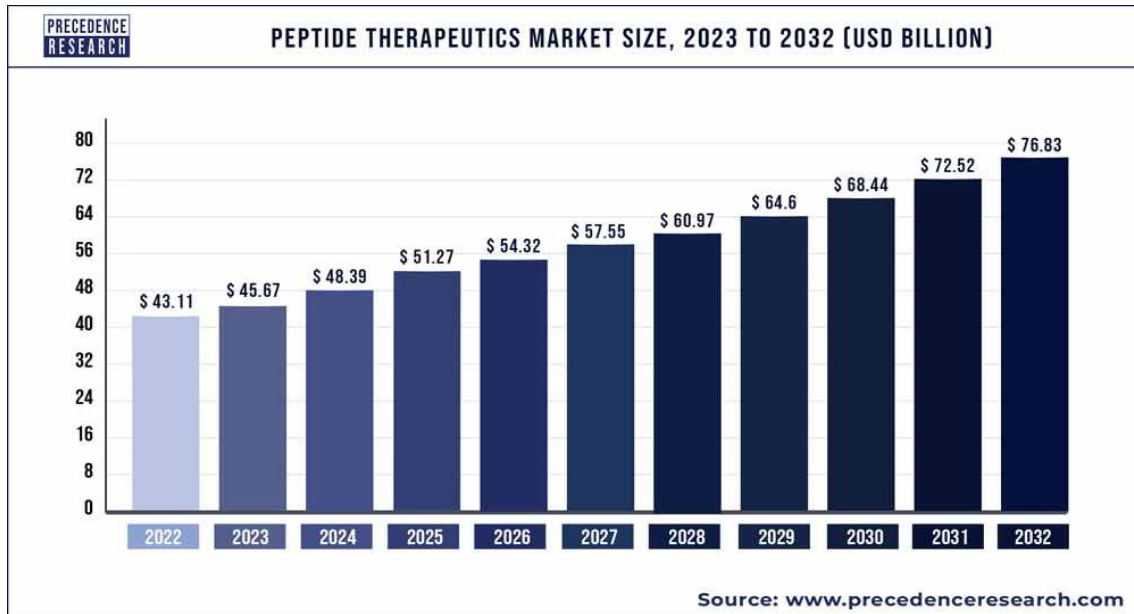


SUMMARY OF GLOBAL PEPTIDES MARKET

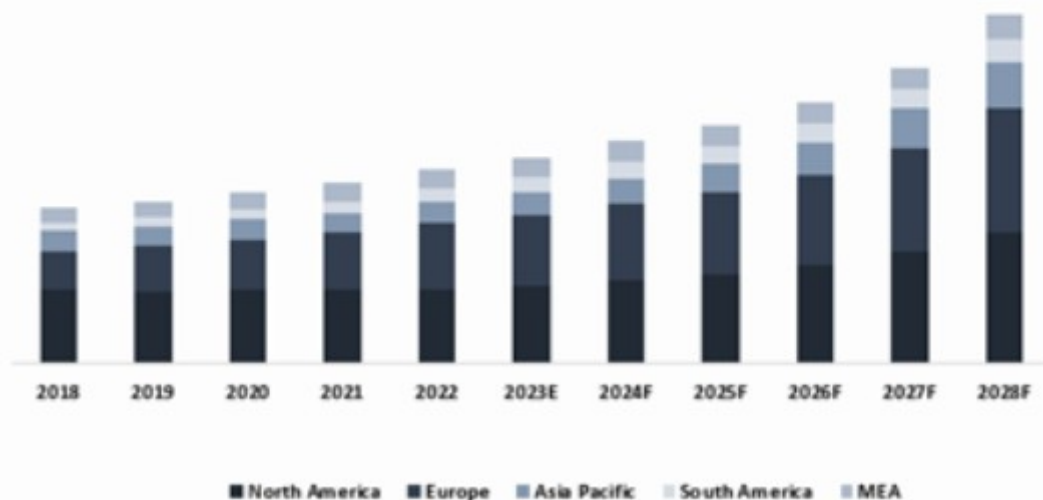
Peptides therapeutics drugs is a global growing market that in 2022 represented a market size of 43.11 USD billions and projections performed by different agencies (included Bloomberg) are that the business will increase by 78% in ten years, reaching 76.83 USD billions.

