under the brand Simply Pure. The couple frequently pops up on lists of cannabis industry big wigs, having earned a reputation for their dogged activism and advocacy. Successful restaurateurs, the couple has owned a number of restaurants in several cities.

James once worked on the congressional campaign of Colorado's recently elected governor, Jared Polis, previously one of the strongest advocates for cannabis reform in the Capitol. She has also played an integral role in the implementation of Colorado's Amendment 64, which legalized adult-use cannabis in the state.

Durrah has been at the head of a number of successful restaurants, as owner and head chef, skills he applied to the cannabis cooking course he once led in Denver during the early days of legalization. He has been featured alongside a slew of notable chefs in the pages of *The Cannabis Kitchen*, a comprehensive tome of cannabis-infused recipes, where he focuses on the inclusion of cannabis as part of a healthy lifestyle.

Together the couple continues to push for a sensible and compassionate legal industry that will mitigate as much of the damages of prohibition as possible. Both military veterans, their insight and determination has helped to keep issues of social justice at the forefront of the cannabis movement even as the conversation shifts toward tax revenues and interstate commerce. They still operate one of Colorado's premier dispensaries and remain active in policy and activism.



CHAD TRIBBLE & JOHN GARRISON

A nybody who's been paying attention to the legal cannabis industry in Colorado knows the guys behind Mountain High Suckers. A staple of the medical marijuana market, the company first appeared on the scene in 2009 and can now be found in stores across the state serving both adult-use customers and medical cannabis patients.

Chad Tribble and John Garrison first went into business together operating a painting company, but the call of the state-legal cannabis market brought them back together, where their aptitude for cultivation, extraction and incorporation of cannabinoids into legal products helped to establish Mountain High Suckers as one of the trend-setting brands in Colorado's fledgling medical cannabis market. That eye for genetics and cannabinoid profiles led Tribble and Garrison to create one of the first commercially available high-CBD products in the Centennial State at a time when the vast majority of manufacturers were still chasing THC potencies.

Despite this forward-thinking outlook, not a whole lot has changed about the company over the past decade. They are still making their handcrafted suckers and lozenges with ethanol-extracted cannabinoids in a variety of interesting flavors, such as caramel apple, lime with chili, spicy orange mango and pineapple with toasted coconut. Recently, the company even launched a line of products bearing the likeness of comedian and Denver resident Josh Blue.

The size of the operation has changed, and advent of the adult-use marketplace has brought with it new challenges, but Tribble and Garrison have managed to hold on to their position as trend setters and industry leaders by sticking with their tried and true formulation. While many other infused product companies have come and gone, Mountain High Suckers has remained an example of what momand-pop cannabis businesses can look like in the commercial era, holding onto the vision that Tribble and Garrison first began with nearly a decade ago, even as other operators are devoured by larger companies. Mountain High Suckers is looking to expand into other states as well as examining international opportunities

BUSINESS & POLITICS | DYNAMIC DUOS



SEAN MCALLISTER & DANIEL GARFIELD

A flourishing cannabis industry wouldn't be possible without the dedicated legal minds facilitating it behind the scenes, and there are few legal minds more dedicated to that cause than Sean McAllister and Daniel Garfield of the law firm McAllister Garfield, P.C. The duo has helped facilitate multi-million-dollar transactions at every step of the cannabis supply chain, granting investors the confidence to put their money to work in an industry still contending with federal illegality, and ensuring that business owners are conducting their operations within the confines of the law.

A former assistant attorney general for the state of Colorado, McAllister helped found Sensible Colorado in 2004, an organization that helped to legitimize the state's medical marijuana program and expand patient access through peerless advocacy. That work culminated in the legalization of adult-use cannabis through Colorado's Amendment 64 in 2012, a measure that was spearheaded by Sensible Colorado. He has received numerous accolades in the years since, including being named "Top Marijuana Lawyer" by Denver's 5280 Magazine. Currently, McAllister serves on the board of directors for the National Cannabis Industry Association, one of the country's preeminent industry groups, in addition to heading the firm.

Daniel Garfield is an accomplished lawyer in his own right, having spent more than two decades practicing law. Garfield is an expert in all facets of marijuana business law, assisting businesses ranging from startups to large money investors as they navigate the perilous and often poorly defined world of legal cannabis.

At McAllister Garfield, the pair's expertise helps to guide a team of over 20 attorneys assisting clients in Colorado, California and Florida. The firm works with clients at all stages of business development, whether they are looking to get started in the industry, hoping to maintain a flourishing business, or making an exit. The law firm and the men who gave it its name have earned a reputation as standout members of the cannabis community in Colorado, and that reputation is only growing with the success of their clients in other legal states.



MARCUS MCCABE & KATE MULLANEY

hile many cannabis entrepreneurs are trying to preserve the essence of the cannabis plant in the form of resins, oils, lotions, tinctures, powders, and waxes, Irish hippies and founders of Kama Hemp and Hempire Kate Mullaney and Marcus McCabe are preserving the plant, juice-style. Longtime hemp advocates and farmers, naturalists, permaculturists, entrepreneurs, and natural material builders, Mullaney and McCabe started juicing hemp plants in 2013.

Everything they do is based on the idea of putting to use the health benefits of the hemp plant and doing so in the purest form. They do this by harvesting their hemp plants, which are homegrown in Monaghan County, Ireland, at the "peak of [their] growing cycle." The plants are then processed in low-speed juicers to preserve the cellular structure and eliminate any oxidation. It's then flash frozen to secure the nutrients and enzymes.

In 1992, the couple left Dublin, Ireland for Monaghan County, where they established a permaculture program as a well as a wetland plant nursery two years later. With the help of local carpenters, they also built a timber-framed building. It was one of their first forays in construction that eventually gave way to their straw bale house that was completed in November of 1998. They even survived the collapse of one of their first hemp businesses that put them in debt financially and spiritually, but the hope for hemp kept them going. They have three children and grow much of their own food.

Kama Hemp claims that their hemp juice has more omega 3 fatty acids than salmon, more potassium than bananas, more magnesium than spinach and more calcium than a glass of milk, making it a wildly nutritious drink that supports many of the body's functions from digestion to the immune system. On their site, you can get recipes for tasty concoctions like Breakfast Berry, Carrot Calmer, and Green Angel Pie to name a few.

Through the couple's other business, Hempire, they offer a variety of different environmentally friendly construction products largely made from their own hemp.

BUSINESS & POLITICS | DYNAMIC DUOS



SHABNAM MALEK & AMANDA CONLEY

seeing as cannabis is still federally illegal, the US Patent and Trademark Office is more than likely to deny a business's application to patent their strain of White Widow or trademark their latest Cannabuddies R' Us brand. But as things progress, there are always gray areas to deal with, and that's where a cannabis-friendly intellectual property agency like Brand & Branch LLP comes in handy. It's possible that the USPTO will let a cannabis business patent products that don't have anything to do with cannabis, like hats or t-shirts. Then again, if cannabis is mentioned in the application, it may be denied. There's also state-specific patents and even developing patent and trademark strategies so a business can be ready to fight a potential infringement or be ready once cannabis does go legal at the federal level. Whatever the case, being connected with an agency like Brand & Branch LLP is a surefire way to get on the right path to protecting your brand.

Shabnam Malek and Amanda Conley founded the firm in 2015 after a lengthy career of corporate lawyering. The duo met in 2010 at San Francisco-based O'Melveny & Myers LLP, where they worked on intellectual property litigation and trademark transactions.

They parted ways for about three years as they independently honed their skills in a variety of intellectual property fields that would later benefit them at their own firm. In 2013, Conley joined Malek at Cobalt LLP in Berkeley, California. The following year, they began developing relationships in the cannabusiness community, attending and speaking at industry events, taking on hot topics like labeling, advertising, trademark protection and enforcement, and copyright issues as they related to the cannabis industry. Soon they were asked to launch the Bay Area chapter of Women Grow, a national cannabis entrepreneurs' group for women, the organization's second chapter.

After their success with Women Grow, the two teamed up with their colleagues to found the National Cannabis Bar Association June 2015, the first of its kind.

With cannabis's increasingly legal status, the need and urgency for businesses to protect their brand and other intellectual property will be all the more. Firms like Brand & Branch LLP are already a crucial asset to that aspect of business and will continue to be a necessity.



WHOOPI GOLDBERG & MAYA ELISABETH

In 2016, celebrity and outspoken cannabis advocate Whoopi Goldberg called on the talent of edible master and Om Edibles co-founder Maya Elisabeth to create Whoopi & Maya Medical Cannabis. With Elisabeth's edible capabilities and Goldberg's interest in women's health, as well as a shared passion for cannabis, the two jumped into the market with a line aimed at female cannabis consumers. Whoopi & Maya products, available in California and Colorado are specifically for soothing those monthly pains unique to women.

Elisabeth's Om Edibles created high-end edibles, body care products, and tinctures based on the concept that top-notch ingredients should be paired with equally quality medical cannabis, an outlook she brought to the Whoopi & Maya line.

