

MedPharm Holdings Corporation, to Be Acquired by Medicine Man Technologies, Addresses Outbreak of Vape-Related Lung Illnesses

- Increased focus by health officials on chemical additives added to vape liquids that can be unsafe when heated and then inhaled
- MedPharm reiterates formal policy prohibiting the use of any potentially harmful chemical additives, including the ones identified in this outbreak, in its vape concentrates
- Medicine Man Technologies calls for Colorado regulators to again be cannabis pioneers for the nation by specifically banning the use of such additives in all vape concentrates

DENVER, Sept. 12, 2019 /PRNewswire/ -- MedPharm Holdings ("MedPharm"), reiterated today its formal policy prohibiting the use of suspected unsafe chemical additives to its entire line of cannabis products, most notably its concentrates that are used in vape products. Furthermore, Medicine Man Technologies (OTCQX: MDCL) ("Medicine Man Technologies" or the "Company") calls on the state of Colorado — and the other 49 states — to enact an industry-wide standard prohibiting certain excipients in vape products. MedPharm and Medicine Man Technologies are parties to a binding term sheet, pursuant to which Medicine Man Technologies will acquire MedPharm.



In recent weeks, there have been hundreds of reports of dangerous and deadly cannabis vaping-related respiratory illnesses characterized by severe pneumonia symptoms, shortness of breath, coughing, fever, fatigue, and respiratory failure. While the exact root cause of these illnesses has yet to be determined, health officials have begun focusing on the role of chemical additives found in many cannabis-containing vaping oils. Some of the suspected chemicals are vitamin E acetate, normally used in the food industry as a preservative, propylene glycol (PG), vegetable glycerin (VG), and medium chain triglycerides (MCT), which are all popular cannabis thinning agents.

Some of these chemical additives (particularly PG and VG), when heated too high during the vaping process, can degrade into harmful cancer-causing byproducts, such as formaldehyde, acetaldehyde, and acrolein. The additives have also been linked to the presence of lipid-laden macrophages found in the lungs of people who suffer from this new vape-induced lung disease. The presence of these lipid deposits can, in turn, trigger inflammation in the lungs, a condition known as lipoid pneumonia. Many of these suspected additives simply haven't been evaluated for safety when inhaled and could very well be associated with the observed symptoms in the growing number of cases.

Of further concern, some black-market or counterfeit vape cartridges also contain undisclosed additives that can inhibit the proper functioning of the vaporizer and/or cartridge, which can also lead to safety risks and health issues for consumers.

"Since its inception, MedPharm's philosophy has been to always provide cannabis products of the highest quality, purity, and safety," said Dr. Tyrell Towle, MedPharm's Director of Chemistry and Extraction. "We have always gone above and beyond to tightly control our processes and inputs. That is how we create products that are consistent from batch to batch and free from contamination. In fact, we have voluntarily implemented Good Manufacturing Practices (GMP) and received third-party GMP certification in early 2019."

In that light, MedPharm committed to never use additives, diluents, viscosity modifiers, or any other substances to carry flavor or alter the behavior of its vaporizable concentrates. Based on its review of the cutting agent's chemical structures and available safety data, or lack thereof, MedPharm's scientists determined that to infuse any of the commonly used diluents into its BATCH or Become line of vape products represented an unacceptable health risk to its customers. Consequently, neither the BATCH nor Become brands contain PG, VG, MCT, or any other such substance. In fact, the only ingredients found in these brands are cannabis distillates and terpenes.

The recent reported outbreaks of lung disease among some people who allegedly vaped cannabis oils with these chemical additives confirms this warranted caution. Given the recently reported lung injuries, MedPharm is renewing its commitment to not use any substance to dilute its vaporizable formulations. Furthermore, MedPharm plans to use its research license in Colorado to investigate the safety of vaporizing cannabis and substances that are commonly used in inhalable cannabis formulations.

