

# NEWS RELEASE

FOR IMMEDIATE RELEASE

Wednesday, November 11, 2020



## **MOUNTAIN VALLEY MD FILES PATENT TO PROTECT SCIENCE ACHIEVEMENT IN SOLUBILIZATION OF IVERMECTIN WITHOUT ORGANIC SOLVENTS AND ITS APPLICATION TO COVID-19 AND OTHER THERAPIES**

**VANCOUVER, B.C. – November 11, 2020 - Mountain Valley MD Holdings Inc.** (the “Company” or “MVMD”) (CSE: MVMD) (FRA:20MP) is pleased to announce that it confirmed the ability to make the drug ivermectin water-soluble without the use of organic solvents, which may enable the drug to be dosed by injection or inhalation in humans.

The Company believes the implications of this achievement will allow for significantly improved dosing by injection, orally consumed enteric coated capsules, and/or inhalation and, based on a recent ICON\* study (the “ICON Study”), may offer a potentially significant therapeutic in the fight against COVID-19. The ICON Study confirmed that the use of ivermectin is associated with a lower mortality in hospitalized COVID-19 patients despite being limited to an orally dosed tablet with poor bioavailability, an issue that MVMD believes would be directly addressed with the Company’s discovery.

Ivermectin is a well-documented anti parasitic drug being used globally in both veterinary and human medicine and its uses are being broadened to include such applications as an anti-malarial. Billions of world-wide doses annually are utilized in underdeveloped countries to protect most domestic and husbandry animals from parasites including poultry, pigs, cattle and horses. Ivermectin has documented limitations due to its poor solubility in water (.005 mg/ml), thereby requiring the use of toxic organic solvents such as glycerol formal and ethanol, eliminating the possibility of FDA approval for a human injectable form or a more bio-available oral solution.

MVMD scientists, while working on improving the inclusion of ivermectin into the Company’s patented Quicksome™ delivery system, made the discovery that they were able to make ivermectin highly water-soluble without the use of organic solvents, improving its water solubility by nearly 5,000 times\*\*. The Company believes that this result would eliminate the main limiter of the drug ivermectin to achieve stronger pharmacokinetics and better overall efficacy.

Further, the new discovery uses only excipients that are currently approved by the US Food and Drug Administration (FDA). As the Company’s strategy is to license its intellectual property to global pharmaceutical, vaccine and nutraceutical third parties, MVMD believes this discovery provides additional advantages to potential licensees as it

may enable them to obtain FDA approvals more quickly based on there being fewer approval steps required for immediate applications in human and animal dosing.

According to The National Center for Biotechnology Information abstract dated October 7, 2020 (*Ivermectin: an award-winning drug with expected antiviral activity against COVID-19\*\**), the potential for ivermectin to be an antiviral agent for COVID-19 and other emerging viral diseases is based on the ability to overcome its property of poor water solubility and consequential low oral bioavailability. Appropriate drug formulations must address the poor water-solubility of ivermectin and the difficulty in delivering the drug to desired target areas, notably the pulmonary environment.

“We believe this discovery to be a breakthrough that will enable the efficacy needed to treat respiratory infections such as COVID-19, influenza and tuberculosis by enabling the drug deposition into the airways and lungs through aerosol formulations and pulmonary delivery,” stated Mike Farber, Director of Life Sciences at Mountain Valley MD. “This will also allow ivermectin to be administered to humans via syringe and intravenous therapy, presenting what we believe are unprecedented options to provide treatment for numerous viruses.”

According to Fior Market Research’s (FMR) Global Ivermectin Medication Market Insights research report\*\*\*\*, the COVID-19 virus has been found to impact the lungs of patients directly and cause inflammation to several organs. Ivermectin medication has been used for treatment in various viruses such as RNA, Influenza A, Zika Virus, dengue, yellow fever, equine herpesvirus, new castle and others, which had similar symptoms on the human body as that of COVID-19. It has antiviral effects, which provides relief to slow down the effect of symptoms on the body. With several studies and research conducted on the potential contribution of ivermectin, it has been termed as an inhibitor of the SARS-COV-2 virus. The FRM report confirms ivermectin is a potential drug for the treatment of viruses, as only a single dose of it affects a 5000-fold reduction of viral RNA.

Additionally, FRM reports\*\*\*\* that a recent study has revealed that the use of ivermectin collectively with doxycycline effects the entry of viral in the body and clears a load of the virus by targeting the functional proteins. In the United States and certain other countries, an apparent high success rate of the patients who were given ivermectin medication was found. The recovery duration was also found to be shortened in some cases, along with relief in symptoms.