The products sold under the brand have a distinctive feminine flair, including bath and body products and those aimed at soothing menstrual cramps in the tradition of Queen Victoria. With inventive mixtures of cannabinoids and natural ingredients designed to assist with uptake, the Whoopi & Maya brand stands out for more than merely the celebrity attached to it.

The pair seem to be doing something right, because the products are a hit, especially seeing as there are few cannabis products, if any, that target menstrual issues. They've got 4.8 stars out of five on Facebook and a bunch of seemingly lifelong customers touting the products' soothing effects. And in Colorado, they are making their presence known: According to the Whoopi & Maya Twitter account, Elisabeth was holding down a booth at the women only cannabis conference Me, Myself, and Irie last September.

BUSINESS & POLITICS | DYNAMIC DUOS



FRITZ CHESS & AC BRADDOCK

he Eden Labs' team of Fritz Chess and AC Braddock is a story of yin and yang, a classic tale of recognizing individual strengths to accentuate each other and the business. Chess founded Eden Labs in 1994 after developing botanical extraction equipment so that clients could unlock the healing and nutritional benefits of various plants. "Enabling extraction of plants for the health of the world," is their mission statement, to be exact.

Chess's interest in plant extraction began when writing an article about Shaman Pharmaceuticals in the early '90s. Venturing into plant extraction, he was unimpressed with the equipment on the market. So, he designed his own, the first one being the Coldfinger[™]. This was all well before the green rush of cannabis legalization, and in 1996 only 10 percent of Eden Labs' sales came from cannabis, Braddock told Marijuana Venture in a profile of herself.

In 2006, Braddock started working with Eden Labs as a business consultant, pulling from her experience as a successful real estate broker, career entrepreneur, and marketer. In 2008, Chess asked Braddock to utilize her skills by taking over the business side of the company. In 2009, Braddock realized that the purity of supercritical CO_2 and ethanol-derived products would be a necessity for the legalization of medical applications for cannabis. This vision and years of educational outreach about extraction methodology and its integral relationship with the emerging science around whole-plant medicine, the endocannabinoid system, and the entourage effect, helped lay the foundation for an industry based on health and well being. Braddock grew Eden Labs' revenues by 500 percent in the first few years while Chess focused on the science of extraction and lab equipment.

Today, Eden Labs is one of the most recognized brands in the cannabis and botanical extraction industries. Their trademarked Hi-Flo^{∞} CO₂ extraction system and Coldfinger ethanol extraction systems are available for commercial and industrial use. Always at the cutting edge, Eden Labs recognized a need for their customers to scale to extract several tons a day, and provide a wide range of "turn-key" solutions which includes R&D, product development, proof of concept, and pre and post processing lab equipment. Equipment is ready to ship and can also be made to custom order. Eden holds and participates in a variety of events for the extraction and cannabis communities, and have training and consultation opportunities on the menu as well.



JOHN & JODY LYONS

ast year, John and Jody Lyons embarked on transforming their horse training ranch in Parachute, Colorado into the country's first ever nutraceutical and hemp treatment facility. Having been a horse trainer for some 40 years, John has worked with more than 600 horses and is known as "America's Most Trusted Horseman". John's held training clinics and emporiums since 1980 and has authored multiple books on the subject.

In 2017, John was set to sell his 70-acre training facility in Parachute. A group of investors wanted to buy it for use as a cannabis grow, according to one story about the facility. Both devout Christians, John and Jody had always held more conservative attitudes about cannabis, but after their investment partners talked the couple into attending a cannabis conference in Eugene, Oregon, the horse trainer and his wife were turned around on the topic; They quickly saw the light of its healing properties.

The partnership with the initial investors fell apart, but John and Jody picked up the pieces and carried on, establishing the Colorado Hemp Institute, where the couple applies their farm-to-table sensibilities to hemp production.

Through the Colorado Hemp Institute, the couple looks to expand access to hemp and broaden understanding of the cannabis plant.

BUSINESS & POLITICS | DYNAMIC DUOS



MARGARET MACKENZIE & AARON RYDELL

Argaret Mackenzie and Aaron Rydell are the co-owners of Salt Creek Hemp Co. based in Collbran, Colorado. The mission of Salt Creek is to grow industrial hemp sustainably and organically in a way that supports their community. Salt Creek's hemp is processed by that community and they support efforts to bring "handson training to tribal members throughout Indian Country," according to their Hempstead Project Heart bio, a public awareness group Mackenzie and Rydell advise on sustainable agriculture and community processing.

Salt Creek Hemp Co. doesn't just grow hemp, they also offer a variety of personal hygiene products they've developed with local goat farmers. Their line of soaps is made of goat milk, whole flower hemp extract and an array of intriguing ingredients. Also available on their website is an all-natural deodorant and their whole hemp plant extract in gel tab form.

Before hemp, Mackenzie and Rydell worked for competing helicopter operators. They met at Rocky Mountain Metro Airport in Broomfield, Colorado. Mackenzie was managing a flight training school for one operator and Rydell was overseeing a heavy lift utility operation for another.

After five years of working together, the opportunity to move to her family's ranch to grow hemp presented itself to them and they jumped on it.

As of the end of 2018, the couple has completed their fourth growing season, they have hosted three annual Hemp on the Slope events, and developed and marketed their whole-flower hemp extract product line.

The couple continue their work to further regenerative farming with a focus on hemp, providing advice and support for hemp farmers across the country.



ANDREW HUNZICKER, CPA & NAOMI GRANGER, CPA, MBA

hese two accounting geniuses are a godsend to the cannabis industry. Andrew Hunzicker and Naomi Granger are seasoned accountants, with years of experience at some of the country's largest accounting firms. Hunzicker and Granger have more than 30 years of accounting experience between the two of them. Today, they not only practice accounting, but have endeavored to teach it to those working in the cannabis space.

About five years ago, Hunzicker started working in cannabis accounting, and was soon inundated with questions form fellow CPAs about navigating the legally murky waters, which was where he met Granger.

The two partnered up to found Dope CFO and teach cannabis accounting to CPAs and bookkeepers around the country. Currently, they have 150 students under their wing in 33 states. The firm mostly serves CEOs, investors and accountants, and they are growing rapidly. Hunzicker is also the founder and president of Anchor Advisors, a company that provides businesses with accounting and start-up services.

Hunzicker and Granger aren't stopping with education, though. This year, they're partnering with some of the most successful cannabis CEOs who operate in every niche of cannabis and launching a line of informational packages that will help new cannabis CEOs and investors in their ventures. Packages like "Dispensary in a Box", "Grow in a Box" and "Processor in a Box" will provide business owners with information on every aspect of operation they will need to run a cannabis company.

BUSINESS & POLITICS | DYNAMIC DUOS



TROY DAYTON & STEVE DEANGELO

B ringing together two synergistic halves is the nature of any good team up, and few duos have that kind of synergy in the amount of Steve DeAngelo and Troy Dayton, respectively president and CEO of Arcview Group. With a wealth of advocacy, policy and industry experience, the complementary experiences of the two has helped to create one of the most trusted sources of cannabis industry data in the modern world.

Currently serving as chair of the board of the Marijuana Policy Project, Dayton also helped to found both Students for Sensible Drug Policy and the National Cannabis Industry Association.

Meanwhile, DeAngelo is the founder and CEO of Harborside Health — one of California's oldest and most revered dispensaries — as well as one of the founders of Steep Hill Labs, which was one of the earliest testing laboratories in the cannabis industry and a pioneer in commercial cannabis science.

Together the duo combines a sharp sense of business acumen, industry knowhow and real-world insight into one of the most trusted industry analysis firms in Arcview, where the pair applies their insight and experience to shaping a responsible and compassionate industry that is palatable to lawmakers. It's hard to find a pair that has been treating the cannabis industry seriously for as long as these two have, creating meaningful analyses that help to build investor confidence and allows the movement to flourish behind successful businesses.

The research done by Arcview helps to create an informed industry while the organization's investor forums help to connect eager entrepreneurs with the capital needed to make the next generation of cannabis businesses possible, having produced several prominent cannabis-related companies such as MJ Freeway and Tokyo Smoke.

Through all of this, Dayton and DeAngelo have attempted to maintain a sense of ethics and responsibility within their organization and the broader cannabis industry that they are helping to shape. Their mixture of activism and acumen has won them favor of cannabis boosters, businessmen and lawmakers alike, giving them a truly unique position of respect from all parties involved.

LOOKING FORWARD: What Federal Legalization Could Mean for the Hemp Industry

By Jessica Arent

ith the 2018 Farm Bill at the top of the list of major milestones, 2018 seems to be a historic year for hemp. The House Committee on Agriculture posed the bill, which won approval in a landslide vote on the House floor before final codification with the signature of President Trump at the close of the congressional session in December.

The hemp provisions in the more than 1,000-page bill re-classify the plant, and removes it from the federal list of Schedule I controlled substances This really is the green rush....or is it?