"At MedPharm and Medicine Man Technologies, we have always respected the health and safety of cannabis consumers and always used a science-based public health approach in our product development," commented Andy Williams, Co-Founder of MedPharm and Co-Founder and Chief Executive Officer of Medicine Man Technologies. "The cannabis industry simply does not need any bad actors or black-market manufacturers using questionable manufacturing practices and additives that may lead to a health crisis and additional public skepticism regarding the safety of our industry and products."

Williams continued, "We are also going beyond simply sharing our policy statement prohibiting the use of dangerous additives internally. We are now asking for the pioneering state of Colorado to yet again lead the way for the cannabis industry and ban the use of such chemical additives in all cannabis products, including the concentrates used in vape products. Additionally, we hope that the other 49 states will follow suit and ban these additives as well. Too much is at stake for consumers and for the responsible cannabis companies that do place a priority on the health and safety of the public to not take action. Just because cannabis is still federally illegal and there are no current manufacturing regulations in place does not mean we as an industry cannot do the responsible thing for the good of all involved."

Williams concluded, "Lastly, we also ask cannabis consumers to only buy reputable vape products that are free of these harmful chemical additives and only buy from a licensed dispensary. There are plenty of vape concentrates on the market that use all-natural, cannabis-derived terpenes instead of these potentially harmful chemical additives or are specially extracted without these or other potentially harmful additives."

For more information about Medicine Man Technologies, please visit <https://www.medicinemantechologies.com>.

About MedPharm Holdings Corporation

MedPharm Holdings owns a 15,000-square-foot manufacturing, research and development laboratory, and cannabis processing facility in Denver, Colorado. Since beginning operations in 2016, MedPharm has grown to a staff of 22 people, including a PhD of chemistry and extraction, Dr. Tyrell Towle. Additionally, Scott Karolchyk, the director of formulation development, is a member of the Colorado Department of Public Health and Environment, Marijuana Enforcement Division, Science and Policy Work Group.

The goal of MedPharm is to provide a reliable clinical effect through the use of well-crafted and well-researched oil analytics and dosage forms. The company provides cannabis pharmaceutical-type products using good manufacturing practices (GMP) that include pre-formulation, formulation development, small-scale commercial manufacturing, analytical method development and validation, routine quality control analysis, and stability studies. MedPharm works to create pharmaceutical dosage forms and produce ingredients utilizing pharmaceutical technology to be used in the delivery of cannabis extracts. Take a 360-degree virtual tour of the MedPharm facility here: www.medpharmresearch.com.

About Medicine Man Technologies

Denver, Colorado-based Medicine Man Technologies (OTCQX: MDCL) is a rapidly growing provider of cannabis consulting services, nutrients, and supplies. The Company's client portfolio includes active and past clients in 20 states and seven countries throughout the cannabis industry. The Company has entered into agreements to become one of the largest vertically integrated seed-to-sale operators in the global cannabis industry. Current agreements will enable Medicine Man Technologies to offer cultivation, extraction, distribution, and retail pharma-grade products

internationally. The Company's intellectual property includes the "Three A Light" methodology for cannabis cultivation and pending acquisition candidate MedPharm's GMP-certified facility, which has the first cannabis research license to conduct clinical trials in the United States. Management includes decades of cannabis experience, a unique combination of first movers in industrial cannabis, and proven Fortune 500 corporate executives.

Forward-Looking Statements

This press release contains "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Such statements may be preceded by the words "intends," "may," "will," "plans," "expects," "anticipates," "projects," "predicts," "estimates," "aims," "believes," "hopes," "potential," or similar words. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on our current beliefs, expectations, and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy, and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks, and changes in circumstances that are difficult to predict — many of which are outside of our control. Such risks and uncertainties include, without limitation, risks and uncertainties associated with (i) regulatory limitations on our products and services; (ii) our ability to complete and integrate acquisitions; (iii) general industry and economic conditions; and (iv) our ability to access adequate financing on terms and conditions that are acceptable to us, as well as other risks identified in our filings with the SEC. The Company assumes no obligation to publicly update or revise its forward-looking statements as a result of new information, future events, or otherwise.

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