

## **ToolGen and PlantArcBio Forge Strategic Collaboration to Develop Gene-Edited, Herbicide Tolerant Soybeans for Global Markets**

*Innovative partnership aims to deliver sustainable, high-performance crops to meet growing global agricultural demands*

**Seoul, Korea and Givat Chen, Israel, Dec. 4, 2024** – ToolGen, a leading gene editing company, and PlantArcBio (TASE: PLNT), a leading ag-biotech company specializing in gene discovery and biological components to enhance agricultural crop traits, announced today a strategic collaboration to develop gene-edited soybean with enhanced herbicide tolerance. This partnership combines the cutting-edge expertise of both companies to address critical agricultural challenges and target the growing \$10 billion global soybean seed market.

Soybean is among the most critical crops worldwide, serving as a major protein source for both human consumption and livestock feed. With the growing need to maximize productivity on existing farmland while reducing environmental impact, this collaboration offers a sustainable, non-GMO solution to improve yields and enhance food security.

This groundbreaking partnership will leverage ToolGen’s advanced CRISPR-Cas9 technology (foundation IP) with top-level experience in generating the edited soybean, and alongside PlantArcBio’s disruptive DIPPER™ platform, a proprietary system for discovering and optimizing genes to enhance native traits.

The developed technology will specifically confer tolerance to two different groups of herbicides. Combining tolerance to the two herbicide groups offers soybean growers greater flexibility and efficiency in managing resistant and hard-to-control weeds, contributing to sustainable and productive farming practices.

**Byong Hwa Lee, CEO of ToolGen**, commented, " We are delighted to collaborate with PlantArcBio, combining ToolGen’s cutting-edge gene-editing technology with PlantArcBio’s high-throughput DIPPER™ platform to enhance native crop traits. Our gene-edited herbicide-tolerant soybeans will offer farmers a non-GMO effective weed management solution, leading to higher productivity and enhanced food security."

**Dror Shalitin, CEO of PlantArcBio** added, "This partnership demonstrates the disruptive potential of PlantArcBio's DIPPER™ platform in optimizing gene editing processes and enhancing native traits in crops. Collaborating with ToolGen as a long-term strategic partner enables us to deliver impactful agricultural solutions. We look forward to applying this collaboration model to additional crops and traits in the near future."

This collaboration is supported by the Korea- Israel Industrial R&D Foundation (KORIL-RDF), which fosters technological innovation between companies in Korea and Israel. The project funding (equaling a budget of US\$ 2.16M for two years) and the support from KORIL-RDF underscores the global significance of this initiative and its potential to impact agriculture worldwide.

The companies envision to expand their partnership in the future to apply gene-editing technology to a broader range of crops and traits, further advancing their shared goal of delivering innovative solutions to global agricultural challenges.

### **About ToolGen**

Since its establishment in 1999, ToolGen has been at the forefront of gene editing, pioneering the development and adaptation of genome-editing technology with ZFN (Zinc Finger Nuclease) and TALEN (Transcription Activator Like Effector Nuclease). The company has registered numerous patents, including the groundbreaking CRISPR-Cas9 technology, making ToolGen the first foundation patent holder of CRISPR-Cas9 for applying eukaryotes in the USA. With a technology-oriented platform, ToolGen has successfully run businesses in patent monetization, therapeutics, and crops.

For crops, Seed R&BD Division of ToolGen is developing high-value-added varieties aiming at high productivity, environmental stress tolerance, functional enhancement, and pest/disease resistance using CRISPR-Cas9 technology. ToolGen's mission for seed development is to secure new and various genetic germplasm using CRISPR-Cas9 technology for the future food of humankind and livestock. ToolGen also looks forward to sharing the genome editing technology and experience for developing the edited crop. ToolGen is very happy to have worked with PlantArcBio as a partner for R&D and business.

### **About PlantArcBio**

PlantArcBio Ltd. (TASE: PLNT) is an ag-biotech company engaged in research and development in the field of gene discovery and biological components for improving plant traits, intended primarily for use in the agricultural industry. The company's proprietary DIP™ and DIPPER™ platforms enable the discovery and optimization of genes that enhance various target traits in plants, enhancing global food security and supporting sustainable agriculture.

PlantArcBio's portfolio comprises a range of products in various stages of research and development, under two product families:

**(1) Discovering and improving genes for the seed industry to enhance desirable traits in crop plants:** these traits include improved yield, drought tolerance, insect resistance, and herbicide tolerance.

(2) **Development of RNAi-based products (biological molecules)**, including pest control and crop enhancement solutions - an area in which PlantArcBio is one of the leading companies in the world.

PlantArcBio's global strategic partners include ICL, Gadot-Agro, KWS, Rallis (a subsidiary of TATA), TMG, CTC, and additional seed and agri-business companies.

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