Agilent Technologies

Biopharmaceutical Discovery and Development

MEETING THE COMBINED CHALLENGES OF COMPLEXITY, RISK, AND EXPENSE

The discovery and development of a single drug compound is an extraordinarily complex, labor-intensive endeavor that can take more than 10 years and $1 billion to progress from lab bench to marketplace. From the moment a potential drug candidate is identified in a research laboratory to the time it is has earned regulatory approval, the compound and its every constituent part must go through a labyrinth of tests and procedures to meet rigorous safety and efficacy standards.

Agilent provides complete solutions to the biopharmaceutical industry to accelerate drug discovery, development and manufacturing. The company's expanding portfolio of instruments, services and software, combined with a long history of dependability, have made Agilent the ideal partner to the expanding global biopharmaceutical network. Providing a wide range of solutions for every stage of the process, Agilent is empowering drug makers to streamline the development process with precision, speed and efficacy.

Agilent's next-generation biopharmaceutical solutions empower drug researchers and manufacturers with the highest quality tools to complete this process with increasing confidence and cost-effectiveness.

PROBLEM: The increasing complexity, risk and expense of drug discovery and development.

SOLUTION: Transform the processes involved to reduce development times, terminating ineffective drug candidates earlier in the process and focusing on the areas of highest therapeutic value.

The creation of follow-on biologics, or biosimilars—while somewhat analogous to the processes used to develop and manufacture novel patented biopharmaceuticals—poses additional challenges. Agilent also supplies customized solutions to address these unique tasks with increased speed, precision and affordability, while fulfilling alternative regulatory parameters.

Biopharmaceuticals, or large molecule bio-engineered compounds such as proteins (antibodies), nucleic acids (DNA, RNA) and living microorganisms like viruses and bacteria, are developed under close scrutiny by regulatory agencies such as the U.S. Food and Drug Administration and the European Medicines Agency, and must satisfy "current Good Manufacturing Practices" or cGMP requirements—rigorous processes and protocols designed to monitor and control the integrity and safety of the compound. Supporting this effort, Agilent provides a collection of products that work together seamlessly to advance drug candidates from conception to reality. In simple terms, the company's core biopharmaceutical products are designed for the identification, measurement, quantification, purification and large-scale systematic reproduction of target compounds.

These technologies range from bench-top instruments to time-saving automated systems used for processing, analyzing and managing large amounts of data. Individually and in combination, Agilent technologies help scientists complete these tasks with precision, confidence and relative ease.

Transforming the Drug Discovery and Development Process

Agilent has a long history of providing innovative solutions to help the biopharmaceutical industry solve its most pressing problems, and continues to fulfill specialized needs through close collaboration and continually refined expertise, together transforming the drug discovery and development process.