Private company Creo is a potential disrupter in the cannabinoids space, leveraging its proprietary bacterial fermentation technology to manufacture hitherto uneconomical rare cannabinoids at commercial scale. Initial focus is on cannabigerol (CBG), a non-psychoactive cannabinoid with potential application across the health, wellness and beauty industries. With its first commercial 28,000L manufacturing run achieved in August 2021 and collaboration agreements with Fifth & Root and Joiya announced, we expect Creo to commence revenue generation in 2021. Continued manufacturing campaigns and the development of partnerships should continue building momentum.

Banking on biosynthesis

Despite the well-regarded therapeutic benefits of cannabinoids, the uptake of rarer cannabinoids has been impeded by their lower concentrations (<1% vs c 20% for cannabidiol (CBD)) and high extraction costs from plants. Creo is one of the frontrunners in developing a biosynthetic process (replicating the natural cannabinoid production by using genetically engineered microbes) to produce pure, consistent-quality minor cannabinoids at high yields and low costs, without the environmental footprint. Creo achieved commercial-scale manufacturing (28,000L) in August 2021, working with a large international ingredients manufacturer.

Differentiated IP accords competitive edge

Creo’s differentiation stems from using bacteria as the microbe of choice (instead of yeast) to drive its fermentation process. The company maintains that this not only puts it in a differentiated IP position and gives it the freedom to operate, but also bestows advantages such as shorter fermentation times and lower purification requirements. Creo’s technological partnership with Genomatica (30% shareholder in Creo) is another key differentiator, allowing the company exclusive access to Genomatica’s sizeable team and technical know-how as well as its 1,800-strong patent portfolio.

Focus on rare cannabinoids

Creo’s initial focus is on CBG (widely regarded as the next CBD) and its reported anti-microbial, antioxidant and anti-inflammatory properties have been garnering particular interest from the skincare industry. Creo’s immediate goal is to supply ingredients to the existing CBD market (in particular the CBD skincare sector, estimated at $3.5bn by 2026) with the medium-term objective of tapping into the mainstream consumer packaged goods (CPG) market. Partnerships with Fifth & Root and Joiya should allow Creo to start generating revenues from 2021.

Sizable market opportunity

Mainstream acceptance, easing regulatory standards and biosynthesis-aided production of rare cannabinoids creates significant growth opportunities for Creo. Raymond James estimates the global cannabinoid biosynthesis market to reach C$10bn by 2025 and C$115bn by 2040. Increasing investment levels (c $700m in 2018, according to SynBioBeta) also highlight the growing interest in the sector.
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