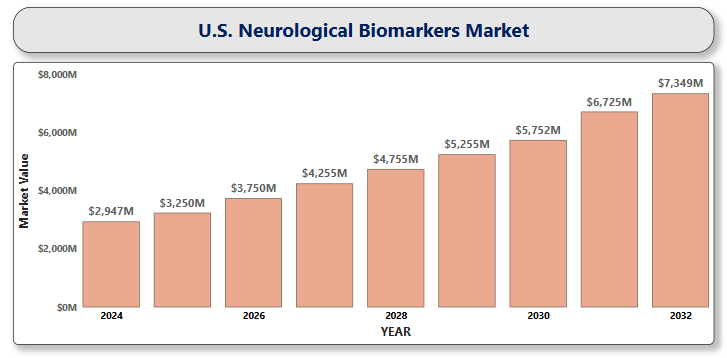
A close-up of hands holding a tablet and a pen

Description automatically generated**U.S. Neurological Biomarkers Market**

According to Intelli, the U.S. Neurological Biomarkers Market size was valued at USD 2,947.3 Million in 2024 and is projected to reach USD 7,349.52 Million by 2032, growing at a CAGR of 12.52% from 2025 to 2032.



The human brain, our most complex organ, governs thought, emotion and identity, yet remains profoundly vulnerable to injury, degeneration and disease. Neurological disorders affect over one billion people worldwide, imposing staggering personal and societal costs. Amidst this challenge, neurological biomarkers have emerged as transformative tools, objective indicators that can detect, track and even predict the course of brain disease long before overt symptoms surface. At their core, biomarkers are specific, quantifiable indicators that provide insights into the presence, progression, or severity of a disease or condition. In the context of neurological diseases, these biomarkers can take several forms. They may be molecules found in blood or cerebrospinal fluid that directly reflect biological changes, such as the presence of proteins like amyloid-β in Alzheimer’s disease or neurofilament light chains in multiple sclerosis. Alternatively, biomarkers can manifest as patterns observed on neuroimaging scans, such as MRI or PET scans, which reveal structural or functional abnormalities in the brain that correlate with specific neurological conditions. Additionally, electroencephalography (EEG) signatures, which capture the electrical activity of the brain, can serve as biomarkers for conditions like epilepsy or certain types of encephalopathy. Beyond early diagnosis, neurological biomarkers are revolutionizing clinical trials and personalized medicine. By stratifying patients according to molecular signature, trials can enroll more homogeneous cohorts, dramatically increasing statistical power and slashing development time for novel therapies. With ongoing advancements in proteomics, genomics, and imaging technologies, the potential of neurological biomarkers has never been closer to reality. These innovations are poised to unveil hidden disease mechanisms, predict the course of neurological disorders, and pave the way for a new era of precision neurology, where treatments are tailored to the individual based on molecular and biological insights.

**U.S. Neurological Biomarkers Market Definition**

The U.S. Neurological Biomarkers Market refers to the sector focused on the development, commercialization, and use of biomarkers to diagnose, monitor, and treat neurological A close-up of hands holding a tablet and a pen

Description automatically generateddisorders. The market includes a variety of products and services, such as diagnostic tests, imaging methods, and laboratory assays, alongside ongoing research and development aimed at identifying new biomarkers. Additionally, it features tools for personalized medicine, which allow healthcare providers to make more tailored treatment decisions based on an individual's unique biomarker profile.

**U.S. Neurological Biomarkers Market Overview**

The U.S. Neurological Biomarkers Market is propelled by several key drivers. The rising incidence of neurological conditions, particularly in aging populations, is a significant driver. Diseases like Alzheimer's, Parkinson's, and multiple sclerosis are becoming more common, fueling the demand for early diagnostic tools and effective treatment strategies. Early detection of neurological diseases is critical to improving treatment outcomes. In addition, continuous progress in genomics, proteomics, and imaging technologies has improved the sensitivity and accuracy of neurological biomarkers. These technological advancements allow for more precise diagnostics, real-time monitoring, and the discovery of novel biomarkers, facilitating better disease management. Moreover, the growing emphasis on personalized or precision medicine is a crucial driver. This shift from generalized treatments to patient-specific care is enhancing outcomes and improving the quality of life for patients. Regulatory support from agencies like the FDA has played a crucial role in accelerating the adoption of biomarker-based diagnostics and treatments. By providing clearer guidelines for the validation and use of biomarkers, the FDA has helped ensure that these innovations meet rigorous standards for safety and efficacy. These factors collectively contribute to the rapid evolution of the U.S. Neurological Biomarkers Market, offering significant opportunities for innovation and improved patient outcomes.