FACTS VS FICTION "Industrial Hemp was not 'removed' from the Controlled Substance act as many news articles claimed," said Veronica Carpio, an industry pioneer with more than a decade of experience in hemp currently serving as CEO of GrowHempColorado. "Industrial hemp was never defined in the CSA, only marijuana. A new definition has been created for industrial hemp in the 2018 Farm Bill language which legal separates it away from marijuana and new language was added to the definition of marijuana in the CSA to not included industrial hemp."

"[Cannabis with] .3 percent THC delta 9 concentration on a dry weight basis or below has been clearly defined [as] industrial hemp. There have been no discussions at a federal level regarding raising the THC levels as many have been misled to believe including those who pushed for and voted for Amendment X here in Colorado, which removed our state constitutional rights to grow hemp by removing our definition of industrial hemp and leaving it in the hands of law makers and lobbyist. Over the last many years, the 0.3 percent THC delta 9 total has been a source of confusion and controversy, but the farm bill clears that all up now. THC delta 9 plus THC-A equals total [THC] concentration which must be 0.3 percent or below, otherwise it is marijuana."

The fact is, while the Farm Bill passed, CBD did not become legal for human consumption. The hemp language in the 2018 Farm Bill in fact allows for cultivation of cannabinoids which are naturally found in various hemp varieties, but does not allow for the human use and consumption of the extracted product. In fact, Sen. Mitch

McConnell (R-Ky.) gave a clear concession to the FDA, ensuring that nothing in the new hemp language and future regulations by USDA will change, alter, limit or impact the federal Food, Drug and Cosmetic Act. The FDA will continue to be allowed to fully enforce anything outside their guidelines, policy and regulations.

The FDA is in charge of all products for human use and consumption and has taken the position that CBD (the compound itself, not the source where it comes from) is not allowed for human/animal use and is not a food. Additionally, there are a number of states that have restrictive CBD-only laws which clearly identify the substance possession, distribution or consumption of a CBD product as illegal unless prescribed by a Doctor. Colorado is currently the most protected state in the nation due to the 2018 Hemp Foods Bill, which defined hemp products, including hemp-CBD, and gave regulatory authority to the state health department. Although this is in direct conflict with the FDA position, it seems it was necessary to enact to ensure consumer safety and protect Colorado's thriving hemp industry, the first legal hemp state, with the biggest hemp program and most acres planted.

But does this make hemp the same as soy and carrots?

"This is not exactly true, although that is the expectation. It is true that industrial hemp is now legally defined as an agricultural commodity and will be regulated under the USDA," said Carpio. "Unfortunately, the fact is that there is not any other agricultural crop that requires GPS coordinates of all planting locations, background checks, finger prints and bans a very selective group of people participating."

McConnell's hemp language originally did not have a ban on participation in hemp cultivation, but later versions added an amendment banning drug felons. Carpio helped to draw public attention to this issue, and a compromise was eventually reached, changing a lifetime ban from the hemp industry to a 10-year ban for those convicted of drug felonies.

While there is language providing an exemption for those who have already been licensed in their state under the 2014 farm bill, the ban only affects drug felons, like those with a marijuana felony, yet allows those who have been convicted of crimes

BUSINESS & POLITICS | LOOKING FORWARD

like murder, rape and tax evasion to both grow and process hemp. Many see this as tragically hypocritical on the part of McConnell, who also pushed through a criminal justice reform bill recently.

"Amendments will and are certainly needed and necessary. In spite of the enthusiasm of the bill's drafting, hemp is not an agricultural food product. It cannot and should not be treated as lettuce or berries," posited Craig Brand, founding partner of cannabis centric law firm Ganja Law. "There are security issues at stake, there are illegal grows to be concerned about, there is interference with and from the gray and black markets, transportation is still an unresolved issue, and there is considerable marketability concerns. We will see and probably must see some balance of state protection measures put into play. Outside competition and forces can cripple a state's newly implemented hemp program if protective measures are not first thought out."

Fortunately, farmers will be able to switch crops to hemp without fear of losing access to banking, credit and insurance programs, according to Brand's assessment, and this includes sovereign Native American tribes left out of the Farm Bill's previous incarnation.

While Brand sees these advancements in local control as a positive, Carpio sees a downside in states and tribes opting out of having their own hemp program. They could also limit the number of hemp farmer licensee/registrations issued and require large fees which will limit opportunities for many farmers around the country, killing cottage industry and opening the door for big money corporate control.

Interstate transportation of raw hemp materials and products was addressed in the bill, adding to the confusion. Currently, the understanding is that no tribe or state can restrict the transportation of hemp. The problem lies with a number of states that have a zero-percent THC allowance and restrict CBD possession and use to FDA-approved drugs, complicating the transport of hemp materials or hemp products with the federally legal .3 percent THC across state lines.

"The 2018 Farm bill signed in by the president throws all existing state and tribal hemp programs into a paradox," said Carpio. "It is probable that it will take the USDA to fully define and implement a federal hemp program 12-18 months with many operating in a 'business as usual' methodology. Once the USDA does have a clearly defined program, all state and tribal hemp programs will probably be required to submit their plans to USDA for approval. They will also have the opportunity to adjust their programs and resubmit to USDA for approval if initially rejected. Oh, and don't get caught lying on your hemp application! If you do, you will also be banned from hemp cultivation and production opportunities."

While some feel they were misled about the breadth of legal allowance that the hemp language in the 2018 Farm Bill would provide, there is hope that the bill will be the first real step toward a fully functioning American hemp industry. What everyone seems to agree on, as Brand stated, is the idea that "our legislature requires more hemp education and knowledge as to where cannabinoid content has taken us to date and where it is going in the future."

"There are security issues at stake, there are illegal grows to be concerned about, there is interference with and from the gray and black markets, transportation is still an unresolved issue, and there is considerable marketability concerns."



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WHAT'S BREWING IN THE MARIJUANA BEVERAGE INDUSTRY?

by Dr. Nicola Davies

annabis producers and beverage giants belong to two very distinct industries. However, given a growing demand for wellness drinks, we might be seeing these two industries merge to develop cannabis-infused beverages.

A \$600 MILLION MARKET FOR CANNABIS-INFUSED BEVERAGES

Marijuana beverages are consumer beverages infused with cannabinoids, the diverse chemical compounds responsible for altering the brain's neurotransmitter release when a person ingests cannabis products. Commonly, these beverages contain doses of tetrahydrocannabinol (THC), cannabidiol (CBD), or both.

Analysts predict that by 2022 THC-infused beverages will become a \$340 million market and CBD-infused drinks will be worth \$260 million, amounting to a \$600 million market for cannabis beverages.¹ It is therefore no surprise that beverage giants such as Coca-Cola are seeing an opportunity to benefit from the lift-off of an emerging cannabis-infused beverage industry.²

THE PROMISING GROWTH OF THE CANNABIS MARKET

The market for marijuana-infused drinks will comprise a sizable portion of the legalized marijuana industry, which itself is poised to get bigger. Worldwide, the revenue of legalized marijuana is projected to reach \$57 billion by 2027, and 67 percent of this will be for the recreational use of cannabis products.³

Canada's national legalization of marijuana indicates that the demand for cannabis can be expected to increase across the world. Less than a year into its legalization, marijuana-containing products are already making waves in the social and dietary fabric of Canada.⁴ In the business sector, big companies have also put in astronomical investments to capitalize on the potential for growth and the revenues to be gained in Canada's newly sanctioned cannabis industry. Indeed, the "cannabis rush" is on, with companies acquiring more than 8.7 million square feet for marijuana-cultivating and processing facilities.⁵





BUSINESS & POLITICS | MARIJUANA BEVERAGES

In general, the perceived risk of marijuana products is declining globally, whilst public acceptance is growing. Amidst this trend, annual cannabis sales in the US alone are projected to reach \$75 billion by 2030 if marijuana were legalized at the federal level.¹ Hence, companies are seeking new ways to differentiate and to capture a portion of the cannabis market, and developing cannabis-containing drinks is a promising way to go.⁶

INVESTING IN CANADA'S MARIJUANA LEGALIZATION

Given Canada's recent national legalization of marijuana in 2018, large beverage companies are toying with the possibility of investing in Canada-based cannabis producers.^{9,11} Co-ca-Cola reported in September 2018 that the company was closely watching the growing use of CBD as an ingredient in wellness drinks, and even cited discussions with Aurora Cannabis, a licensed cannabis producer based in Edmonton, Canada.⁷

As Coca-Cola explores cannabinoid drinks, and as consumer interest in novel wellness drinks expands, other beverages giants are also expected to capitalize on the growth potential in cannabis.¹¹ Hugh Johnston, PepsiCo's chief financial officer, in October 2018 revealed that PepsiCo had no plans for involvement with the cannabis industry.¹² The same day the statement aired, the company's stock dropped in value by 1.4 percent. Later the same day, Johnston retracted his earlier statement, saying that the company is critically looking at cannabis beverages.¹¹

However, beverage makers may soon need more than a critical exploration of cannabis. Companies such as Constellation Brands and Molson Coors have already gone beyond exploration by investing in the Canadian cannabis sector. In August 2018, Constellation Brands, a maker of whiskies, vodkas, tequilas and beers such as Corona and Modelo, invested \$4 billion to gain a 38 percent stake in Ontario-based marijuana producer Canopy Growth.⁹ In the same month, Molson Coors also entered a joint venture with a marijuana cultivator, Hexo, to develop a cannabis-laced beer.¹

LONG-TERM GROWTH ON THE HORIZON

Analysts predict that in four years marijuana beverages will comprise 20 percent of the market for marijuana edibles.¹ This should not come as a surprise given the business potential offered to drink companies and the health and wellness opportunities offered to consumers. The emerging marijuana beverage sector is clearly poised for a level of growth that will have a lasting impact on both the beverage and cannabis industries. \blacksquare As Coca Cola explores cannabinoid drinks, and as consumer interest in novel wellness drinks expands, other beverages giants are also expected to capitalize on the growth potential in cannabis.

