

October 5, 2021



# **Calyxt Announces New Strategic Direction to Provide Sustainable, Plant-Based Synthetic Biology Solutions to Expanded Group of End Markets and Diversified Base of Customers**

- Proprietary PlantSpring™ technology platform expanded and achieves rapid development of plant-based biomolecules -**
- PlantSpring leverages artificial intelligence and machine learning -**
- First pilot BioFactory™ manufacturing facility is being developed to work in concert with PlantSpring for producing plant biomolecules at scale and sustainably -**
- Continues current technology licensing and product development activities as synergistic components of the expanded business model -**
- Hosts conference call and webcast today at 4:30 p.m. ET -**

ROSEVILLE, Minn., Oct. 5, 2021 /PRNewswire/ -- [Calyxt, Inc.](#) (Nasdaq: CLXT), a plant-based synthetic biotechnology company, today announced the launch of a strategic initiative that will focus the Company on engineering synthetic biology solutions for a diversified base of customers across an expanded group of end markets including the nutraceutical, cosmeceutical, pharmaceutical, advanced materials, and chemical industries.



Central to the strategy is the integration of the Company's proprietary technology platform, PlantSpring, with its newly commissioned pilot bioreactor, the BioFactory, which together will enable Calyxt to rapidly prototype and produce complex plant-derived compounds without the need for outdoor cropping systems. The Company estimates that, aided by machine learning and artificial intelligence, it will be able to take a customer's molecule need through Calyxt's design, engineering, verification, and pilot-level production process within a 36-month period, with commercial scale production to commence thereafter. The final output, based upon the engineering of plant metabolism to mass produce plant-based compounds, is designed to provide customers across industries a safe and more sustainable supply of these compounds for use in a myriad of products and manufacturing processes.

"By leveraging our proprietary PlantSpring technology platform with our newly commissioned pilot bioreactor, the BioFactory, Calyxt has the pieces in place to advance plant-based synthetic biology solutions for important target customers and end markets to help those groups produce more sustainable products toward meeting their corporate sustainability targets," said Michael A. Carr, President and Chief Executive Officer of Calyxt. "These new potential customers include large corporations within such industries as nutraceuticals, cosmeceuticals, personal care, and pharmaceuticals, as well as companies that manufacture advanced materials and chemicals."

Mr. Carr added: "Through our engineering of the metabolism of plants, Calyxt unlocks plants' ability to exponentially multiply production of finite biomolecules into large quantities, enabled within a bioreactor that does not use fermentation or farmland. As a result, Calyxt offers customers the opportunity to target a broad range of plant biomolecules and applications produced through a highly sustainable process, and within a highly efficient timeframe aided by our emerging machine learning and artificial intelligence toolkit. Our efforts are already underway to market our expanded offerings to new target customers."

### ***PlantSpring Technology Platform: Built on a Decade of Engineering Experience***

The Company's technology platform, newly named PlantSpring, has been built on Calyxt's experience of more than a decade engineering plant metabolism, its proprietary systems, its tools and technologies, and an expanding set of artificial intelligence and machine learning

capabilities. This licensable platform has powered the Calyxt innovation engine, previously focused primarily on the agriculture end market. Together with the BioFactory, this platform opens a wide array of new end markets to Calyxt.

The platform delivers innovation through an efficient process from laboratory to pilot, which includes identification of breakthrough molecules based on customer needs and design strategies to reprogram host cells; engineering of plant cell metabolism to optimally produce targeted molecules; and production of target molecules at pilot scale. Calyxt has developed early-stage artificial intelligence and machine learning capabilities in PlantSpring, which enable learning and adaptation from knowledge gained from past activity and can be combined with predictive analytics to rapidly prototype and provide feedback, accelerating the time from design to pilot and de-risking the commercial scale-up phase. As a result, Calyxt believes it can develop engineered biomolecules in plants for customers at faster speeds than its competitors in the synthetic biology industry. Calyxt expects to continue to develop its artificial intelligence and machine learning capabilities end-to-end across the PlantSpring platform and the BioFactory and anticipates this augmentation to continue to drive down development timeframes.

"Calyxt's scientists are experts at engineering plant metabolism, which includes enabling the plant cells to produce more or less of certain chemistries, or novel chemistries, that may be unique to plants. The scientific team has demonstrated this capability many times over across multiple plant species," said Travis Frey, Ph.D., Chief Technology Officer of Calyxt. "We leverage our PlantSpring technology platform as the engine that drives Calyxt's R&D capabilities. It combines our company's decade of technology, know-how and intellectual property and enables us to engineer important plant biomolecules, often found at scarcity in nature, and to eventually produce these biomolecules at scale for our customers."

### ***The BioFactory: Leveraging the Power of Plants to Efficiently and Sustainably Manufacture at Scale***

The output from the PlantSpring platform integrates seamlessly with the Company's newly commissioned BioFactory.

The BioFactory is the culmination of the work of Calyxt's researchers and will enable the Company to expand its production methods from solely outdoor agriculture systems to also include controlled environment, bioreactor-based production systems.