**U.S. Neurological Biomarkers Market Segmentation**

The U.S. Neurological Biomarkers Market can be segmented based on several factors, including type, application, technology, and end-user.

**U.S. Neurological Biomarkers Market, By Type**

* A close-up of hands holding a tablet and a pen

  Description automatically generated**Proteomics-based Biomarkers**
* **Genomics-based Biomarkers**
* **Metabolomics-based Biomarkers**
* **Electrophysiology-based Biomarkers**
* **Imaging-based Biomarkers**

The U.S. Neurological Biomarkers Market is diverse, with each type of biomarker contributing significantly to the market’s growth. Among these, Proteomics-based Biomarkers dominate the market share. Genomics-based Biomarkers follow closely, driven by the increasing interest in genetic predispositions to neurological disorders and advancements in genomic sequencing technologies, making them critical for personalized treatment strategies. Metabolomics-based Biomarkers are gaining traction, particularly in understanding the metabolic shifts in neurological conditions, with their ability to provide insights into disease mechanisms. Electrophysiology-based biomarkers, including EEG, play a crucial role in diagnosing conditions like epilepsy, where the brain's electrical activity patterns are closely linked to the onset of symptoms. Additionally, imaging-based biomarkers, leveraging technologies such as MRI and PET scans, are pivotal in the market, particularly for the early detection and ongoing monitoring of brain abnormalities, offering valuable insights into neurological conditions.

**U.S. Neurological Biomarkers Market, By Application**

* **Alzheimer’s Disease**
* **Parkinson’s Disease**
* **Epilepsy**
* **Multiple Sclerosis**
* **Others**

The U.S. Neurological Biomarkers Market is significantly driven by its diverse applications in diagnosing and managing various neurological conditions, with Alzheimer’s Disease leading the market share due to the high prevalence of the disease and the growing demand for early diagnostic tools. Parkinson’s Disease follows closely, with biomarkers like neurofilament light chain and alpha-synuclein playing a key role in monitoring disease progression and therapeutic efficacy. Epilepsy is another major application, where electrophysiology-based biomarkers, including EEG, are widely used for diagnosing and A close-up of hands holding a tablet and a pen

Description automatically generatedtracking seizures. Multiple Sclerosis also contributes a substantial share, with biomarkers like neurofilament light chain helping clinicians assess disease activity and progression. The Others category includes a variety of neurological disorders, such as Huntington’s disease and ALS, where emerging biomarkers are continuously being explored.

**U.S. Neurological Biomarkers Market, By Technology**

* **Imaging Techniques**
* **Biochemical Assays**
* **Genetic Testing**
* **EEG**
* **Mass Spectrometry and Chromatography**

The U.S. Neurological Biomarkers Market is significantly shaped by various advanced technologies, each contributing uniquely to the detection and monitoring of neurological disorders. Imaging Techniques, such as MRI, PET, and CT scans, hold the largest market share due to their ability to visualize brain structure and function. Biochemical Assays also represent a key segment, as they are widely used to measure specific biomarker levels in blood, cerebrospinal fluid, and other bodily fluids, offering non-invasive and reliable diagnostic solutions for conditions like multiple sclerosis and epilepsy. Genetic testing is increasingly important, especially for identifying genetic predispositions to neurological disorders, and plays a crucial role in personalized medicine by enabling the customization of treatments based on an individual's unique genetic makeup. On the other hand, EEG continues to be a vital technology for monitoring the brain's electrical activity, particularly in conditions like epilepsy, where it is instrumental in tracking and managing seizure events. Mass Spectrometry and Chromatography are emerging as powerful tools for analyzing complex protein and metabolite profiles, crucial for discovering novel biomarkers and advancing the understanding of neurological diseases.

