

# Gene Expression Market to Surpass \$17.9 Billion by 2031 with a CAGR of 7.7%

PORTLAND, OREGON, UNITED STATES, June 17, 2024 /EINPresswire.com/ -- Overview of the Global <u>Gene Expression Market</u>

The global gene expression market, valued at \$8,505.71 million in 2021, is anticipated to expand to \$17,960.77 million by 2031, growing at a compound annual growth rate (CAGR) of 7.7% from 2022 to 2031. Gene expression involves converting genetic information from DNA into functional products like proteins and RNA, critical for cellular functions. This process encompasses transcription, where DNA is transcribed into RNA by RNA polymerase, and translation, where RNA guides protein synthesis. Gene expression can be influenced by various factors, including RNA splicing and post-translational modifications.

## Historical Market Trends

From 2018 to 2020, the gene expression market saw significant growth, particularly in the Asia-Pacific region. This surge was driven by the rising prevalence of genetic disorders, an aging population, increasing chronic and acute diseases, and heightened awareness of personalized medicine. The presence of key pharmaceutical and biotechnology companies in the region also played a crucial role.

## Market Dynamics

Drivers

Increasing Prevalence of Genetic Disorders: Rising incidences of genetic and chromosomal disorders, such as trisomies 13, 18, and 21, are driving demand for gene expression analysis and therapy.

Growing Awareness of Personalized Medicine: Personalized medicine, which tailors treatment to individual genetic profiles, is becoming more popular.

Applications in Drug Discovery: Gene expression is crucial in drug discovery, aiding in identifying new therapeutic targets and understanding disease mechanisms. Restraints

High Cost of Instruments: The expense associated with gene expression instruments can be

prohibitive.

Lack of Skilled Professionals: A shortage of trained personnel can impede market growth. Opportunities

Technological Advancements: Innovations like 10x Genomics' targeted single-cell RNA sequencing are enhancing gene expression analysis.

Increased R&D Investments: Governments and private entities are investing significantly in healthcare infrastructure and gene expression research, opening new market opportunities. Segmental Analysis

## By Product

Consumables: This segment dominates the market, driven by the high volume of genetic tests in various applications.

Instruments: Subcategories include polymerase chain reaction (PCR), next-generation sequencing (NGS), and DNA microarrays.

#### By Application

Drug Discovery: Utilized to identify new drug targets and understand disease mechanisms. Diagnostics: Leading the market due to the precise and early diagnosis of genetic disorders and chronic diseases.

#### By End User

Pharmaceutical & Biotechnology Companies: This segment shows the highest growth, utilizing gene expression analysis for drug discovery and development.

Academic & Research Institutes: Engaged in fundamental research and training. Others: Includes various healthcare providers and diagnostic laboratories.

## By Region

North America: Dominates the market due to technological advancements and significant investments in gene expression research.

Asia-Pacific: Expected to grow rapidly due to increasing collaborations, government funding, and a focus on personalized medicine.

## Competitive Landscape

Key players in the gene expression market include Illumina Inc., Agilent Technologies, Thermo Fisher Scientific Inc., PerkinElmer Inc., Oxford Nanopore Technologies, QIAGEN, Bio-Rad Laboratories Inc., PacBio, Promega Corporation, and F. Hoffmann-La Roche Ltd. These companies are focusing on product launches, expansions, and acquisitions to enhance their market presence and product portfolios. David Correa Allied Market Research +1 800-792-5285 email us here Visit us on social media: Facebook X

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