

China's Stem Cell Industry: Fast Growing driven by Demand, Innovative Technology Capabilities and Favorable Policies

Introduction/Executive Summary

- **Stem cells** are undifferentiated cells found in the human body that have the unique ability to divide continuously and build every tissue in the human body. Hence, they **possess significant potential for therapeutic applications in tissue regeneration and repair**. Moreover, stem cells play an important role in the body's healing process, and the introduction of new stem cells has always showed great promise in the treatment of many health conditions. Given their distinctive regenerative capabilities, stem cell research has been one of the most fascinating areas of contemporary biology.
- The stem cell industry is consisted of three parts: **1) Upstream**: stem cell collection and storage; **2) Midstream**: stem cell preparation, production and research, and **3) Downstream**: stem cell clinical treatment and application. Since stem cell collection and storage do not require advanced technologies and expertise, they are facing the fiercest competition across the entire stem cell supply chain.
- Characterized by **capital-intensive** and **greatly affected by government policies**, stem cell industry belongs to a typical scientific research industry. Changes in policies usually have a profound impact on the industry's structure, development and prospects. **Major barriers to entry** for the industry include the following four aspects: **1) Technical; 2) Talent; 3) Funding; and 4) Regulatory**.
- The global stem cell therapy market in 2019 was around US\$148 billion. It is estimated that the market will grow to near US\$242 billion in 2024, representing a **compound annual growth rate (CAGR) of 10.3% between 2019 and 2024¹**. Geographically, **North America and Europe were the two largest stem cell markets worldwide**, accounting for a respective market share of 37.6% and 33.0% in 2018, while **China made up 10.4% of the total global share**.
- However, driven by more favourable policies, abundant funding and sustainable economic growth of the nation, **China's stem cell market** is expected to reach US\$56 billion in 2024, **growing at a CAGR of 11.8% for the 2019 to 2024 period**, higher than the pace of the global market. Importantly, China's global market share is expected to jump to **28.6%, more than twofold of its share in 2018**. Hence, China's stem cell market will become one of the fastest growing markets in the world.
- In our view, China's stem cell industry should not be underestimated. It is because there has been a **surge in the number of stem cell related patent applications filed** from 759 in 2014 to 1,497 for the first 10 months of 2018 after registering a record high of 1,776 in 2017 or more than doubling in just three years.
- Biobanks² are playing increasingly important roles in clinical and translational research nowadays. The U.S. and Europe currently dominate the biobanking market due to their sheer sizes. Nonetheless, with the **largest population, abundant clinical resources and significantly lower cost**

¹ Source: Qianzhan Research Institute

² A large collection of biological or medical data and tissue samples, amassed for research purposes

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