

## **Central Nervous System Biomarkers Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)**

Market Report | 2023-01-23 | 115 pages | Mordor Intelligence

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### **Report description:**

The central nervous system biomarkers market is projected to register a CAGR of 8.86% during the forecast period of 2022-2027, with a revenue of approximately USD 4,190.84 million in 2021, and it is expected to reach USD 7,113.47 million by 2027.

COVID-19 cases worldwide had a profound impact on the CNS biomarkers market. Based on the study "Biomarkers for central nervous system injury in cerebrospinal fluid are elevated in COVID-19 and associated with neurological symptoms and disease severity," published in January 2021, various studies found frequent reporting of neurological symptoms in patients hospitalized due to COVID-19. Thus, the researchers examined cerebrospinal fluid (CSF) from patients with neurological manifestations of COVID-19 for biomarkers of the central nervous system (CNS) injury and other pathology in relation to neurological symptoms and disease severity. Therefore, future studies in larger samples are needed to explore and understand the genesis of neurological injury in COVID-19 patients.

A biomarker is used to measure the biological state, presence of diseases, and effects of treatments. The advancements in the fields of genomics and proteomics during the past decade have improved awareness regarding genetic regulatory pathways related to (central nervous system) CNS biomarkers. The proteomics technologies have advanced in various areas of drug discovery and development through a comparative assessment of normal and diseased tissues. Proteomics research has great potential in the discovery of relevant protein biomarkers in both diagnostics and therapies for the central nervous system. It plays a crucial role in earlier disease diagnosis, prognosis, and monitoring of the development of central nervous disease.

There is also an increasing number of pipeline studies for the development of biomarkers in various disease conditions, which is expected to boost the central nervous system biomarkers market growth. According to the study "Biomarkers in tumors of the central nervous system" published in 2019, specific diagnostic, prognostic, and predictive biomarkers were detected, and they

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continue to emerge. Hence, the knowledge of specific biomarkers is of great importance for individualized treatment and follow-up.

Therefore, advanced imaging systems are aiding the early diagnosis of various diseases while reducing the mortality rate. The development in related technologies, such as genomics, proteomics, and imaging system, is reflected in the evolution of newer biomarkers. Considering the complexity of the central nervous system (CNS), biomarkers are now expected to play a significant role in the identification of several neurodegenerative diseases at an early stage, provide enhanced diagnosis, and eventually better treatment.

However, the high cost of CNS biomarker testing and diagnostics and certain issues related to regulatory and reimbursement systems are found to be the hindering factors impacting the growth of the market.

## Central Nervous System Biomarkers Market Trends

### Personalized Medicine Segment Expected to Show Better Growth in the Forecast Period

Precision medicine, or personalized medicine, is found to be one of the most promising approaches to tackling various diseases. The major factors that are contributing to the growth of the market are the rising number of brain and other nervous system cancers. It has its rising application as a diagnostic tool, which helps in recognizing the precise biological markers. There is an increasing number of companies that are found focusing on developing breakthrough products for the treatment of neurological diseases.

The COVID-19 pandemic impacted the personalized medicine segment. Precision medicine (PM) aims to tailor treatment and interventions to unique individual or population-level traits. Therefore, personalized medicine is relevant for addressing COVID-19 illness. The San Antonio Partnership for Precision Therapeutics (SAPPT) also announced the funding of three projects that would accelerate treatments for COVID-19 using precision medicine principles.

Biomarker research in neurodegenerative disease is a rapidly advancing area in personalized medicine. The role of these markers is not only diagnostic, but they also have prognostic potential or role in the development of new treatments. Therefore, a large number of molecules have been evaluated and associated with different neurodegenerative disorders. Alzheimer's disease and Parkinson's disease are found to be the two most common neurodegenerative disorders.

This evolution within precision medicine has profoundly impacted the biopharmaceutical industry, and multiple players from biopharma to diagnostics companies with multiple functions such as research and development to commercial operations will witness a change. Therefore, all these factors have helped in boosting the overall market.

### North America Dominates the Central Nervous System Biomarkers Market

The growing burden of chronic diseases, rise in the development of proteomics, genomics, and imaging systems, and increasing adoption of personalized medicines and therapy are expected to drive the central nervous system (CNS) biomarkers market in the United States.

The increasing neurological symptoms have been frequently reported in hospitalized patients with COVID-19, and biomarkers of central nervous system (CNS) injury are reported to be increased in plasma but not extensively studied in cerebrospinal fluid (CSF). Therefore with the rising COVID-19 cases, there is increasing evidence of central nervous system (CNS) damage in COVID-19 patients by using serological biomarkers.

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According to the estimates of the GLOBOCAN in 2020, there were an estimated 2,281,658 new cancer cases diagnosed and 612,390 deaths due to cancer in the United States. The National Institute of Neurological Disorders and Stroke is mainly focusing on approaches that could facilitate the discovery and validation of robust biomarkers, primarily for better diagnosis and treatment of certain conditions. Hence, with the rising concerns regarding neurological disorders and increasing spending on R&D of novel biomarkers, the market is expected to grow over the forecast period.

The molecular biomarkers are used for various purposes, including CNS disease diagnosis, prognosis, prediction, and assessment of treatment response and safety. Almost every pharmaceutical company is formulating a molecular biomarker program, either alone or through partnerships. More molecular biomarkers are expected to be identified and validated in drug development.

In 2019, MC10 Inc. announced the collaboration with the University of Rochester for the development of novel digital biomarkers for central nervous system diseases. Hence, with the rising concerns regarding neurological disorders and increasing spending on R&D of novel biomarkers, the market is expected to grow over the forecast period.

#### Central Nervous System Biomarkers Market Competitor Analysis

The global players in the central nervous system biomarkers market include Acumen Pharmaceuticals Inc., Alseres Pharmaceuticals Inc., Aposense Ltd, Avacta Life Sciences Limited, Banyan Biomarkers Inc., Bio-Rad Laboratories Inc., DiaGenic ASA, G-Biosciences, Merck KGaA, and Thermo Fisher Scientific Inc. The players strategically invest in the research and development for innovative and technological advancements and focus on partnerships with domestic players to expand their outreach.

Additional Benefits:

The market estimate (ME) sheet in Excel format  
3 months of analyst support

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