CB Therapeutics Expands Synthetic Biology Platform to Produce Valuable Diterpenoids from Salvia

CARLSBAD, CA, UNITED STATES, February 10, 2025 /EINPresswire.com/ -- CB Therapeutics, a U.S.-based synthetic biology company specializing in the sustainable bio-manufacturing of high-value compounds, today announced the successful production of select diterpenoids from Salvia plants. Historically, these Salvia-derived molecules have shown promise in pest management and mental health applications, among other areas, underscoring their importance across multiple industries.

By leveraging its existing terpene-producing strains, CB Therapeutics has developed a novel approach to bioengineer yeast capable of synthesizing these valuable Salvia compounds. The same synthetic biology platform—also used to manufacture rare cannabinoids from long-chain prenyl donors, such as geranylgeranyl diphosphate—has been further refined to address complex plant pathways. This achievement paves the way for scalable, domestic production of therapeutic, nutraceutical, and agricultural ingredients that previously required resource-intensive extraction from plant material. “Our goal is to offer sustainable, high-purity alternatives to traditionally hard-to-source plant compounds,” said Co-founder and CEO, Sher Ali Butt. “Expanding into Salvia-derived diterpenoids reflects our commitment to building a U.S.-based supply chain that can support multiple sectors—from mental health to environmentally friendly pest control—without compromising on quality or consistency.”

Salvia encompasses a wide range of species, some of which produce compounds renowned for their insecticidal properties, while others are studied for potential effects on mood, cognition, and other aspects of mental well-being. With this development, CB Therapeutics aims to collaborate with research institutes, agriculture-focused enterprises, and healthcare organizations seeking reliable access to these compounds. The company is also exploring Salvia divinorum and other species that could yield novel drug leads and wellness products. “We’re proud of how our precision fermentation platform continues to evolve,” added Co-founder and Chief Scientific Officer, Dr. Jacob Vogan. “Diterpenoids from Salvia are notoriously complex, but our team’s expertise in enzyme engineering and pathway optimization allowed us to replicate key biosynthetic steps inside our microbial strains.”

This milestone grows CB Therapeutics’ extensive portfolio of biomanufactured ingredients, from dyes to important therapeutics, reinforcing the company’s ability to integrate advanced strain engineering, scalable fermentation, and downstream processing. In addition to producing these

new Salvia compounds, CB Therapeutics remains focused on building strategic collaborations in synthetic biology, U.S. biomanufacturing, and beyond.

Organizations or researchers interested in partnering to commercialize Salvia-derived compounds—or to develop entirely new ingredients based on CB Therapeutics' platform—are encouraged to inquire about collaboration and licensing opportunities.

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