References:

1. Berke, J. (2018). 'The market for marijuana-infused beverages could explode to \$600 million in the next four years', Business Insider, October 1, 2018 [online]. Available at: https://www.businessinsider.com/ marijuana-infused-beverages-600-million-market-2022-2018-9 [Accessed 12/12/2018]

2. Yakowicz, W. (2018). 'Forget Kombucha and Coconut Water, Cannabis Is the Next Hot Beverage Trend', Inc, June 11, 2018 [online]. Available at: http://www.inc-asean. com/the-inc-life/forget-kombucha-and-coconut-water-cannabis-is-the-next-hot-beverage-trend/?utm_source=inc&utm_medium=redir&utm_campaign=incredir [Accessed 12/12/2018]

3. Pellechia (2018). 'Legal Cannabis Industry Poised For Big Growth, In North America And Around The World', Forbes, March 1, 2018 [online]. Available at: https://www.forbes.com/ sites/thomaspellechia/2018/03/01/double-digitbillions-puts-north-america-in-the-worldwidecannabis-market-lead/#b34fbd651093 [Accessed 14/12/2018]

4. Szklarski, C. (2018). 'Marijuana at a holiday party? Legalization puts spotlight on changing social norms', Global News, December 12, 2018 [online]. Available at: https://globalnews.ca/news/4755343/holiday-party-season-cannabis/ [Accessed 13/12/2018]

5. Wong, N. (2018). 'Demand for Pot Grow-Ops Is 'Astronomical' as Canada Legalizes', Bloomberg, October 18, 2018 [online]. Available at: https://www. bloomberg.com/news/articles/2018-10-18/demand-for-pot-grow-ops-is-astronomical-as-canada-legalizes [Accessed 13/12/2018]

6. Pierre, J. (2018). 'Coca, Cola, and Cannabis: Psychoactive Drugs as Beverages'. Psychology Today. [blog] October 1, 2018. Available at: https://www.psychologytoday.com/gb/ blog/psych-unseen/201810/coca-cola-and-cannabis-psychoactive-drugs-beverages [Accessed 14/12/2018]

7. Skerritt, J. and Giammona, C. (2018). 'Coca-Cola Is Eyeing the Cannabis Market', Bloomberg, September 17, 2018 [online]. Available at: https://www.bloomberg.com/news/articles/2018-09-17/coca-cola-eyes-cannabis-market-in-push-beyond-sluggish-sodas [Accessed 12/14/2018]

8. Shieber, J. (2018). 'Coke eyes cannabis-infused wellness drinks as market for CBD beverages expands', Tech Crunch, September 17, 2018 [online]. Available at: https://techcrunch. com/2018/09/17/coke-eyes-cannabis-infusedwellness-drinks-as-market-for-cbd-beveragesexpands/ [Accessed 13/12/2018]

9. Dangerfield, K. (2018). 'Drinking weed: Here's everything to know about cannabis-infused drinks', Global News, September 20, 2018 [online]. Available at: https:// globalnews.ca/news/4461993/cannabis-infused-drinks-marijuana-legalization-canada/ [Accessed 11/12/2018]

10. Cooley, K. (2018). '7 Beverage Brands Infused With Cannabis'. Drinkpreneur. [blog] July 25, 2018. Available at: https://www. drinkpreneur.com/beverage-startups/7-beverage-brands-infused-with-cannabis/ [Accessed 11/12/2018]

11. Hirsch, L. (2018). 'PepsiCo just became the latest beverage company to say it's looking at the fast-growing cannabis market', CNBC, October 2, 2018. Available at: https://www.cnbc. com/2018/10/02/pepsico-will-look-at-cannabis-industry-critically-says-cfo-hugh-johnston. html [Accessed 11/12/2018]

12. Giammona, C. (2018). 'Pepsi Slides After CFO Says Company Has No Plans for Cannabis', Bloomberg, October 2, 2018. Available at: https://www.bloomberg.com/news/articles/2018-10-02/pepsico-slides-after-cfo-sayscompany-has-no-plans-for-cannabis [Accessed 13/12/2018]

13. Hamblin, J. (2017). 'Smoking Versus Edibles', The Atlantic, August 18, 2017 [online]. Available at: https://www.theatlantic.com/ health/archive/2017/08/whats-the-safest-wayto-get-cannabis-to-my-brain/536988/ [Accessed 12/12/2018] Blazing a trail isn't easy. But you don't have to go at it alone.

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MICHIGAN ADULT-USE CANNABIS What's in Store for the Wolverine State?

by Erin Hiatt

n November 6, 2018, Michigan became the tenth state to pass a legal, adult-use cannabis law. Proposal 1, passed by 56 percent of Michiganders, allows for adults 21 and older to possess and transport up to 2.5 ounces of cannabis, including up to 15 grams of cannabis concentrate. Adults may also grow up to to 12 cannabis plants and possess up to 10 ounces of cannabis in their homes. Until the law is implemented, Michiganders will not be arrested for simple use and possession of cannabis.

The win in Michigan was one of several cannabis victories during the 2018 election, along with the passage of medical marijuana initiatives in Utah and Missouri. What is significant about Michigan's victory is that the Wolverine State is the first in the Midwest to pass legal adult-use laws. Matthew Schweich, who served as the campaign director for Proposal 1, and also acts as deputy director of the Marijuana Policy Project (MPP), a marijuana advocacy organization that contributed large sums of cash as well as in-kind donations to the initiative's success, recently stated that he believes that the entry of Michigan into legal cannabis markets "will be the nail in the coffin for marijuana prohibition."

Mason Tvert, national spokesperson for MPP, further clarified the significance of Proposal 1's passage. "Up until now, adult-use legalization has been moving forward on the coasts and in the Southwest," he said. "Michigan will be the first state in the Midwest to regulate marijuana for adult-use, in addition to medical use, and it will hopefully set a strong example for other states in the region. Lawmakers in Illinois, Ohio, and other states will be able to see this system at work without having to travel to other states outside their region."

Cannabis is not new to Michigan. Voters passed the Michigan Medical Marihuana Act in 2008, but the rollout of medical cannabis has been anything but smooth. Mark Passerini is the co-founder of the Ann Arbor-based Om of Medicine and the Ann Arbor Medical Cannabis Guild. He also serves on the board of the National Cannabis Industry Association, Americans for Safe Access, and is a member of the ArcView Group, a private cannabis investment and market research firm. >>>

CANADA



BUSINESS & POLITICS | MICHIGAN ADULT-USE

With a long history in the local cannabis market, Passerini has some reservations about how the new adult-use market will unfold. "If the rollout of licensed medical cannabis facilities is any indication on how the adult-use program will be, we are in for a rough patch of limited supply, slow-to-award licenses at the state level, and pushback on the local level. Many municipalities have opted out of the program and more will follow suit," he said.

Passerini also expressed concern about high application costs and places for consumers to legally use cannabis. "Often times the licensing fees are exorbitant and out of reach for small mom-and-pop type businesses," he explained. "I am hoping that the application process will allow for those most adversely affected by the war on drugs to participate in this burgeoning industry. Lastly, like everywhere else [with adult-use cannabis laws], the question of, where does an adult tourist legally consume cannabis?"

Hilary Dulany, a cannabis entrepreneur and the director of operations at AccuVape, shares many of the same concerns as Passerini, plus what she considers an incredibly difficult obstacle: the licensing system. "There are two forces at work: the legislative and the local governance that can decide whether to opt-in, and licenses," she said. Dulany explains that some cities are opting to give cannabis licenses via a lottery system, which makes it very difficult for anyone opening a business, much less a cannabis business, which requires a much more rigorous application process and massive capital. "The amount of investment, planning, and hurdles, just to apply for a license! I challenge you to find the professional required to operate a business that is divvied up by lotto."

Several legal states and municipalities therein have opted for a lottery system to award cannabis licenses. In this process, applicants that meet the minimum requirements, such as not violating required buffer zones, submitting the required application fees, and meeting other qualifications may receive a license, a process that Dulany believes is akin to pulling a license out of a hat.

