

## **Protein Crystallization Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)**

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### **Report description:**

The Protein Crystallization Market is projected to register a CAGR of 8.1% during the forecast period (2022-2027).

COVID-19 had a significant impact on the growth of the protein crystallization market as, with the rise in cases of infectious diseases among the population, there was an increase in the demand for vaccines and protein-based therapies to overcome infection. The extensive use of protein crystallization to develop COVID-19 drugs has contributed to the market's growth. For instance, in January 2021, Elasmogen identified protein-based drugs that can potentially stop COVID-19 infections through a partnership with the University of Minnesota. Thus, the agreement was signed between market players and the research institute with a focus on research for COVID-19 protein therapeutics, which created the need for protein crystallization. Thus, COVID-19 had a pronounced impact on the growth of the market.

The increasing demand for protein therapeutics is a key factor driving the market's growth. This is because protein therapeutics have become an integral part of the health care industry over recent years. Protein therapeutics are extensively used to treat various major diseases, such as cancer, owing to their low immunogenicity and specificity. The increasing demand for protein-based drugs and therapeutics has led the manufacturers to implement growth strategies to gain the major market share, thereby increasing the market's growth. For instance, in January 2022, Amgen entered into a partnership with Generate Biomedicines to discover and create protein therapeutics for five targets across several therapeutic areas and multiple modalities. Such research and development activities create the need for protein crystallization products and services and thus drive the growth of the market.

Furthermore, the increasing demand for protein therapeutics is due to the increasing prevalence of chronic disease and rising awareness regarding protein therapeutics' efficiency. According to the World Health Organization (WHO) December 2020 article,

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an estimated 19.3 million new cancer cases were diagnosed worldwide. Such an increase in chronic disease prevalence creates a need to develop novel and efficient drugs, and as protein crystallization is widely used in drug discovery and development, it is expected to propel the growth of the market.

Advancements in protein crystallography and the implementation of standard protocols create a lucrative opportunity for market growth. Increasing application fields and areas of protein crystallization for tailoring effective drug candidates contribute to the market's growth over the forecast period. Additionally, the strategic collaboration among the market players is also expected to boost the growth of the market. For instance, in March 2020, Intabio, Inc. and Protein Metrics, Inc., developers of advanced analytical tools for accelerating biopharmaceutical development and manufacturing, signed a co-development and co-marketing agreement to couple Intabio's Blaze instrument system with the Byos software suite from Protein Metrics. The integrated Blaze-Byos platform helps to address a critical bottleneck for biopharmaceutical developers by automating the analysis of large protein structure/quality data sets to confirm product consistency and quality.

Thus, owing to the abovementioned factors, the market is expected to show positive growth over the forecast period. However, the lack of skilled professionals and the high cost of instruments may impede the growth of the market.

#### Protein Crystallization Market Trends

The Pharmaceuticals and Biotechnology Industries Segment is Expected to Hold a Major Market Share in the Protein Crystallization Market

The pharmaceutical and biotechnology industries are expected to be the most lucrative segment, with extensive usage of protein crystallization in the production process. The pharmaceutical industry is expected to register significant revenue growth over the forecast period owing to the increasing application of protein crystallization in the drug discovery and development process and rising demand for protein therapeutics.

The increasing innovative product launches to meet the growing demand are also expected to boost the market segment's growth. For instance, in July 2021, DeepMind signed a partnership with the European Molecular Biology Laboratory (EMBL) to create the most complete and accurate database of predicted protein structure models for the human proteome. The partnership aims to cover all ~20,000 proteins expressed by the human genome, and this data is to be freely and openly available to the scientific community. Additionally, in November 2020, Rigaku Corporation launched the Rigaku HyPix-Arc 100, a curved photon-counting X-ray detector for single crystal X-ray diffraction applications. Such launches are propelling the growth of the market segment.

Furthermore, the growing expansion of facilities by pharmaceutical and biotechnological companies to meet the increasing demand for protein crystallization is also boosting the growth of the segment. For instance, in March 2022, Flow Eighteen38, a protein sciences division created to facilitate and accelerate antibody characterization and protein purification projects, announced a EUR 5 million investment into its protein production and biophysical characterization capabilities and services from its parent company, CRO FairJourney Biologics S.A. Such initiatives taken by the market players are propelling the growth of the market segment.

Thus, owing to the abovementioned factors, the market segment is expected to project growth over the forecast period.

North America is Expected to Hold a Significant Share in the Market and Expected to do Same in the Forecast Period

North America is likely to dominate the global market owing to technological innovations in protein crystallization and an increase in research and development activities in the biopharma sector. The robust growth of protein crystallization can be attributed to

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the increasing investment and funding activities for proteomics research and the development of structure-based drugs.

The increase in research and development activities and collaboration among the market players and research institutes contribute to the growth of the overall regional market. For instance, in January 2022, Cullinan Oncology Inc. entered into a collaboration agreement with the Icahn School of Medicine at Mount Sinai ("Icahn Mount Sinai") to develop novel small-molecule immune modulators. The multi-year collaboration agreement will be focused on the optimization and development of oral protein degraders targeting hematopoietic progenitor kinase 1 (HPK1), a key regulator of immune cell activation and a high-priority target in immune-oncology. Such research agreements create the need for these products for protein crystallization and thus are expected to propel market growth.

Furthermore, in October 2021, EQRx and Absci Corporation signed a partnership agreement to discover and develop next-generation protein-based drugs. As per the agreement, both organizations leverage Absci's Drug Creation technology for discovery and development activities, along with EQRx's clinical development expertise and commercial capabilities, to advance next-generation, protein-based therapeutics across multiple therapeutic areas, including oncology and immunology.

Thus, the market is expected to grow in the North American region over the forecast period due to the abovementioned factors.

### Protein Crystallization Market Competitor Analysis

The protein crystallization market is moderately competitive and consists of several major players. In terms of market share, a few of the major players are currently dominating the market. Some companies currently dominating the market are Rigaku Corporation, Hampton Research Corporation, SARomics Biostructures AB, Agilent Technologies Inc., Charles River Laboratories Inc., and others.

#### Additional Benefits:

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

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