**U.S. Neurological Biomarkers Market, By End-User**

* **Hospitals and Clinics**
* **Diagnostic Laboratories**
* **Research and Academic Institutions**

A close-up of hands holding a tablet and a pen

Description automatically generatedThe U.S. Neurological Biomarkers Market is driven by diverse end-users, each playing a critical role in the adoption and application of biomarkers for neurological diseases. Hospitals and Clinics dominate the market share, as they are primary settings for diagnosing, monitoring, and treating neurological disorders. Diagnostic Laboratories also contribute significantly, performing advanced testing on patient samples to identify biomarkers associated with neurological conditions. These laboratories support healthcare providers with reliable results that aid in the timely detection and monitoring of disease progression. Research and Academic Institutions play a crucial role in the discovery and validation of new biomarkers, conducting studies that push the boundaries of neurological disease understanding and treatment. Together, these end-users are pivotal in advancing the U.S. Neurological Biomarkers Market, with hospitals and clinics holding the largest share due to their central role in patient care.

**Key Players**

The “U.S. Neurological Biomarkers Market" study report will provide valuable insight emphasizing the U.S. market. The major players in the market Biogen Inc., Amgen Inc., F. Hoffmann-La Roche AG, Eli Lilly and Co., Medtronic PLC, Cerebra Health, Quest Diagnostics Incorporated, Neurocrine Biosciences, Inc., Neurolixis, Merck & Co., Neurotrack Technologies, Inc., Linus Health, Altoida Inc., Illumina, Inc., Siemens Healthineers, Thermo Fisher Scientific Inc., GE Healthcare, GlaxoSmithKline, PerkinElmer, Inc., Abbott Laboratories among others. Our market analysis also entails a section solely dedicated to such major players wherein our analysts provide an insight into the financial statements of all the major players, along with product benchmarking and SWOT analysis.

**Key Developments**

* In 2024, Roche’s Elecsys pTau217 plasma biomarker test received Breakthrough Device Designation from the FDA, a major step forward in early Alzheimer’s diagnosis. This designation speeds up the test’s development and review, showing its potential to transform Alzheimer's diagnosis. It offers a non-invasive, easy-to-use test for early detection in clinical settings, making it a promising tool for better diagnosis and treatment.
* In 2024, CansenS, a finger-prick test for quick Alzheimer’s screening with over 90% diagnostic accuracy was developed.

A close-up of hands holding a tablet and a pen

Description automatically generated

**Market Attractiveness**

The image of market attractiveness provided further helps to get information about the region leading in the U.S. Neurological Biomarkers Market. We cover the major impacting factors driving the industry growth in the given region.

**Porter’s Five Forces**

The image provided would further help to get information about Porter's five forces framework providing a blueprint for understanding the behavior of competitors and a player's strategic positioning in the respective industry. Porter's five forces model can be used to assess the competitive landscape U.S. Neurological Biomarkers Market, gauge the attractiveness of a particular sector, and assess investment possibilities.

A close-up of hands holding a tablet and a pen

Description automatically generatedTABLE OF CONTENT

1. **INTRODUCTION OF** **U.S. NEUROLOGICAL BIOMARKERS MARKET**
   1. Overview of the market
   2. Scope of report
   3. Assumptions
2. **EXECUTIVE SUMMARY**
3. **RESEARCH METHODOLOGY**
   1. Data Mining
   2. Validation
   3. Primary Interviews
   4. List of Data sources
4. **U.S. NEUROLOGICAL BIOMARKERS MARKET OUTLOOK**
   1. Overview
   2. Market Dynamics
      1. Drivers
      2. Restrains
      3. Opportunities
      4. Trends
   3. Portes Five FORCE Model
   4. Value Chain Analysis