In Santa Ana, California, where they chose to award licenses via lottery, seven months after 20 applicants were awarded licenses only two had opened. Another challenge of the lottery system is that small groups of businesses with multiple submitted applications can win the majority of licenses, essentially stuffing the box and dominating the market. "[Members of the municipal government] are thinking, 'If we do a lottery, it'll be fine.' But a business person has to plan. If the city wants to make a go of it, it takes planning," Dulany said. "We're working on the whims of a lottery, and it is not the way to really do anything."

Despite these challenges, Passerini is optimistic about Michigan's new governor, Democrat Gretchen Whitmer, and Attorney General Dana Nessel, also a Democrat, who will take office in the new year. Former Attorney General Bill Schuette, who ran for Governor on the Republican ticket and lost to Whitmer, proved himself, in Passerini's view, to be very antagonistic to the medical cannabis community. "Gretchen Whitmer has stated she would uphold the will of the people [regarding Proposal 1] and be an advocate for cannabis reform!" he said. "Our new Attorney General has also promised to be a champion for our cause and we are planning to make sure they both keep their word."

Dulany is similarly hopeful that new state leadership will make the difference in Proposal 1's implementation. "The old administration were Republican and massively conservative," she said. "They pretty much didn't do anything that wasn't beneficial specifically to them, and now they're voted out." Dulany also cites the new governor and attorney general's word to be pro cannabis legalization, and believes that a new governing body will be good for the state overall and help calm the wariness of some cannabis-averse cities. "I believe that after the first of the year, things are going to start moving more efficiently to implement the program. If not, Michigan won't see their tax capture. I believe that the Democrats taking over are going to make sure we meet those."

If all goes smoothly, legal adult-use markets are expected to be open for business in 2020, when regulations are expected to be in place. Dulany is excited for a new industry in the state, one hard hit by layoffs in the auto industry. "I think that people in Michigan are positioned for [adult-use markets] because we have that industrial, process-oriented background. We're uniquely positioned for our [cannabis] workforce," she said. "All those people getting laid off at GM understand the certification process, and they'll be able to understand the cannabis process. I think that Michigan is gonna crush it."

"I am hoping that the application process will allow for those most adversely affected by the war on drugs to participate in this burgeoning industry. Lastly, like everywhere else [with adult-use cannabis laws], the question of, where does an adult tourist legally consume cannabis?"

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CBD for Aging Pets, Cannabinoid Topicals & The Case for More CBD Research



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CBD for Aging Pets BUEFIN Hiatt

SCIENCE & TECHNOLOGY | CBD FOR ELDERLY PETS



Many pet owners are drawn to CBD as their pet naturally slows from age, or starts to exhibit age-related conditions like arthritis, diabetes, cancer, kidney disease, and dementia.

mericans sure do love their pets. In fact, according the American Pet Products Association, in 2016, pet owners in the US spent upwards of \$30 billion on veterinary care, pet supplies, and treatments. Americans are also spending a lot of money on hemp-derived cannabidiol (CBD) products. Often found as tinctures and capsules, CBD has found its way into gummies, isolates, edibles, and myriad other intake methods.

This non-psychoactive cannabinoid found in the cannabis plant is believed to help relieve symptoms of inflammation and anxiety, and is often used to treat pain and to reduce symptoms of depression. It is also famous for helping children with intractable epilepsy like Dravet's syndrome and Lennox-Gastaut. In fact, one of the few FDA-approved cannabinoid-based medicines, Epidolex, is intended for the treatment of intractable epilepsy.

As people get wise to CBD's healing effects, The Hemp Business Journal estimates that the hemp CBD market will grow to more than \$450 million by 2020, representing a whopping 700 percent increase from 2016. And as the market has grown, so has the demand for CBD for elderly pets.

CBD works through the body's endocannabinoid system (ECS), something all mammals share, by binding to cannabinoid receptors in the body, helping to restore the homeostasis, or a natural equilibrium within cells. A working hypothesis, called the Clinical Endocannabinoid Deficiency, posits that imbalance in the ECS may be at the root of some chronic and treatment-resistant conditions like fibromyalgia and irritable bowel syndrome.

Many pet owners are drawn to CBD as their pet naturally slows from age, or starts to exhibit age-related conditions like arthritis, diabetes, cancer, kidney disease, and dementia. However, formalized research on how CBD can help your elderly pet is pretty much nonexistent, so the reports are anecdotal.

But Dr. Patty Khuly, VMD, MBA, and the owner of Sunset Animal Clinic in Miami, Florida, thinks that the anecdotal reports on CBD are the real deal. Khuly first started thinking about CBD several years ago, after a friend's daughter, who had epilepsy, dramatically improved while taking CBD supplements. This inspired her to try it with her pet patients, initially for the treatment of osteoarthritis, and grew to include many other conditions.

"Overall, I'd say that about 75 percent of my CBD patients experience significant pain relief, especially when used in conjunction with other pain relievers," she said. "This means I can use less of the drugs, thereby limiting a lot of the side effects we see with some pain drugs like constipation, diarrhea, vomiting, etc."

Khuly says that her experiences treating pets with CBD have been largely successful, with the exception of some dogs that seemed overly sensitive to CBD's sedative effects, and some who showed no response at all. She says that she is surprised so few veterinarians are currently recommending it, but she believes that is because of the current legal gray zone. "As it stands," she said, "most veterinarians believe it's illegal to even discuss CBD products with their patient's owner." >>>

SCIENCE & TECHNOLOGY | CBD FOR ELDERLY PETS

Here's how CBD could supplement your elderly pet's health:

- Anxiety: some studies have shown that in humans, CBD has helped those who have social anxiety and are afraid to speak publicly. And any pet owner has likely come home, at one point or another, to a partially eaten or scratched up couch because of anxiety
- Chronic joint pain and arthritis: CBD is anti-inflammatory, that when taken consistently and dosed properly, may help reduce the discomfort from joint pain and arthritis. While it certainly is not a cure, it may help your pet stay active longer and have a better quality of life
- **Cancer:** preliminary studies have shown that CBD may work with the immune system to cause cancer cell death, as well inhibit tumor growth and reduce a cancer cell's ability to produce energy
- **Healthy eating:** as pets get older, getting the proper nutrients is essential for the animal's overall health. But, just like humans, when an animal is dealing with an illness, their appetites may shut down, leaving them without the nutrients they need to get better. CBD is believed to trigger hunger while also reducing nausea, which helps your pet heal
- **Epilepsy:** at Colorado State University James L. Voss Veterinary Teaching Hospital, Dr. Stephanie McGrath, a neurologist, led studies on the efficacy of CBD for dogs with epilepsy. McGrath found that of the 16 dogs studied, 89 percent of the dogs who received CBD for epilepsy had fewer seizures. While the research is still nascent, McGrath said she thought the results were very promising

Finding the correct dosage of CBD for your pet may require some trial and error, but one thing you should never give your pet is CBD combined with THC. Pets may become disoriented and hyperactive, and in a worst-case scenario, THC may cause seizures and tremors. You will know if your pet is intoxicated if they become lethargic, overly vocal, and drool excessively. If your pet becomes THC-intoxicated, take them to the vet immediately, be upfront about why you brought them, and how much THC you estimate they've ingested. That gives the doctors needed tools to plan the appropriate course of action.

With the passage of the 2018 Farm Bill, research is likely to open up, clearing the way for more formalized study on CBD's ameliorative effects. And the good news is, with an animal, there is no placebo effect. CBD will either work for your elderly pet, or it won't.

Khuly hopes that now that the Farm Bill has been signed into law, her veterinarian colleagues will understand that they will no longer be at odds with the DEA over CBD's use, and can feel comfortable sharing its benefits with pet owners. "I'm frustrated that most veterinarians can't see past the fine points of the law when the product offers so many benefits," she said. "That will change with the Farm Bill, I hope."

Finding the correct dosage of CBD for your pet may require some trial and error, but one thing you should never give your pet is CBD combined with THC.



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Cannabinoid Topicals: What can they Treat?

by Dr. Nicola Davies

SCIENCE & TECHNOLOGY | CANNABINOID TOPICALS

Cannabinoids act upon cannabinoid receptors in the human body, like CBI and CB2. CB1 receptors affect memory, sleep, mood, appetite and pain, while CB2 receptors are believed to trigger cannabinoids' anti-inflammatory and immunomodulatory effects.

s the stigma against cannabis wavers, doctors and researchers are keen to explore the plant's potential as a topical treatment for a variety of medical conditions. Gaining particular attention is the use of cannabinoid topicals for skin conditions and pain.¹ Research and anecdotal evidence suggest cannabinoid topicals could alleviate the symptoms of acne, atopic dermatitis, pruritus, eczema, arthritis, and chronic pain.¹⁻³

WHAT ARE CANNABINOID TOPICALS?

Cannabinoid topicals are lotions, balms, salves and oils that contain cannabinoids, natural compounds found in the cannabis plant. These compounds include cannabigerol (CBG), cannabichromene (CBC), cannabidiol (CBD), tetrahydrocannabinol (THC), cannabinol (CBN), cannabinodiol (CBND), and other cannabinoids. The most notorious cannabinoid is THC, which causes psychoactive effects.