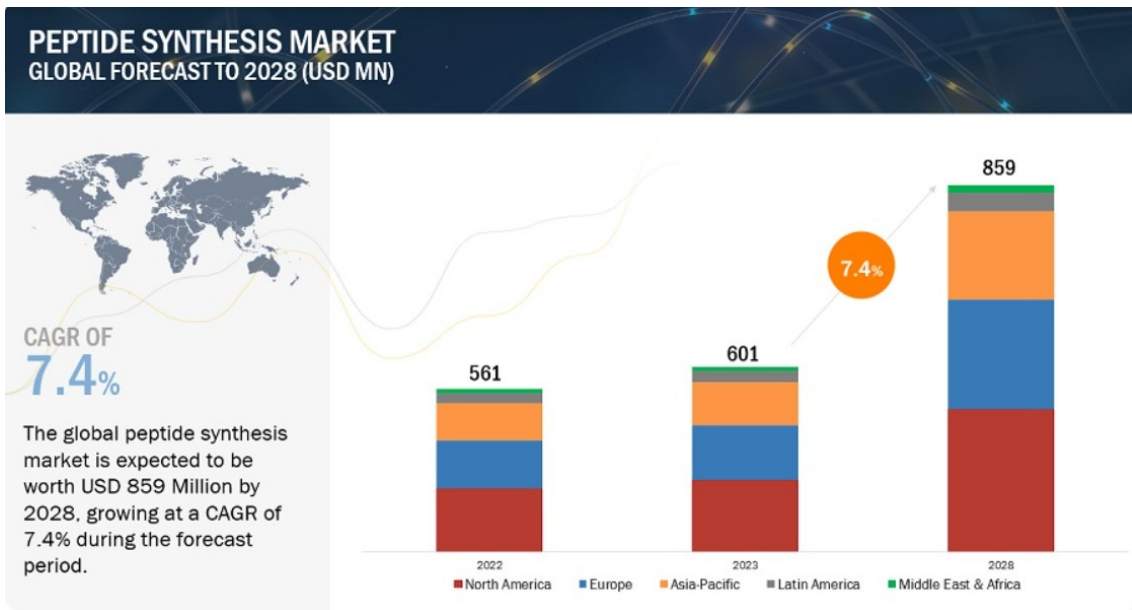


Regarding the manufacture of peptides (API), by region, Europe is the second manufacturer but the projection shows that the distance with respect to the first will decrease in the next 15 years.

Global Peptide Synthesis Market

Global Peptide Synthesis Market Size, By Region, By Value, 2018-2028F





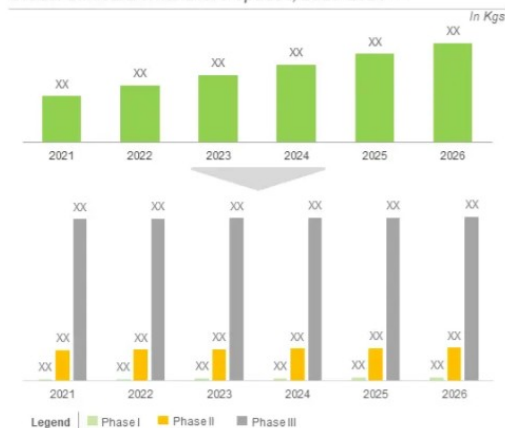
The demand of peptide-based drugs is increasing every year:

Example Highlights

Owing to the fact that peptide-based drugs are being used progressively for the treatment of various diseases, the demand is indubitably rising and expected to grow at annualized rate of over 10% in the near future

Demand Analysis: Global Clinical Demand

Global Clinical Demand for Peptides, 2021-2026^{1, 2}

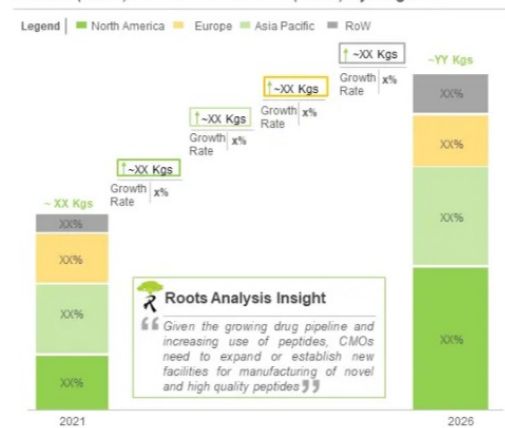


Note 1: Illustrations are not as per actual scale

Note 2: Detailed analysis, highlighting the demand for peptides across different regions, is available in the report titled "Peptide Therapeutics: Contract API Manufacturing Market (2nd Edition), 2022-2025"

Demand Analysis: Global Commercial Demand

Current (2021) and Future Demand (2026) By Region^{1, 2}



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Therapeutic peptides, small proteins –less than 50 amino acids – are having a dramatic impact on the drug market. In the last five years industry has made a heavy investment in these drugs, thanks in part to the improvements in chemical synthesis techniques and a decrease in production costs. The number of peptides authorised by the U.S. Food and Drug Administration, the North American agency that approves new medicines, is increasing at an annual rate of 8%.

Factors Driving The Global Peptide Drug Conjugate Market

Increasing Prevalence Of Chronic Diseases

Chronic diseases such as cancer, diabetes, and autoimmune disorders are often difficult to treat with traditional drugs due to their complex nature and the difficulty in targeting specific cells or tissues. Peptide drug conjugates offer a more targeted approach to treatment, delivering the drug payload more precisely and reducing the likelihood of side effects. The increasing prevalence of chronic diseases is driving the development and use of peptide drug conjugates in several ways. According to the WHO, chronic diseases account for approximately 71% of all deaths worldwide, with cardiovascular diseases alone responsible for 17.9 million deaths per year. Similarly, the American Hospital Association reports that approximately 133 million Americans, which is nearly 50% of the population, have at least one chronic illness such as heart disease, hypertension, or arthritis. This figure has increased by 15 million over the past decade, and it is projected to rise to 170 million by 2030.

Advancements In Peptide Synthesis Technologies

Over the years, there have been significant advancements in peptide synthesis technologies, which have led to the development of more complex and diverse peptide drugs. For instance, solid-phase peptide synthesis (SPPS) is a widely used method for synthesizing peptides. It involves the use of a solid support (usually resin) to which the first amino acid is attached. Subsequent amino acids are then added one at a time, building up the peptide chain. SPPS has become the gold standard for peptide synthesis due to its speed, efficiency, and scalability.

Increasing Research And Development Activities

The pharmaceutical industry is investing heavily in research and development of peptide drugs, which is leading to the development of new and innovative drugs. For example, in 2020, the FDA approved 12 peptide drugs for clinical use. Major pharmaceutical companies are investing significant amounts of money into research and development of peptide drug conjugates. For instance, in 2020, AstraZeneca announced that it would invest \$125 million in the development of peptide-based drugs. Similarly, in 2019, Novo Nordisk announced that it would invest \$500 million in the development of peptide-based drugs for diabetes and obesity.