**5 U.S. NEUROLOGICAL BIOMARKERS MARKET, BY TYPE**

5.1 Overview

A close-up of hands holding a tablet and a pen

Description automatically generated5.2 Proteomics-based Biomarkers

5.3 Genomics-based Biomarkers

5.4 Metabolomics-based Biomarkers

5.5 Electrophysiology-based Biomarkers

5.6 Imaging-based Biomarkers

**6 U.S. NEUROLOGICAL BIOMARKERS MARKET, BY APPLICATION**

6.1 Overview

6.2 Alzheimer’s Disease

6.3 Parkinson’s Disease

6.4 Epilepsy

6.5 Multiple Sclerosis

6.6 Others

**7** **U.S. NEUROLOGICAL BIOMARKERS MARKET, BY TECHNOLOGY**

7.1 Overview

7.2 Imaging Techniques

7.3 Biochemical Assays

7.4 Genetic Testing

7.5 EEG

7.6 Mass Spectrometry and Chromatography

1. A close-up of hands holding a tablet and a pen

   Description automatically generated**U.S. NEUROLOGICAL BIOMARKERS MARKET, BY END-USER**
   1. Overview
   2. Hospitals and Clinics
   3. Diagnostic Laboratories
   4. Research and Academic Institutions
2. **U.S. NEUROLOGICAL BIOMARKERS MARKET COMPETITIVE LANDSCAPE**
   1. Overview
   2. Company Market Ranking
   3. Key Developments Strategies
3. **COMPANY PROFILES**

**10.1 Biogen Inc.**

* + 1. Overview
    2. Financial Performance
    3. roduct Outlook
    4. Key developments
  1. **Amgen Inc.**
     1. Overview
     2. Financial Performance
     3. Product Outlook
     4. Key developments
  2. **F. Hoffmann-La Roche AG**
     1. Overview
     2. Financial Performance
     3. A close-up of hands holding a tablet and a pen

        Description automatically generatedProduct Outlook
     4. Key developments
  3. **Eli Lilly and Co.**
     1. Overview
     2. Financial Performance
     3. Product Outlook
     4. Key developments
  4. **Medtronic PLC**
     1. Overview
     2. Financial Performance
     3. Product Outlook
     4. Key developments
  5. **Cerebra Health**
     1. Overview
     2. Financial Performance
     3. Product Outlook
     4. Key developments
  6. **Quest Diagnostics Incorporated**
     1. Overview
     2. Financial Performance
     3. Product Outlook
     4. Key developments
  7. **Neurocrine Biosciences, Inc.**
     1. Overview
     2. Financial Performance
     3. Product Outlook
     4. A close-up of hands holding a tablet and a pen

        Description automatically generatedKey developments
  8. **Neurolixis**
     1. Overview
     2. Financial Performance
     3. Product Outlook
     4. Key developments
  9. **Merck & Co.**
     1. Overview
     2. Financial Performance
     3. Product Outlook
     4. Key developments
  10. **Neurotrack Technologies, Inc.**
      1. Overview
      2. Financial Performance
      3. Product Outlook
      4. Key developments
  11. **Linus Health**
      1. Overview
      2. Financial Performance
      3. Product Outlook
      4. Key developments
  12. **Altoida Inc.**
      1. Overview
      2. Financial Performance
      3. Product Outlook
      4. Key developments
  13. A close-up of hands holding a tablet and a pen

      Description automatically generated**Illumina, Inc.**
      1. Overview
      2. Financial Performance
      3. Product Outlook
      4. Key developments
  14. **Siemens Healthineers**
      1. Overview
      2. Financial Performance
      3. Product Outlook
      4. Key developments
  15. **Thermo Fisher Scientific Inc.**
      1. Overview
      2. Financial Performance
      3. Product Outlook
      4. Key developments
  16. **GE Healthcare**
      1. Overview
      2. Financial Performance
      3. Product Outlook
      4. Key developments
  17. **GlaxoSmithKline**
      1. Overview
      2. Financial Performance
      3. Product Outlook
      4. Key developments
  18. **PerkinElmer, Inc.**
      1. A close-up of hands holding a tablet and a pen

         Description automatically generatedOverview
      2. Financial Performance
      3. Product Outlook
      4. Key developments
  19. **Abbott Laboratories**
      1. Overview
      2. Financial Performance
      3. Product Outlook
      4. Key developments

1. **KEY DEVELOPMENTS**
   1. Product Launches/Developments
   2. Merges and Acquisitions
   3. Business Expansions
   4. Partnerships and Collaborations
2. **Appendix**

12.1 Related Research