Cannabinoids act upon cannabinoid receptors in the human body, like CB1 and CB2. CB1 receptors affect memory, sleep, mood, appetite and pain, while CB2 receptors are believed to trigger cannabinoids' anti-inflammatory and immunomodulatory effects.⁴ Cannabinoid topicals usually contain one or a combination of cannabinoids. In the form of topicals, however, cannabinoids typically do not enter the bloodstream and only stimulate CB2 receptors. Therefore, consumers typically will not experience psychoactive effects from cannabinoid topicals, unless they receive concentrated THC through a dermatological patch intended to introduce the cannabinoid into the bloodstream.⁵

WHAT CAN CANNABINOID TOPICALS TREAT?

Currently, only a limited number of cannabinoid compounds have shown efficacy in the treatment of specific conditions and most of the existing data for cannabinoid topicals are pre-clinical, without having undergone controlled, randomized trials.⁴ However, research has found cannabinoid topicals to have great potential in the treatment of acne, atopic dermatitis, pruritus, eczema, and discomfort associated with arthritis and chronic pain.¹⁻³

Acne:

According to a 2018 literature review published in the Dermatology Online Journal, topical preparations containing cannabinoids have demonstrated positive effects on acne-afflicted skin.⁴ Sebum is a natural oil produced in skin and its over-production is the primary cause of acne. The authors of the review cite a study that outlines CBD's capability to decrease excess lipid and sebum production of the skin.⁶ Additionally, the authors note a test conducted in 2015 that evaluated a three-percent cannabis extract cream from C. sativa seeds on the right cheek of patients with acne. The cream was given two times a day for two weeks. Researchers observed a marked decrease in sebum production and redness on the test cheek in comparison to a control cream.

Atopic Dermatitis and Pruritus:

Pruritus, or severe itching of the skin, is a common symptom exhibited by sufferers of atopic dermatitis, resulting from the condition's characteristic dry skin and histamine release. Cannabinoids can potentially reduce itch by stimulating CB2 receptors, which can deactivate the body's response to irritants. Recent trials of cannabinoid-like topicals in the treatment of atopic dermatitis have demonstrated encouraging results. A cream containing PEA (palmitoylethanolamide, an compound produced naturally in the body, which can act on the same receptors as cannabinoids) administered to adults and children significantly reduced the average time to the next flare-up.7 In another study, a topical emulsion of a similar chemical clinically cured atopic dermatitis and inhibited relapse in 80 percent of tested patients.8 Additionally, in a trial of a PEA-containing cream, patients reported a 60 percent improvement in itch severity and, as a result, improved sleep.9

While neither test utilized cannabis-derived cannabinoids, both demonstrate the potential for treatment through stimulation of cannabinoid receptors.

Eczema:

Similar to atopic dermatitis, eczema is a non-contagious skin disease that results in patches of itchy, flaky red skin. In a controlled study of 60 patients, it was determined that emollient creams containing PEA or N-acylethanolamine (a fatty acid) improved itch, dryness, and scaling in eczema patients after 28 days.¹⁰ Skin hydration was also improved.

Pain Relief:

Topical cannabinoids, specifically those containing CBD, may also relieve pain. One study found that while CBD has

SCIENCE & TECHNOLOGY | CANNABINOID TOPICALS

only a small effect on the body's endocannabinoid system it, "...activates, or inhibits other compounds in the endocannabinoid system. For example, CBD stops the body from absorbing anandamide, a compound associated with regulating pain. So, increased levels of anandamide in the bloodstream may reduce the amount of pain a person feels."¹¹

This is good news for people suffering from long-term, painful conditions such as arthritis or chronic pain. Indeed, another study tested a CBD topical gel on animals with arthritis. After four days, researchers observed reduced inflammation and symptoms of pain.¹² Another study, which involved administering CBD to rats via injections in the foot, concluded that CBD could be an effective treatment for patients with chronic pain.¹³

THE OUTLOOK FOR CANNABINOID TOPICALS

Current research indicates a positive future for cannabinoid topicals in the treatment of certain skin conditions and pain relief, especially in terms of atopic dermatitis. While existing studies are few and the results are modest, the discomfort caused by atopic dermatitis (especially by pediatric patients) and other skin conditions merits further investigation into any potential therapeutic value of cannabinoid topicals. As these compounds undergo more clinical trials, their potential as a treatment will become more apparent.

At present, no topical cannabinoids have been approved by the Food and Drug Administration (FDA). However, with more states legalizing marijuana for medicinal and recreational purposes, topical cannabinoids are increasingly available to consumers. If you are considering using cannabinoid topicals, check with your doctor and familiarize yourself with your state's laws prior to making any purchases.

References:

1. Shalaby, M., Yardley, H. and Lio P., 2018. 'Stirring the Pot: Cannabinoids and AD', Practical Dermatology, January, pp. 68-70.

2. Knopp, J. (2018). 'The Market for Cannabinoid Topicals is Set to Explode', Civilized Life, 24 April 2018 [online]. Available at https://www. civilized.life/articles/the-market-for-cannabis-topicals-is-set-to-explode/ [Accessed 6 December 2018]

3. Johnson, J. (2018) 'Does CBD Oil Work for Chronic Pain Management?' Medical News Today, 16 March 2018 [online]. Available at https://www.medicalnewstoday.com/articles/319475.php [Accessed 10 December 2018]

4. Eagelston, L., Yazd, N., Patel R., Flaten, H., Dunnick, C., & Dallavalle, R. (2018) 'Cannabinoids in Dermatology: a Scoping Review', UC Davis Dermatology Online Journal. June [online]. Available at https://escholarship.org/uc/item/7pn8c0sb [Accessed 5 December 2018]

5. Rhan, B., 2015. 'What are Cannabis Topicals and How Do They Work?' Leafly, 30 April [online]. Available at: https://www.leafly.com/news/ cannabis-101/what-are-cannabis-topicals [Accessed 6 December 2018]

6. Oláh A, Tóth BI, Borbíró I, et al. (2014) 'Cannabidiol Exerts Sebostatic and Antiinflammatory Effects on Human Sebocytes'. Journal of Clinical Investigation. 124(9):3713-3724.

7. Del Rosso J. Q., (2007). 'Use of a Palmitoylethanolamide-Containing Nonsteroidal Cream for Treating Atopic Dermatitis: Impact on the Duration of Response and Time Between Flares. Cosmetic Dermatology 20 (4) pp. 208-211.

8. Pulvirenti N., Nasca M.R., Micali, G. (2007). 'Topical Adelmidrol 2% emulsion, a Novel Aliamide, in the Treatment of Mild Atopic Dermatitis in Pediatric Subjects: a Pilot Study. Acta Dermatovenerol Croatia. 15 (2) pp. 80-83.

9. Eberlein B., Eicke, C., Reinhardt, H.W. and Ring, J. (2008). 'Adjuvant Treatment of Atopic Eczema: Assessment of an Emollient-Containing N-Palmitoylethanolamine (ATOPA study). Journal of the European Academy of Dermatology and Venerology. 22 (1) pp: 73-82.

10. Yuan, C. Wang, X.M., Guichard, A., Tan, Y.M., Qian, C.Y., Yang, L.J., (2014). 'N-Palmitoylethanolamine and N-Acetylethanolamine are Effective in Asteatotic Eczema: Results of a Randomize, Double-Blind, Controlled Study in 60 Patients'. Clinical Interventions in Ageing. 9 pp: 1163-1169.

11. Rosenberg, E.C., Tsien, R.W., Whalley, B.J., Devinsky, O. (2015). 'Cannabinoids and Epilepsy'. Neurotherapeutics. 12 (4) pp: 747-768.

12. Hammell, D.C., Zhang, L.P., Ma, F., Abshire, S.M., Mcllwrath, S.L., Stinchcomb, A.L. and Westlund, K.N. (2016). 'Transdermal Cannabidiol Reduces Inflammation and Pain-Related Behaviours in a Rat Model of Arthritis.' European Journal of Pain. 20 (6) pp: 936-948.

13. Xiong, W., Cui, T., Cheng, K., Yang, F., Chen, S.R., Willenbring, D., Guan, Y., Pan, H.L., Ren, K., Xu, Y., Zhang, Li (2012). 'Cannabinoids suppress inflammatory and neuropathic pain by targeting α 3 glycine receptors.' Journal of Experimental Medicine. 209 (6) pp: 1121-1134.





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THE CASE FOR EXPANDED, MORE RIGOROUS, AND TARGETED RESEARCH ON THE USE OF CBD

by Richard Blunk, Nick Brockmeyer, Conrad Dimanche and Glenn Spillman

BD and its potential therapeutic uses are key points of discussion in medical circles as well as among users and CBD vendors. Urban legends abound, promoting its use in curing maladies including Alzheimer's, bipolar disorder, PTSD, schizophrenia and Tourette's syndrome. Unfortunately, this widespread enthusiasm has hurt CBD's acceptance in certain circles, as skeptics recite the old adage: "If it seems too good to be true, it probably is."

