

Israel's PlantArcBio secures U.S. and South Korea patents for DIPPER Platform, advancing gene-editing optimization in crops

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PlantArcBio has been granted patents in the United States and South Korea for its proprietary DIPPER platform, a breakthrough technology designed to optimize gene expression for gene-editing processes in crops.

The DIPPER platform represents a significant advancement in plant biotechnology, enabling researchers and breeders to enhance the efficiency and precision of processes using gene-editing tools such as CRISPR to improve crop performance.

Unlike traditional trial-and-error approaches, DIPPER employs a high-throughput, in planta system to systematically identify regulatory and coding DNA elements that maximize gene expression and trait performance across a wide range of crops and traits.

A critical challenge in developing gene-edited crops is identifying precise DNA modifications that are required to improve plant functionality, rather than relying solely on gene deletions. DIPPER addresses this challenge by providing a precise method to pinpoint optimal DNA changes, shortening the trait development timeline and allowing seed companies to bring new crop traits to market faster and more efficiently, benefiting both farmers and consumers.

"The swift granting of these patents underscores PlantArcBio's commitment to delivering cutting-edge, scalable solutions for global agriculture," said Dror Shalitin, CEO of PlantArcBio. "DIPPER is a game-changing platform that accelerates the development of traits such as drought tolerance, yield enhancement, herbicide resistance, and nutritional improvement, helping farmers worldwide meet the growing demands of sustainable food production."

The patents strengthen PlantArcBio's intellectual property portfolio and highlight DIPPER's potential as a prerequisite for the successful use of gene-editing tools such as CRISPR in major crops including corn, soybean, wheat, rice, vegetables, and more. The platform paves the way for novel trait development and faster commercialization timelines, positioning PlantArcBio at the forefront of modern agricultural innovation.

PlantArcBio is an ag-biotech company developing gene discovery and RNAi-based solutions to enhance crop traits and biologically control pests, with a vision to improve global food security and promote sustainable agriculture.

The company's proprietary DIP and DIPPER platforms enable the discovery and development of novel genes and gene-editing targets, with game-changing effects on plants - including yield improvement, drought resistance, herbicide tolerance, and nutritional enhancement.