



DiagnaMed’s BRAIN AGE® Brain Health AI Platform Targeting Multi-Billion Digital Brain Health Market

TORONTO, May 15, 2024 -- DiagnaMed Holdings Corp. (“DiagnaMed” or the “Company”) (CSE: DMED) (OTCQB: DGNMF), a healthcare technology company focused on brain health using AI, is commercializing its novel BRAIN AGE® Brain Health AI Platform (“BRAIN AGE®”), a world-first consumer brain health and wellness AI solution that estimates brain age and provides a brain health score, targeting the global digital brain health market projected to be USD 405.53 billion by 2031.¹

Fabio Chianelli, CEO of DiagnaMed, commented: “We are entering into our next growth phase through the commercialization of our novel BRAIN AGE® Brain Health AI Platform that empowers individuals and healthcare professionals seeking to improve overall brain health. After several years of research and development, along with clinical studies validating the potential utility of our BRAIN AGE® Brain Health AI Platform, we are now focused on executing our commercialization plan by educating medical communities about the potential of BRAIN AGE® and its value proposition to motivated individuals wanting to take control of their brain health and to a network of healthcare clinics as a service to their clients.”



Opportunity of BRAIN AGE® Brain Health AI Platform

According to ECON Market Research, the global digital brain health market is a rapidly growing sector that aims to use technology to improve brain function, prevent cognitive decline, and manage neurological disorders and was valued at USD 199.98 billion in 2022 and projected to be USD 405.53 billion by 2031.¹ Based on research studies at Drexel University and the University



of Miami, BRAIN AGE® Brain Health AI aims to ‘raise a red flag’ for potential brain health issues. BRAIN AGE® Brain Health AI can assess if a brain is aging more quickly or more slowly than is typical for healthy individuals. Brain age is estimated by collecting neural activity data of the brain with a low-cost and easy-to-use electroencephalogram headset and calculating the data with a proprietary machine-learning model. In addition, BRAIN AGE® Brain Health AI can assess if a person has a healthy brain or is in the early stage of cognitive decline. Brain health is scored by taking a clinically validated assessment for brain resilience, vulnerability and performance functions. Individuals can seek out personalized diagnostics and interventions, such as medication or lifestyle changes, that may help to decrease the development or progression of cognitive decline.

Target Users and Applications

BRAIN AGE® has several promising applications for the millions of individuals and placements in up to 10,000 licensed physicians, specialists and sports clinics in North America focusing on health and wellness, sports and physical therapy, mental health, chiropractic care, or pharmaceutical and clinical drug research for neurological and cognitive disorders. The Company believes that the potential initial target market population for BRAIN AGE®, comprised of healthy individuals, athletes, mental health and neurodegenerative patients, is at least 50 million in the U.S. alone.

Clinical Validation of BRAIN AGE® Brain Health AI Platform

In a first-of-a-kind peer-reviewed paper in [Frontiers in Neuroergonomics](#), titled “*Brain-age estimation with a low-cost EEG-headset: effectiveness and implications for large-scale screening and brain optimization*”², BRAIN AGE®, as announced in a [press release](#) by Drexel University, Prof. Kounios was quoted regarding the clinical potential of BRAIN AGE®: “It can be used as a relatively inexpensive way to screen large numbers of people for vulnerability to age-related. And because of its low cost, a person can be screened at regular intervals to check for changes over time,” Kounios said. “This can help to test the effectiveness of medications and other interventions. And healthy people could use this technique to test the effects of lifestyle changes as part of an overall strategy for optimizing brain performance.”³

From the University of Miami Comprehensive Center for Brain Health, the BRAIN AGE® brain health assessment portion is designed to assess a patient’s risk for developing Alzheimer’s disease (“AD”) and other neurological issues, through an advanced series of tests that determine the risk for dementia by combining three measures — a Resilience Index (“RI”), a Vulnerability Index (“VI”) and a Number-Symbol Coding Task (“NSCT”). The results, when combined, help



assess the risk for developing AD and other related conditions. Essentially, it is intended to “take a snapshot” of a patient’s brain health. In a cross-sectional study, Galvin and colleagues evaluated 230 participants (71 controls, 71 with mild cognitive impairment, 88 with AD and related disorders). Researchers determined VI and RI scores from physical assessments, lifestyle questionnaires, demographics, medical history and neuropsychological examination, including the NSCT. Results showed that participants with abnormal test scores were 95.7% likely to be impaired, with a misclassification rate of 9.7%. The platform outperformed the Montreal Cognitive Assessment with a high level of accuracy (area under the curve = 0.923 ± 0.053)⁴.

Potential of BRAIN AGE® Brain Health AI Platform

BRAIN AGE® can be used as a screening tool to identify individuals whose brain-age gap suggests the possibility of underlying age-related pathology that can be followed up with specific diagnostic tests. Furthermore, it can be performed repeatedly to verify results and detect changes over time. This means that it may become practical to begin screening people in early middle age (or younger) rather than waiting for late middle age, or older, when symptoms become apparent. Essentially, BRAIN AGE® can raise the possibility of large-scale detection and treatment of the earliest phases of age-related neurological disorders rather than later. In addition, BRAIN AGE® may be a useful tool at home or in the workplace and for researchers and medical professionals who wish to test potential interventions for slowing or reversing neurological aging.

Furthermore, the Company plans to unlock the clinical utility of BRAIN AGE® by seeking FDA clearance for its algorithm as a clinical diagnostic tool for mental health, neurological disorders, and brain injury.

Partnering Opportunities with BRAIN AGE® Brain Health AI Platform

Current partners include the University of Miami Comprehensive Center for Brain Health, Drexel University, Stockton University, and Hamilton Health Sciences. Clinics, hospitals, clinical research organizations, biotech, and pharmaceutical companies can add the BRAIN AGE® Brain Health AI Platform by visiting BrainAge.io.

About DiagnaMed

DiagnaMed Holdings Corp. (CSE: DMED) (OTCQB: DGNMF) is a healthcare technology company focused on brain health using AI. DiagnaMed 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.



For more information, please contact:

Fabio Chianelli
Chairman and CEO
DiagnaMed Holdings Corp.
Tel: 416-800-2684
Email: info@diagnamed.com
Website: www.diagnamed.com

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Footnotes:

- (1) <https://www.econmarketresearch.com/industry-report/digital-brain-health-market/>
- (2) Kounios John, Fleck Jessica I., Zhang Fengqing, Oh Yongtaek. Brain-age estimation with a low-cost EEG-headset: effectiveness and



implications for large-scale screening and brain optimization. *Frontiers in Neuroergonomics*. 2024; Volume 5. DOI=10.3389/fnrgo.2024.1340732. <https://www.frontiersin.org/articles/10.3389/fnrgo.2024.1340732>.

(3) <https://drexel.edu/news/archive/2024/April/New-AI-Technology-Estimates-Brain-Age-Using-Low-Cost-EEG-Device>

(4) Kleiman, Michael J et al. "The Brain Health Platform: Combining Resilience, Vulnerability, and Performance to Assess Brain Health and Risk of Alzheimer's Disease and Related Disorders." *Journal of Alzheimer's disease: JAD* vol. 90,4 (2022): 1817-1830. doi:10.3233/JAD-220927