Given the growing number of Americans that support decriminalization and the inclusion of cannabinoid language in the recently passed Farm Bill, advocates for decriminalization have an excellent opportunity to address this unfortunate kneejerk reaction and to educate the public - current users and nonusers alike - on the potential therapeutic uses of CBD. Almost as important, the medical and CBD industries should support and conduct rigorously structured medicals studies, each with a laser-like focus on the use of CBD in specific instances, such as in the management of chronic pain experienced by professional athletes for which a growing amount of research already exists.

To be sure, CBD legalization presents a mix of emotional, philosophical, legal and financial issues, so one must always understand the agenda of parties that provide this type of supportive research. But by supporting independent, rigorous research conducted by well-respected medical institutions, members of the CBD industry have an opportunity to "do the right thing" from both the societal and financial point for view, particularly where that research considers the use of CBD for national health concerns.

Opioid abuse is one such devastating concern. The President's Commission on Combating Drug Addiction and the Opioid Crisis has called this situation a national public health emergency that impacts nearly every community across the nation. A report by the National Safety Council indicated that opioids were the second most likely cause of preventable death in the US in 2017, outpaced only by suicide and surpassing automobile accidents.

Professional athletes are not exempt from this epidemic as they look for ways to manage the chronic pain they experience from their participation in their sport. The National Institute of Health, for example, has determined that professional football players used opioids during their playing days at a rate three times greater than the general population and that players that misused opioids during their playing days are most likely to continue to misuse opioids after they retire. Given this concern, it is not surprising that many professional athletes have publicly advocated the use of CBD to handle their constant pain. Mike Jones, a free agent formerly a running back with the Tampa Bay Buccaneers and the Detroit Lions appears to be the first NFL athlete to apply for cannabis-based therapeutic use exemption. His request was recently denied

Notwithstanding this particular result, many commentators have suggested that this level of athlete involvement will prompt various sports governing bodies to promptly address the use of CBD. The UFC, for example, has permitted its fighters to use CBD since the beginning of 2018. But others have been much slower to react. NFL commissioner Rodger Goodell publicly opposes the use of recreational marijuana, but he has recently expressed a willingness to listen to the league's medical advisors on the potential benefit of medicinal cannabis. The re-negotiation of the NFL collective bargaining

SCIENCE & TECHNOLOGY | CBD RESEARCH

Advocates of CBD legalization frequently note that the circumstance that led to CBD being illegal was driven by forces very similar to the adoption of alcohol prohibition: a belief that marijuana use negatively affects families, that making it illegal would reduce its use, the involvement of certain church and reform groups, a belief that it would improve health and safety, reduce crime, and improve the economy.

agreement, which expires in 2020, may present the next realistic chance for management and labor to address this issue. Interestingly, once out of the public spotlight, professional sports commissioners (e.g., David Stern, the former commissions of the NBA) appear more willing to change their prior hardline opposition to players using medical cannabis.

Even though the pace of advances varies among professional sports, many world-wide leaders in the medical field continue to voice their support of the use of CBD in addressing the pain experienced by athletes. As just one example, the World Health Organization has recently stated that CBD exhibits "no effects indicative of any abuse or dependence potential" and the World Anti-Doping Agency even removed CBD from its 2018 list of prohibited substances.

A variety of medical research facilities and universities have recently begun rigorous studies on such uses, with several universities (such as the University of Utah and UC San Diego) having received substantial funding for similar work.

This trend is much needed in supporting the expanded use of CBD for specific medical purposes since no serious party could dispute the assertion that additional, disciplined medical research may provide additional – possibly, clearer – answers to help us to know where CBD can best be used. As this knowledge base increases, it seems likely that the negative image fostered by the current, overly broad urban legends will diminish as the scientifically established ability of CBD to address specific, targeted conditions grows.

Advocates of CBD legalization frequently note that the circumstance that led to CBD being illegal was driven by forces very similar to the adoption of alcohol prohibition: a belief that marijuana use negatively affects families, that making it illegal would reduce its use, the involvement of certain church and reform groups, a belief that it would improve health and safety, reduce crime, and improve the economy.

Alcohol prohibition was repealed, this argument continues, to a large extent due to two key factor - both of which are also present today and equally applicable to CBD legalization. First, the increases in alcohol consumption during prohibition indicates to many commentators that prohibition failed. So too with marijuana since research suggests that more and more Americans - frequently stated to be as high as 64 percent, but on occasion stated to be as high as 94 percent - support the legalization of marijuana for at least some use. From this, one may reasonably assume that the percentage in favor of the legalization of CBD, which does not provide the same euphoria as is typical with the use of marijuana, would be at least as high if not higher. With this increase in approval has come a corresponding increase in use.

Even if CBD is no longer subject to the Controlled Substances Act, it will still be regulated by the Food and Drug Administration. To date, the FDA has expressed grave concerns about the manner in which the products that have not been reviewed by the FDA are promoted more than the products themselves. Website testimonials extolling CBD's therapeutic use for a variety of diseases and conditions - ranging from cancer, depression, traumatic brain injury, autism, diabetes, Alzheimer's and heart issues made without meaningful proof of those claims have been frequent targets for the FDA. Once again, targeted and rigorous medical research on individual therapeutic uses for CBD should help at this juncture as well.

Some industry experts predicted that the total cannabis mark will exceed \$40 billion by 2021, with CBD sales increasing from 5 to 12 percent of the total cannabis market by 2021. Others estimate that the CBD market (exclusive of FDA-approved products) will be worth roughly \$1.9 billion by 2026.

Predictably, this has led to an increase of so-called "defensive" acquisitions by the "Big Three" (companies in the pharmaceutical, tobacco and liquor industries) which are designed to give them a toehold in this new industry while also protecting current products.

Canadian subsidiary of Novartis, the world's fourth largest pharmaceutical company, entered into a partnership to sell non-combustible marijuana products; Alliance One International, a global tobacco wholesaler and distributor, invested in various hemp producers; and Constellation Brands, a leading alcohol company, acquired a minority stake in a licensed Canadian producer of medical cannabis in order to create a non-alcoholic, cannabis-infused beverage.

To the extent one ever needed to validate the financial opportunities present in today's cannabis world, these acquisitions are clear proof.

From a regulatory perspective, the most promising developments is the FDA's approval of "Epidiolex," which is designed to treat two rare forms of childhood epilepsy. This milestone is the first cannabis-based product approved by the FDA. One can only hope that this achievement indicates the FDA's willingness to assess CBD-based products objectively.

By supporting rigorous, independent research conducted by well-respected medical institutions, all members of the CBD industry have an opportunity to benefit societally and financially, particularly where that research considers the use of CBD as a non-addictive substitute for opioids. POT-LITICALLY INCORRECT:

Run the Numbers TWISTING THE DATA IN THE INTEREST OF PROHIBITION



WARNING: (not-so) Mature Content Ahead

What follows is the deranged ranting of a mind torn asunder by cannabis use. The publishers of this magazine have made the foolish choice to allow me the freedom to mock and deride the anti-cannabis (and sometimes pro-cannabis) movement in any obscene way that I see fit. This is a column in which the rage-inducing bullshit of pot prohibitionists, through the transcendental power of cannabis, becomes an obscenity-laden tirade. It is a place of catharsis and healing, a place of humor and insight. But mostly it is a place where I get to use the word "fuck" a lot. Prepare yourself.

ately there's been a lot of talk about the impacts of legal cannabis as newly electd ed lawmakers move to catch up with existing adult-use states. Most recently, this came with the publication of Alex Berenson's book Tell Your Children: The Truth About Marijuana, Mental Illness, and Violence, a dire call to action attempting to demonstrate that when Harry Anslinger worked to criminalize cannabis, his racist assertions were actually rooted in fact. I'll concede that I have not read Berenson's book. but the thrust seems to be that cannabis causes psychosis and psychosis causes violence — a two-fer of socially harmful misconceptions that delegitimizes healthy cannabis use and stigmatizes people suffering from mental illness.

More unsettling than any claim made publicly by Berenson, however, is the effectiveness of the promotional campaign pushing his book, which featured an op-ed in The New York Times, appearances on Fox and Friends, and some glowing hypsemanship from Malcom Gladwell via a support piece in The New Yorker, among others. While it's easy to dismiss Fox and Friends as the morning show of record for mush-brained baby boomers and The New Yorker as a decaying relic of effete liberal elitism, the effectiveness of the blitz is undeniable, reawakening the tired narrative that stoners are violent psychos, which most cannabis users probably thought was buried with Anslinger. If Berenson's Twitter feed is to be believed, the campaign was a smashing success and the book is entering a second printing.

Predictably, Berenson's work was not particularly well received by people glad to not be arbitrarily made into criminals, as well as by those who understand the harms caused by the continued prohibition of cannabis, triggering a wave of thoughtful rebuttals to Berenson's claims. Pieces on Vox, Vice, and a very well-crafted tear down by notably informed stoner David Bienenstock for Leafly thoroughly torched Berenson's claims that an upswing in violent crimes post-2014 was tied singularly to cannabis legalization. Yes, Berenson's assertions are harmful, his explanations flimsy, and the attention he has received is reflective of a crumbling status quo that is overly eager to justify the harms it has created, but it's reassuring to see the groundswell of reasonable intellectuals absolutely shitting on them, and a little satisfying to watch Berenson angrily defend himself assisted only by the Tucker Carlsons of the world.

