DiagnaMed Files U.S. Patent Application for Novel Methods of Producing Molecular Hydrogen

Advancing molecular hydrogen for neurological and mental health disorders

Expects its molecular hydrogen product to be ready for use in December 2024

TORONTO, November 7, 2024 (GLOBE NEWSWIRE) – DiagnaMed Holdings Corp. ("DiagnaMed" or the "Company") (CSE: DMED) (OTCQB: DGNMF), a life sciences company focused on molecular hydrogen and AI diagnostics for brain health, today announced that it has filed a provisional patent application with the U.S. Patent and Trademark Office outlining pharmaceutical-based methods and compositions for producing molecular hydrogen as potential treatments for neurological and mental health disorders.

The patent application, entitled "Methods and Compositions for Producing Hydrogen for Treating Diseases and Disorders Affecting Brain Health," outlines novel combinations of certain pharmaceutical-grade hydrogen producing ingredients as a potential therapeutic option for a variety of neurological disorders such as, but not limited to, Dementia, Parkinson's disease, and Traumatic brain injury, and mental health disorders including, Depression, Anxiety, and Post-traumatic stress disorder.

The foundation of DiagnaMed's strategic initiative to advance therapies that unlock the medical potential of molecular hydrogen for brain health is set for partnering and commercialization. DiagnaMed will partner with third-party research institutions and life sciences companies in the manufacturing, clinical research, and commercialization of its patent-pending molecular hydrogen product. The Company expects its pharmaceutical-grade molecular hydrogen product to be ready for use in December 2024.

"Molecular hydrogen therapy has promising potential for brain health and we are focused on developing a natural, safe and potentially efficacious pharmaceutical-grade molecular hydrogen product for neurological and mental health disorders," said Fabio Chianelli, CEO of DiagnaMed. "We are now initiating product testing and manufacturing of our molecular hydrogen product for clinical research and commercialization."

Hydrogen is well-known for its industrial use as a pollution-free fuel. The global hydrogen generation market size was estimated at USD 170.14 billion in 2023 and is expected to grow at a compound annual growth rate (CAGR) of 9.3% from 2024 to 2030[1].

Molecular hydrogen therapy is a growing field and poised for rapid clinical adoption. There are over 2,000 scientific publications on molecular hydrogen's potential therapeutic effects in over 100 human studies[2]. Molecular hydrogen has been clinically demonstrated to provide antioxidant, anti-inflammatory and neuroprotective effects. It can potentially aid in managing chronic diseases by diminishing oxidative stress and the associated inflammatory pathways. The cellular bioavailability of molecular hydrogen is high[3] and has the potential for antiaging, neurodegenerative disorders (i.e. Parkinson's and Alzheimer's disease), and mental health conditions (i.e. Depression)[4].

According to a published article titled "*Molecular hydrogen therapy for neurological diseases: a review of current evidence*," a number of studies have demonstrated the neuroprotective effects of hydrogen therapy in stroke, neurodegenerative diseases, neurotrauma, and global brain injury[4]. Also, no adverse effects have been reported in the human studies related to the administration of hydrogen therapy and its clinical use as an adjunctive treatment of various neurological diseases is promising[5].

The Company cautions that it is not making any express or implied claims about its molecular hydrogen product success alone and in combination with pharmaceuticals in treating neurological and mental health disorders or commercial viability. The patent application seeks protection for, among other things, methods of producing hydrogen alone and in combinations with certain ingredients supporting various brain health diseases, disorders, and conditions.

About DiagnaMed

DiagnaMed Holdings Corp. (CSE: DMED) (OTCQB: DGNMF) is a life sciences company focused on molecular hydrogen and AI diagnostics for brain health. DiagnaMed is exploring the medical use of hydrogen for brain health conditions, such as neurological and mental health disorders. In addition, the Company is commercializing BRAIN AGE® Brain Health AI Platform, a world-first consumer brain health and wellness AI solution that estimates brain age and provides a brain health score. Visit DiagnaMed.com.

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Certain statements in this news release are forward-looking statements, including with respect to future plans, and other matters. Forward-looking statements consist of statements that are not purely historical, including any statements regarding beliefs, plans, expectations or intentions regarding the future. Such information can generally be identified by the use of forwarding-looking wording such as "will", "may", "expect", "could", "can", "estimate", "anticipate", "intend", "believe", "projected", "aims", and "continue" or the negative thereof or similar variations. The reader is cautioned that assumptions used in the preparation of any forward-looking information may prove to be incorrect. Events or circumstances may cause actual results to differ materially from those predicted, as a result of numerous known and unknown risks, uncertainties, and other factors, many of which are beyond the control of the Company, including but not limited to, business, economic and capital market conditions, the ability to manage operating expenses, and dependence on key personnel. Such statements and information are based on numerous assumptions regarding present and future business strategies and the environment in which the Company will operate in the future, anticipated costs, and the ability to achieve goals. Factors that could cause the actual results to differ materially from those in forward-looking statements include, the continued availability of capital and financing, litigation, failure of counterparties to perform their contractual obligations, loss of key employees and consultants, and general economic, market or business conditions. Factors that could cause actual results to differ materially from those anticipated in these forward-looking statements are described under the caption "Risk Factors" in Company's management's discussion and analysis for the three and nine months ended June 30, 2024 ("MD&A"), dated August 22, 2024, which is available on the Company's profile at www.sedarplus.ca. Forward-looking statements contained in this news release are expressly qualified by this cautionary statement. The reader is cautioned not to place undue reliance on any forward-looking information. The forward-looking statements contained in this news release are made as of the date of this news release. Except as required by law, the Company disclaims any intention and assumes no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

This news release does not constitute an offer to sell or the solicitation of an offer to buy, and shall not constitute an offer, solicitation or sale in any state, province, territory or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state, province, territory or jurisdiction.

Footnotes:

1. Grandviewresearch.com. Hydrogen Generation Market Size, Share & Trends Analysis Report By System (Merchant, Captive), By Technology (Steam Methane Reforming, Coal Gasification), By Application, By Source, By Region, And Segment Forecasts, 2024 - 2030. [(accessed on 30 October 2024)]. Available online: https://www.grandviewresearch.com/industry-analysis/hydrogen-generation-market.
2. Ichihara, M., et al. Beneficial biological effects and the underlying mechanisms of molecular hydrogen-Comprehensive review of 321 original articles. Med. Gas Res. 2015, 5, 12.
3. Nicolson, GI., et al. 2016. Clinical Effects of Hydrogen Administration: From Animal and Human Diseases to Exercise Medicine. Int. J. Clin. Med. 7(1): 32-76. Doi:10.4236/ijcm.2016.71005.
4. Shigeo Ohta, Molecular hydrogen as a preventive and therapeutic medical gas: initiation, development and potential of hydrogen medicine, Pharmacology & Therapeutics,Volume 144, Issue 1, 2014, Pages 1-11, ISSN 0163-7258, https://doi.org/10.1016/j.pharmthera.2014.04.006.
5. Ramanathan D, Huang L, Wilson T, Boling W. Molecular hydrogen therapy for neurological diseases: a review of current evidence. Med Gas Res. 2023 Jul-Sep;13(3):94-98. Doi: 10.4103/2045-9912.359677. PMID: 36571372; PMCID: PMC9979207.