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AuraCell Technology set to transform clean-label food preservation

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In an increasingly clean-label-driven food industry, two innovators, Novella Innovative Technology and Metaphor Foods, are collaborating to introduce a next-generation preservation solution. Central to this partnership is AuraCell, Novellaâ??s zero-waste, plant cell-based platform, which provides powerful antioxidant and antimicrobial benefits without compromising taste, aroma, or appearance. This collaboration aims to address a significant challenge: extending shelf life while ensuring the fresh, appealing look and flavour that consumers desire.

In an interview with NUFFOODS Spectrum, Itay Dana, co-founder and Chief Business Development Officer of Novella, discusses the inspiration behind the partnership, the unique advantages of AuraCell technology, and how this joint effort could drive clean-label innovation across the APAC region, beginning with meat and poultry and targeting future expansion into seafood, dairy, and plant-based products.

What inspired the collaboration between Novella Innovative Technology and Metaphor Foods, and how does it address current gaps in natural food preservation?

The collaboration was born out of a series of conversations with Metaphor Foods around shared challenges and opportunities in the food industry. As we explored potential areas for collaboration, one clear opportunity stood out: the need for a natural

protection system that goes beyond traditional shelf-life solutions.

At Novella, weâ??ve developed a product with strong antioxidant properties, combined with a neutral taste and aroma profile and excellent powder dispersibility. These characteristics opened a unique opportunity to innovate in food protectionâ??not just by extending shelf life, but by preserving and even enhancing the visual appearance of food products during storage.

We identified that the real unmet need wasnâ??t simply how long a product lastsâ??but how good it looks while it lasts. Our solution helps maintain, and in some cases improve, the appearance of food over time, which is critical for consumer acceptance.

Metaphor Foods is a natural partner for usâ??they have a strong footprint in the APAC region, and their team brings deep expertise in both science and market strategy. For a startup like Novella, this made them an ideal collaborator to help translate innovation into real market impact.

Can you explain the key benefits of Novellaâ??s AuraCell technology and how it enables zero-waste, high-purity production of plant-based bioactives?

Traditional plant extraction methods often result in significant wasteâ??both from agricultural inputs and from extraction processes that yield only a small fraction of usable compounds. With AuraCell, we take a completely different approach.

Our platform allows us to increase the concentration of bioactives from within the plant cells themselves, creating cells that perform more powerfully than conventional extracts. While typical extracts isolate one or two molecules, AuraCell preserves the full spectrum of synergistic bioactives, delivering enhanced functionality at lower dosage levels.

What sets our approach apart is that we retain the entire plant cell, which not only contains potent bioactives but also valuable components like proteins and oligosaccharides with naturally low levels of sugars. The intact cell wall acts as a protective matrix, shielding and stabilising these compounds, resulting in a product that is greater than the sum of its parts.

Our zero-waste promise comes from two key principles:

We use the whole cell, with no biomass discarded.

We avoid solvents entirely

Behind this is our precision botanical technology, which gives us full control over every parameterâ??from water and cell type. In a bioreactor, unlike a farm, we can fine-tune and enhance bioactive expression through unique protocols and media formulations.

AuraCell is not just an alternativeâ??it's a next-generation platform for producing clean, potent, and scalable plant-based actives, with no compromise on purity or sustainability.

How does the Hela Natvance range plan to integrate these new natural antioxidant and antimicrobial compounds into its existing food protection systems?

The beauty of this collaboration is that Hela Natvance doesnâ??t need to reinvent its formulations. Our ingredient comes in a neutral, easy-to-blend powder format, allowing for smooth integration by simply replacing or reducing certain components in the existing system.

While it can replace synthetic antioxidants, the more impactful benefit is its ability to replace many botanical extracts currently used in natural preservation systems, which often carry strong, unpleasant flavours, aromas, or solubility issues. Our ingredient is sensory-neutral, highly dispersible, and avoids the challenges that typically come with extracts, especially those in oil formats or with overpowering herbal notes.

It not only extends shelf life but also helps maintain or even improve the visual appearance and flavour profile of food productsâ??critical for consumer satisfaction and clean-label positioning.

Together with Metaphorâ??s skilled team, weâ??ve identified several promising application areasâ??starting with conventional food, then expanding into plant-based, dairy, and more. The flexibility and ease of use of our solution make it an ideal fit for the evolving demands of modern food systems.

While the initial focus is on meat and poultry, what potential do you see for expansion into other categories like dairy, seafood, or plant-based alternatives?

Each food category presents its own set of challengesâ??and our ingredient delivers different types of value depending on the matrix.

Take alternative meat, for example: there are currently no tailored preservation solutions for this category. Most producers still rely on meat-based preservation systems, which aren't always effective or aligned with the clean-label goals of plant-based products. We believe this category deserves a smarter, category-specific approach, and thatâ??s exactly where Metaphorâ??s application center and formulation expertise come into play.

Seafood is another high-priority category due to its sensitivity and short shelf life. Our technology can provide both oxidative stability and visual protection, which are critical in that space.

That said, while the initial focus is firmly on meat and poultry, weâ??re not rushing to scale prematurely. Our strategy is to establish strong performance and proven success in one category first, and then expand thoughtfully into others like plant-based, seafood, and dairyâ??ensuring quality, relevance, and scalability at each step.

In what ways will this partnership help accelerate clean-label innovation across the APAC region, and how important is regional adaptability in your strategy?

APAC represents an incredible market of opportunityâ??itâ??s a highly diverse region with unique challenges, particularly in food preservation. One of the biggest shifts happening now is the transition from a predominantly fresh-food culture to more processed and chilled food formats. With that shift comes a rising demand for clean-label, natural solutions that donâ??t compromise safety or quality.

This region isn't just about demandâ??it also has strong regulatory support for natural and clean-label products, making it a fertile ground for innovation.

Success in APAC wonâ??t just be regionalâ??it can set a precedent for clean-label transformation globally. Thatâ??s why regional adaptability is core to our strategy. Itâ??s not a one-size-fits-all market, and weâ??re approaching it with that understanding.

Our partnership with Metaphor is key here. At Novella, we bring the platform technology and deep expertise in plant cell cultivation. Metaphor brings market access, application know-how, and a strong regional network. Itâ??s a partnership built on trust, where each side focuses on its strengths, and together, we deliver solutions that are both effective and culturally relevant.

What are the next major milestones or product launches we can expect from this partnership shortly?

In the food industry, progress takes timeâ??and for good reason. We're currently moving through key stages: from application studies into pilot trials and extended shelf-life validations, all of which are critical for a successful commercial launch.

On our side at Novella, weâ??re also focused on scaling production to meet future demand, while working through the necessary regulatory approvals in parallel.

Our initial targetâ??the meat categoryâ??is both large and strategically important. But itâ??s also a conservative space, which means weâ??re taking a methodical, smart approach to ensure adoption and trust.

Looking ahead, 2026 is shaping up to be a breakthrough year for this partnership. We expect to share results from pilot trials, market feedback, and product stories that reflect the impact of this innovation. We're building something long-term, and we're committed to doing it right.

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