## Market Analysis

## Editorial

The global pharmaceutical manufacturing market size was valued at USD 1,325.5 billion in 2019 and is expected to grow at a compound annual growth rate (CAGR) of 4.6% from 2020 to 2027. Continuous investments made by the pharmaceutical and outsourcing firms to expand their manufacturing facilities have positively impacted market growth. For instance, in February 2020, AstraZeneca invested USD 133.0 million to expand its Australian manufacturing site. Similarly, in December 2019, a global outsourcing solution provider, PCI Pharma Services, expanded its U.K.-based Tredegar facility to improve its high potent drug development and manufacturing capabilities. The emergence of new management systems, such as enterprise resource planning systems and manufacturing execution systems has optimized the data management process. In addition, the paradigm shift towards smart, integrated, and data-rich paperless operations has resulted in precise and errorfree production. Such developments have allowed the companies to gather and utilize more data in minimal time and cost, which boosts the pharmaceutical manufacturing. Constant progress in the field of personalized medicines has opened up numerous possibilities to target different health maladies and allowed the development of patientcentric models. This progress results in a shift from large batches to smaller batches for the development of complex medicines and autologous patient-centric treatments. This has also encouraged the manufacturers to redesign their supply chain in order to better align with the patient-centric health care system. A rise in the drug approvals by the regulatory bodies is expected to fuel the pharmaceutical manufacturing procedures. For instance, the FDA approved 59 drugs in 2018, 49 drugs in 2019, and 15 drugs up to April 2020. Furthermore, a large number of ongoing clinical trials have created numerous growth opportunities in the market for pharmaceutical manufacturing. The in-house segment dominated the market for pharmaceutical manufacturing and accounted for a revenue share of 50.1% in 2019. Most of the largescale drug manufacturers opt for in-house production because it allows the companies to have control over the private information associated with novel molecules. Expansion of in-house pharmaceutical manufacturing facilities by key firms also drives the segment growth. For instance, in August 2020, Grand River Aseptic Manufacturing expanded its Michigan facilities. In recent years, key drug manufacturers have shifted their focus towards external service providers for R&D and manufacturing services. The growth in the demand for customized products, the need for enhanced productivity and efficiency across the value chain, and continuous pressure from regulatory bodies on drug pricing have compelled the pharmaceutical companies to rely more on outsourcing mode of drug development. Several benefits associated with outsourcing operations are expected to drive the segment at a lucrative pace in the market for pharmaceutical manufacturing. Outsourced services minimize the investments, reduce drug development and overall costs, and increase the efficiency of manufacturing procedures, and easily comply with different regulatory norms. Besides, the integration of Robotic Process

Automation (RPA) by contract manufacturers efficiently accelerates the drug development processes. In terms of revenue, the tablets segment dominated the market for pharmaceutical manufacturing with a share of 25.4% in 2019. This is due to the wide availability of tablets in different colors, shapes, and sizes as well as types, such as film and enteric-coated, effervescent, and orally disintegrating tablets. The advent of 3D-printed tablets designed for personalized needs also boosts seament growth. For instance, in February 2020, Merck partnered with a German firm, AMCM, to conduct clinical testing on 3D printed tablets. The injectable segment is anticipated to witness the fastest CAGR in the market for pharmaceutical manufacturing during the forecast period. The increase in the number of approvals for prefilled syringes and auto-injectors is attributive to an estimated growth rate. Moreover, a shift in preferences towards larger dosage volumes has resulted in an increased demand for 2.25mL needle syringes, which significantly contributes to the revenue generation in this segment. The oral segment dominated the market for pharmaceutical manufacturing and accounted for a revenue share of 59.8% in 2019. Oral dosage forms are affordable, easy to manufacture, and patient-friendly. In addition, the advancements in drug delivery technologies, such as sustained release dosage formulations and targeted drug delivery, has allowed the orally administered drugs to achieve greater levels of availability in the marketplace. The rise in demand for innovative drug-delivery systems that better fit with the 'mobile lifestyle' of patients' paves a path for the high adoption of pens and autoinjectors, which further surges the segment growth. Apart from this, an increase in the outsourcing of fill-finish manufacturing services by the drug developers also boosts the revenue generation in the parenteral segment in the market for pharmaceutical manufacturing. The retail segment accounted for the largest revenue share of 78.2% in 2019 in the market for pharmaceutical manufacturing. As the medical cost and health insurance have risen, more people have shifted their preferences towards self-medication for the treatment of minor health issues. Moreover, OTC medicines have gained popularity as an easy and cost-effective option. These factors result in the high adoption rate of drugs from retail stores, which leads to a larger share of this segment. In recent years, specialty pharmacy has gained significant traction resulting in the wide availability of specialty drugs at retail pharmacies, which also drive the segment growth. Besides, retail pharmacies undergo partnerships and collaboration models with health professionals and healthcare facilities in order to improve clinical outcomes and remain competitive with other businesses in the market for pharmaceutical manufacturing. The advent of electronic transfer of information is anticipated to open up numerous opportunities within primary care. This can eliminate the issues of poor communication between primary and secondary care. Moreover, the use of diagnostic support systems enables the automated introduction of clinical pathways of care, which can be tailored according to the patient's needs by a clinician. This, in turn, drives the sale of drugs in the non-retail segment at the fastest CAGR in the market for pharmaceutical manufacturing.