MVMD filed a patent application to cover all highly solublized macrocyclic lactones, including ivermectin and selamectin, which have also been shown to be effective in the treatment of tuberculosis even with limited solubility. The Company believes its solubility technology can dramatically enhance the efficacy of both inhaled and injected selamectin or ivermectin providing a novel effective therapeutic for tuberculosis. According to the World Health Organization\*\*\*\*, tuberculosis is one of the top 10 causes of death and the leading cause from a single infectious agent globally.

“We believe the extrapolation of this technology achievement across multiple viral applications could be very significant and has the potential to positively impact human

and animal health globally,” stated Dennis Hancock, President & CEO of Mountain Valley MD. “We believe this will dramatically change the effectiveness and application options for numerous drugs on the market while also supporting the invention of novel drugs that are not limited based on their solubility.”

### **REFERENCES/SOURCES**

\* ICON - Use of Ivermectin Is Associated With Lower Mortality in Hospitalized Patients With Coronavirus Disease – [https://journal.chestnet.org/article/S0012-3692\(20\)34898-4/fulltext](https://journal.chestnet.org/article/S0012-3692(20)34898-4/fulltext)

\*\* The Company had previously engaged the services of a third-party preclinical contract research organization (“CRO”) in connection with its Quicksome™ technology. The CRO confirmed the solubility through a preliminary evaluation.

\*\*\* October 7, 2020 - Ivermectin: an award-winning drug with expected antiviral activity against COVID-19  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7539925/>

\*\*\*\* Fior Market Research - Global Ivermectin Medication Market Insights research report  
[www.fiormarkets.com](http://www.fiormarkets.com)

\*\*\*\*\* WHO – Tuberculosis Fact Sheet  
<https://www.who.int/news-room/fact-sheets/detail/tuberculosis>

### **ABOUT MOUNTAIN VALLEY MD HOLDINGS INC.**

Mountain Valley MD is building a world-class biotech and life sciences company organization centred around the implementation of its patented Quicksome™ oral drug formulation and delivery technologies to innovate industry leading products that are sought out globally.

MVMD’s proposition for delivering Quicksome™ formulations that have rapid onset, high bioavailability, low variability and precision dosing is core to the Company’s success across key health and wellness categories. Consistent with its vision towards “Helping People Live Their Best Life”, MVMD applies its Quicksome™ technology to its groundbreaking work for the oral delivery of vaccines and pharmaceutical drugs as well as the development of products for pain management, weight loss, energy, focus, sleep, anxiety, and more.

The Company’s patented Quicksome™ desiccation technology utilizes advanced liposomes and other stabilizing molecules to encapsulate and formulate active ingredients into highly efficient product formats that are consumed orally. The result is a new generation of product formulations that are capable of delivering vaccines, drugs and nutraceuticals into the body faster, with greater impact, efficiency and accuracy.

For more Company information and contact details, visit [www.mountainvalleymd.com](http://www.mountainvalleymd.com).

SOURCE: Mountain Valley MD Holdings Inc.

## **CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION**

Certain statements contained in this news release may constitute forward-looking information. Forward-looking information is often, but not always, identified by the use of words such as "anticipate", "plan", "estimate", "expect", "may", "will", "intend", "should", and similar expressions. Forward-looking information involves known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking information.

The Company's actual results could differ materially from those anticipated in this forward-looking information as a result of regulatory decisions, competitive factors in the industries in which the Company operates, prevailing economic conditions, and other factors, many of which are beyond the control of the Company.

The Company is making forward-looking statements, including but not limited to with respect to: the ability to extrapolate the intellectual property to multiple viral applications; the patentability of the intellectual property; the effect and implications of the intellectual property with respect to both ivermectin as well as other drugs and generally to human and animal drug treatments, the ability for licensees to obtain FDA approval more quickly.

The Company believes that the expectations reflected in the forward-looking information are reasonable, but no assurance can be given that these expectations will prove to be correct and such forward-looking information should not be unduly relied upon. Any forward-looking information contained in this news release represents the Company's expectations as of the date hereof and is subject to change after such date. The Company disclaims any intention or obligation to update or revise any forward-looking information whether as a result of new information, future events or otherwise, except as required by applicable securities legislation.

For further information:

Dennis Hancock  
President and Chief Executive Officer  
Mountain Valley MD Holdings Inc.  
Telephone: 647-725-9755  
Email: [dennis@mountainvalleymd.com](mailto:dennis@mountainvalleymd.com)

[www.mountainvalleymd.com](http://www.mountainvalleymd.com)