

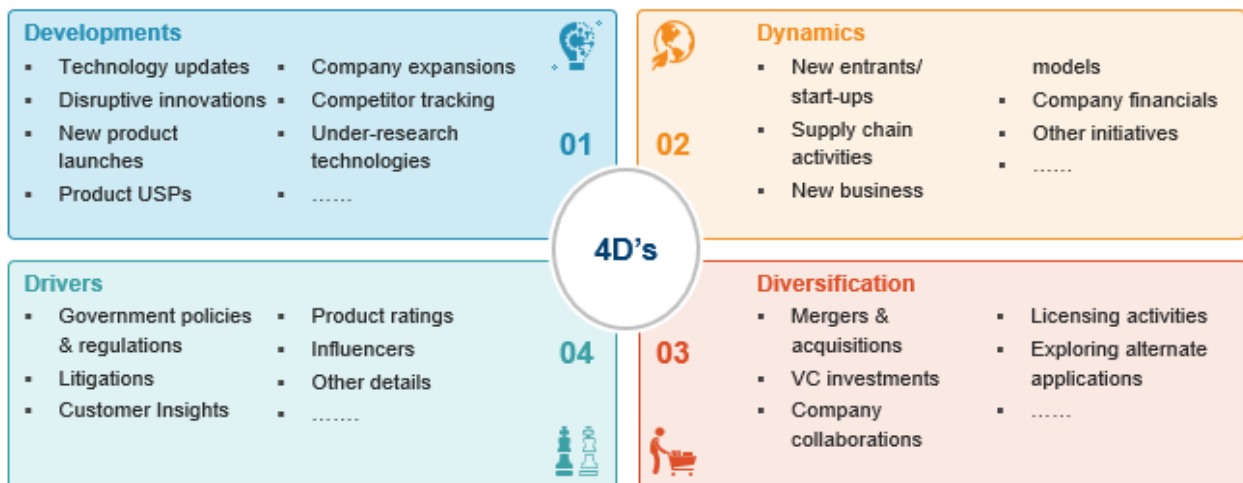
INTELLOTRACKER

Plant Molecular Farming

May 2023



ARANCA'S QUARTERLY SECTORIAL UPDATE ACROSS FOUR DIMENSIONS....





DEVELOPMENTS

Technology / Innovation		Researchers at University of Castilla-La Mancha and IBMCP-CSIC created a saffron-fortified potato that enhances the anti-oxidant properties of potatoes. <i>Source: University Website</i>
Technology / Innovation		Naylor Nutrition, a company that has developed a method to extract protein from cabbage, is constructing a facility to produce the functional ingredients <i>Source: FoodIngredientsFirst</i>
Technology / Innovation		Tokyo University of Science and Iwate Biotechnology Research Center genetically engineered tomatoes and potatoes to produce anti-inflammatory plant pigment betalain. <i>Source: Food Navigator Europe</i>
Technology / Innovation		Tel Aviv University scientists created a novel technology that increases bioactive components and other substances to make seaweed healthier. <i>Source: Food Navigator Europe</i>
Technology / Innovation		Elo Life Systems is researching gene-editing techniques to save Cavendish Bananas from extinction due to fungi. <i>Source: FoodIngredientsFirst</i>
Technology / Innovation		Plantae Bioscience uses CRISPR gene editing to reduce levels of bitter-tasting saponin in yellow peas, improving the taste of pea protein. <i>Source: FoodIngredientsFirst</i>
Technology / Innovation		Monsanto Technology patented a method for enhancing plant resistance against pathogens by introducing a specific gene sequence that activates the plant's innate immune system, resulting in improved plant health and higher crop yields. <i>Source: US20230048751A1</i>
Technology / Innovation		CSIRO patented a method for producing enhanced levels of lipids in a plant host. <i>Source: CA2804025C</i>
Technology / Innovation		Yeda Research and Development patented the production of recombinant milk proteins in various plant parts, such as seeds, fruits, leaves, and roots, and a method of producing a food, medicament, cosmetic or blocking composition from the plant. <i>Source: CA2804025C</i>
Technology / Innovation		Redbiotec AG patented the method of producing and production of casein proteins in recombinant host cells such as yeast and fungi. <i>Source: EP4122950A1</i>



DYNAMICS

Company Financials		Moolec Science, a food technology company producing animal proteins in plants through molecular farming, gets listed on NASDAQ. <i>Source: GlobeNewswire</i>
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DIVERSIFICATION

Company Collaboration		Motif Foodworks has partnered with IngredientWerks to explore novel ways to optimize heme protein production through molecular farming. <i>Source: PR Newswire</i>
VC Investments		PoLoPo, an Israeli molecular farming startup that grows animal protein in potatoes, received \$1.75 million funding in the pre-seed round. <i>Source: Vegconomist</i>
VC Investments		IngredientWerks, an ag-tech ingredient company developing high value plant-based proteins for the alternative protein markets, secured funding in the seed round. <i>Source: PR NewsWire</i>
VC Investments		Pigmentum, a startup producing casein in plants, plans to utilize its \$6 million funding, secured in its seed funding round, to accelerate production. <i>Source: Food Navigator Europe</i>
VC Investments		Tiamat Sciences raised \$2 million in an extended seed funding round to reduce production costs of plant-grown animal proteins. <i>Source: Tech Funding News</i>
VC Investments		Elo Life Systems raised \$24.5 million in a series A funding round to commercialize its monk-fruit inspired intense sweetener, made via molecular farming <i>Source: Food Navigator USA</i>

DRIVERS		
Government Policies		England legalizes commercial development of gene-edited food. <i>Source: BBC</i>
Government Policies		The European Court of Justice established that plants derived from random <i>in vitro</i> mutagenesis technique, and have a long established record of safety, would not fall under EU GMO regulations <i>Source: Feed Navigator</i>
Litigation		Perfect day's animal-free dairy US patent was challenged by an anonymous petitioner, on grounds of the only independent claim being "obvious" and the applicant's arguments proven false in prior literature. <i>Source: AG Funder News</i>

SOLUTION PORTFOLIO – TECHNOLOGY RESEARCH & ADVISORY

IP Strategy	Technology Intelligence	Growth & Strategy
How best can we proactively manage and monetise our technical knowhow / intellectual property?	How best can we keep abreast of technology trends, competitor activity and headwinds / tailwinds in our domain?	Which technologies do we invest in? How do we ensure quick wins? Speed to market?
<ul style="list-style-type: none"> IP Portfolio Analysis IP Monetisation IP Valuation Prior Art Searches 	<ul style="list-style-type: none"> Competitor Benchmarking Tech / IP Landscapes Technology Watch Market Analysis / Trends 	<ul style="list-style-type: none"> R&D Strategy Roadmaps Technology Scouting Open Innovation Product Development



GROWTH ADVISORY



INVESTMENT RESEARCH & ANALYTICS



VALUATION & FINANCIAL ADVISORY



TECHNOLOGY RESEARCH & ADVISORY



PROCUREMENT & SUPPLY CHAIN INTELLIGENCE

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