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Chenguang Biotech patents Quercetagetin formulation to boost Chrysanthemum growth and yield

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China's natural plant-extract specialist has patented a formulation combining quercetagetin with naphthaleneacetic acid and indolebutyric acid, targeting stronger root development, above-ground growth and higher chrysanthemum flower yields

Chenguang Biotech Group Co., Ltd. has secured a Chinese patent for a plant growth regulator based on quercetagetin, adding a new application to the natural plant-extract company's technology portfolio and opening a potential route into more targeted crop-production inputs. The patent, titled “A Composition for Regulating Plant Growth, Plant Growth Regulator and Application Thereof”, carries authorisation publication number CN117958266B and was published on September 11, 2026, according to information from the China National Intellectual Property Administration. The underlying application, CN202410136584.9, was filed on January 31, 2024.

The invention was developed by Wang Hao, Guo Hao, Lv Xingna and Gao Wei, with Beijing Luhai Intellectual Property Agency Co., Ltd. acting as the patent agency and Shang Xiuling as patent agent.

A new application for quercetagetin

The patent focuses on the use of quercetagetin as a plant growth-promoting component. According to the patent abstract, Chenguang Biotech identified a growth-promoting function for the compound and developed a plant growth regulator by combining it with naphthaleneacetic acid (NAA) and indolebutyric acid (IBA). The formulation is designed around the interaction of the three components, with the patent describing a synergistic effect between quercetagetin, NAA and IBA.

The stated objective is to improve both root development and above-ground plant growth, while also increasing fresh flower yield. The patent specifically identifies chrysanthemum cultivation as an application area, with the formulation showing reported benefits for yield enhancement and production efficiency.

The development is notable because it extends the potential application of Chenguang Biotech's plant-derived compound expertise beyond its established natural-extract business and towards crop-production technologies.

From natural extracts to agricultural applications

Chenguang Biotech has built its business around the research, development, production and sale of natural plant extracts, with products spanning chilli red pigment, lutein, chilli oleoresin, spices, sweeteners and nutritional and medicinal products. The company's scale is underpinned by a vertically integrated industry-chain model and a portfolio of extraction technologies. Its chilli red pigment business is among the world's largest by production and sales volume.

The new patent adds a different dimension to that technology base. Rather than focusing solely on extraction and ingredient supply, the invention applies a plant-derived compound to a specific agricultural function—plant growth regulation. That creates a potential bridge between Chenguang's natural-product capabilities and the growing search for technologies that can improve crop productivity and input efficiency.

A formulation rather than a standalone molecule

The patent's technical proposition rests not only on quercetagetin itself, but on its combination with established plant-growth-regulating compounds. NAA and IBA are both widely used in plant-growth applications, particularly in relation to rooting and plant development. The patent claims that combining them with quercetagetin can produce a synergistic effect, improving root and shoot development and supporting higher fresh flower production.

The focus on formulation is commercially relevant. In crop inputs, performance often depends not simply on the biological activity of an individual compound but on how active components interact, are formulated and ultimately perform under cultivation conditions.

Chrysanthemum as the initial application

The patent specifically highlights chrysanthemum production, where flower yield and plant development directly influence commercial returns. The claimed effects include improved root growth and development, stronger above-ground growth and increased fresh flower yield. The invention consequently positions the formulation as a potential tool for improving both yield and production efficiency in chrysanthemum cultivation.

Whether the technology ultimately develops into a broader commercial plant-growth platform will depend on further product development, registration and field-level validation. The patent itself establishes intellectual-property protection around the disclosed composition and applications but does not, by itself, establish commercial-scale adoption.

Chenguang's expanding business base

The patent comes as Chenguang Biotech maintains a substantial presence in the natural plant-extract and agricultural-processing industries. For the first half of 2026, the company reported RMB 3.159 billion in revenue. Natural pigments, spices, sweeteners, nutritional and medicinal products contributed RMB 1.618 billion, or 51.21 per cent, of revenue, while cottonseed and cottonseed products generated RMB 1.379 billion, representing 43.66 per cent. Other businesses contributed RMB 162 million, or 5.13 per cent.

The company recorded RMB 184 million in net profit during the period. The scale provides Chenguang with a substantial industrial base from which to develop higher-value applications around its underlying plant-extract and biotechnology capabilities.

The quercetagetin patent points towards one such avenue: using compounds derived or developed through its broader natural-product technology platform to address specific agricultural production challenges. From extraction expertise to crop-performance technology
The broader significance of the patent lies in where Chenguang may be taking its technology portfolio.

Natural plant compounds have traditionally found major markets in food ingredients, pigments, nutrition, cosmetics and pharmaceutical applications. Increasingly, however, their biological properties are also being investigated for applications in agriculture, including plant growth regulation and input-efficiency technologies.

Chenguang's quercetagetin patent sits within that intersection.

The immediate application is relatively focused—improving chrysanthemum growth and fresh flower yield—but the underlying approach could have wider relevance if subsequent research establishes useful effects across additional crops and

production systems. The patent does not yet signal a new commercial business line for Chenguang. It does, however, provide evidence of the company's continued effort to turn its natural-product research capabilities into proprietary technologies with applications beyond its traditional extraction markets.