Lost in all this was the reality that another prohibitionist organization recently took a tilt at painting cannabis legalization in a bad light in a manner that will perhaps prove more detrimental in its ability to provide drug warriors with bullshit talking points. While Berenson's book is an obvious cash grab meant to capitalize on uniformed NIMBYs thirsty for an excuse to oppose the objectively successful legalization programs slowly overtaking the country, a report released last November by the Centennial Institute, titled "Economic and Social Costs of Legalized Marijuana", may be a more useful tool for people attempting to find science to justify racist policy.

For those unfamiliar with the Centennial Institute, the organization is the think tank arm of Colorado Christian University, the college that features Colorado's easiest course on evolutionary biology. The organization is dedicated to "mobilizing ideas of faith, family, and freedom to strengthen America's future." In practice, that means defending the right of the state's most heterosexual Christian bakery to refuse service to gays, trying to ensure abortion is unsafe and women's healthcare is inaccessible, and fracking the ever-loving Christ out of the planet until the boiling ocean swallows us all. To put it succinctly, the organization is dedicated to building a society based on carefully selected bronze-age morality tales that will most benefit wealthy white men.

The organization's webpage features a link to their most recent newsletter, the Centennial Review, which features an image of no-longer Attorney General Jeff Sessions taken at last year's Western Conservative Summit — which also featured such intellectual leaders as (disgraced) former EPA administrator Scott Pruitt and (horribly stupid) video bloggers Diamond and Silk. The image is part of an article praising Trump as a "law-and-order" president fighting back against the lawlessness of the previous administration, which for some unknowable reason doesn't mention anything about the extra-judicial execution of an American citizen via drone strike.

Needless to say, this organization, which bases its outlook on the absolute certainty that White Christ will scoop them out of the apocalypse if they're just mean enough to the gays, may not be the most objective and factual source for data on the impacts of legalization in the state.

The main takeaway from the report is that cannabis legalization costs Colorado \$4.50 for every dollar made in tax revenue, a factoid already cited by the good bitches fighting legalization in places like New Jersey. How did they arrive at this startling figure you might ask? Well, the answer is math.

The report uses numbers, genuine Arabic numerals, in order to assess the terrible monetary costs of people not buying weed from drug dealers. As an example, the section titled "costs of physical inactivity," cites a study indicating that a sedentary person's healthcare costs are \$920 higher per year than someone getting the recommended weekly allotment of activity. Building off of this, the report compares the inactivity levels of Coloradans, 67.5 percent of whom are estimated to not be as active as recommended per the CDC (ten percentage points higher than the national average), with the inactivity levels of cannabis users, stated at 80.3 percent. Interestingly for a report that meticulously cites data points and includes more than 16 pages of citations, there is no citation for this second number. From here we assess that there is a 12.8 percentage difference between the CDC measured inactivity levels of all Coloradans and that of stoners, which is assumed to "[capture] the percentage of people whose inactivity is likely due to marijuana use." That 12.8 percent is then applied to the number of total current cannabis users in the state (984,533 per a Colorado Department of Revenue survey) to produce a number that is then multiplied by \$482 to determine the additional healthcare cost of inactivity directly caused by marijuana use in Colorado, giving us \$60,741,748 - or \$54,833,218 if you go off the combined totals of heavy, moderate and light users when they are individually calculated.

Makes sense, right? Just take some numbers from a reputable source, apply some other numbers, do some math, waffle stomp the result through your biased assumptions, and bingo! You've got irrefutable, factual proof that cannabis legalization is bad.

Well I'm no big city statistician, but it seems to me that this is a garbled nonsense of meaningless tripe meant to sound authoritative without actually providing anything substantive or meaningful. But, whoo boy, does it confirm the sneaking suspicion of the dumbest motherfuckers on Earth that arresting people over a plant is the right thing to do.

This sort of data creation is pretty representative of what you'll find throughout the report, which also asserts that more than \$423 million dollars went unearned by Coloradans because they had dropped out of high school thanks to their cannabis use. Unsurprisingly, the same data used in the study to estimate the total number of cannabis users in the state shows a steady decline amongst those users age 12-17 post legalization, something that the study's authors were apparently unable to explain.

But more than any of this, there is no metric by which the report identifies how any of this is actually affected by legalization. Are these artfully crafted figures the direct result of people buying cannabis from licensed, taxed and regulated retailers? Or would all of these harms remain if everyone in Colorado was buying brick shwag smuggled over the border by dudes who kill tens of thousands of people a year to protect their profits? The report doesn't even attempt to answer this questions.

It's all pretty frustrating, and especially so in the section bemoaning the environmental costs of the industry, which addresses higher energy usage due to indoor growing and a deluge of plastic waste resulting form the childproof packages required to contain any legally made ...this organization, which bases its outlook on the absolute certainty that White Christ will scoop them out of the apocalypse if they're just mean enough to the gays, may not be the most objective and factual source for data on the impacts of legalization in the state.

purchase. What's that? These are both problems caused by the cumbersome regulations meant to placate exactly the kind of people who would commission this dumbfuck report? Why yes, these are exactly those problems.

Legal marijuana producers in most of the state are barred from growing outdoors and vendors are required to sell product in single-use childproof containers, laws put in place by people deathly afraid of the menace posed by the demon marihuana. It might also be a tad hypocritical for an organization that denies climate change to suddenly get all fired in defense of the environment — but I guess if it allows you to make the world worse for people who are different, environmentalism is ok.

I could spend days picking apart this report, and probably produce a document that would match the 70-some page report in length. Of course, this would likely cause my brain to shrivel into a raisin, and I don't get that much page space here. The point is, though, should anybody ever cite that \$4.50 cost for every dollar made figure, you can be assured that this person cares more about arresting people than basing public policy on facts. You can count on it. $\underbrace{\bullet}_{=\infty}$



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5 CANNABIS PAIRINGS

by DJ Reetz



Cannabis makes a great accompaniment to so, so many things. It's a versatile plant with myriad applications, and as such it pairs well with many different activities. Whether you're trying to relax at the end of your day or need to get moving at the start, there's a way to pair cannabis with whatever endeavor you may be undertaking. We now offer up some of our favorite pairings, the synergistic applications of cannabis that enhance the experience on both ends. Live your best life and get the most out of your love for this versatile plant.

CREATING





ALCOHOL

Let's face it, some of the best art that has ever been made came about with the assistance of cannabis use. While this hasn't been extensively studied in a clinical context, the effects of altered states on the creative process are easy to understand intuitively. Getting nicely toasted allows you to step outside of your usual frame of reference, granting new avenues for insight that can lead to creative breakthroughs not possible on their own. A study published in 2012 in The Journal of Consciousness and Cognition sought to address this phenomenon empirically, finding that cannabis use might assist users in connecting unrelated concepts, something crucial in creative enterprises.

Here we must rely on the less exciting but undoubtedly more functional variety of cannabis: hemp. Experienced agriculturalists will likely be aware of hemp's excellent qualities as a soil remediator, drawing out toxins and heavy metals that can accumulate in soil. Because of this, hemp makes for an excellent rotational crop, helping to keep your garden plot healthy in alternating seasons. It also works well as a companion plant due to it's relatively low water requirements and natural pest repellent qualities. While hemp is enjoying more widespread legal acceptance thanks to the Farm Bill, it's still a good idea to check your local regulations before planting a crop in your backyard garden.

Another intuitively understood fact by many cannabis consumers, the plant makes for a great addition to your sex life. A study published in The Journal of Sexual Medicine in 2017 seemed to indicate that marijuana use was associated with increased coital frequency, but the best marriage of cannabis and sex might be in using during the act, where it can assist with relaxation, allowing you to better escape into the moment. If you happen to have access to a legal market, there is no shortage of cannabinoid-containing lubricants these days, all designed to increase stimulation and enjoyment.

Combining cannabis and alcohol might not be for everyone. The effects of the two substances have been shown to enhance one another, meaning it is easy to find yourself more intoxicated than you intended if you aren't careful. That said, this also means that you will have to consume less of each substance when using them in tandem, saving your liver from that extra drink and your lungs from a second blunt. The crossfade is real, and it's quite enjoyable if you can dial it in. Just be sure that you're not driving anywhere, and be selfaware enough to know when you've reached your limit.

ACTIVITY

А commonly held stereotype among cannabigots is that cannabis users are lazy. What a shame these ignorant folks don't know about all the ways that cannabis can help you be active and productive. The analgesic properties of several cannabinoids makes them a great addition to any strenuous physical activity, whether that's lifting weights or banging out a 12-mile hike. Hemp snacks also make a great addition to an active lifestyle thanks to their relatively high content of plantbased protein and dense nutrient profile. Smoking cannabis is said to be popular among ultramarathoners, so if you haven't found it helpful in keeping you moving you must be smoking the wrong strain.

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