In a world seeking to evolve to more sustainable solutions, the Company believes that plants are uniquely capable of producing many compounds that cannot be produced through other currently available means, including microbial fermentation. Calyxt estimates that more than 80 percent of all known natural compounds are able to be produced by plants. These known natural compounds comprise over 200,000 chemistries today, and the Company believes plants have the potential to access many of the nearly one million estimated chemistries not yet discovered.

The BioFactory harnesses the potential of plant cells in a matrixed structure, combined with nutrients and media for its production, and leverages multiple cell types. The matrix structures enable controlled replication and processing of molecules, with the replication accelerating exponentially over time.

The BioFactory produces these plant-based molecules within a synthetic biology bioreactor. Calyxt has produced multiple proof of concept biomolecules in its laboratories. The initial pilot BioFactory will operate from Calyxt's headquarters in Roseville, Minnesota, and is currently expected to be online by the end of 2021. The Company plans to work with infrastructure partners to build capabilities to produce at larger scales to meet anticipated customer demand. The transition from pilot to commercialization is expected to be facilitated through third-party contract manufacturers, who can provide at-scale production in support of Calyxt's asset-light strategy. The Company anticipates that its customer demand-driven focus and use of third-party contractors for at-scale manufacturing address key uncertainties of anticipating market demand and the cost constraints of maintaining at-scale production capacity.

Significantly, Calyxt's BioFactory manufacturing process relies on plant cell matrices for production, and its initial growth rates using this system have presented a strong productivity curve. Evaluated in grams per day over a 30-day period, these initial results suggest Calyxt's plant cells grow more than five times faster than other plant-based systems, as reported in the scientific literature to date.

The Company's manufacturing approach notably does not use fermentation. As a result, Calyxt's process at scale is expected to be simpler, create less water waste and disposal, and allow customers to stack multiple molecules from plants, even potentially turning by-products into useful products.

"The scaled production of these biomolecules through our BioFactory will be vital for our customers because it will provide them with more sustainable-sourced materials for their own manufacturing processes," said Dr. Frey. "Furthermore, we believe the BioFactory has the potential to be one of the most productive and sustainable plant-based processes across industries because of its production methodology. Based on our initial test results we expect to produce compounds at higher yields and throughputs on a per-unit basis, which is one of the reasons we believe the BioFactory can be scaled. Because it does not use fermentation, we expect fewer of the sustainability challenges associated with other indoor systems, including potentially lower levels of off-gasses, reduced water demands and lower energy requirements."

### ***Technology Licensing and Partnered Agricultural Development***

As a synergistic component of its expanded strategy, the Company expects to continue to license its technology and develop products for agricultural customers based on their needs.

With respect to technology licensing, this activity spans Calyxt's vast intellectual property library including multiple gene editing platforms, plant breeding, and other capabilities as well as the licensing of historically developed product candidates, including improved digestibility alfalfa licensed to S&W Seeds, high oleic, low linolenic soybeans, and product candidates derived from its hemp advancements.

As demonstrated by the recent announcement of a new product to be developed for a partner in soybeans, Calyxt will continue to opportunistically develop products for customers focused on traditional outdoor agriculture. To ensure appropriate resourcing of the opportunities, Calyxt has developed a set of criteria by which all opportunities are vetted, which include the size of the overall opportunity, the nature of the product to be developed,

and the amount of cash to be received both upfront and over time.

### **Recent Corporate & Financial Highlights**

- Appointed Michael A. Carr as its President, Chief Executive Officer, and member of its Board of Directors effective July 27, 2021. Mr. Carr brings more than 20 years of business, financial and operational leadership experience to Calyxt and will focus on advancing and monetizing Calyxt's technologies. Prior to joining Calyxt, he most recently served as Vice President of M&A, Strategy, and Innovation at Darling Ingredients, Inc.
- Successfully transformed the hemp genome and produced "pollen-proof" (seedless) hemp with its triploid breeding technology. Combined, Calyxt's hemp advancements offer significant advantages in innovation, crop management, and harvest potential. In our partner-driven model, we can now develop and deliver hemp products tailored for their needs across plant-based proteins and oils, advanced materials, fiber, cosmeceuticals, nutraceuticals, and others.
- On September 21, 2021, launched a \$50 million at-the-market (ATM) share issuance program. As of today, the Company has not sold any shares pursuant to the program.
- Entered into a research collaboration with a leading global food ingredient manufacturer based in Asia to develop an improved soybean capable of producing an oil as a sustainable commercial alternative to palm oil. As part of the research collaboration, Calyxt will receive cash payments in each of the two years of its term. This collaboration agreement also includes a commercial option for the global food ingredient manufacturer.
- As of September 30, 2021, Calyxt had cash, cash equivalents, and restricted cash of \$14.9 million. This represents cash usage of approximately \$3.6 million in the third quarter of 2021. This strong cash performance was driven by collections from the sale of grain to Archer Daniels Midland (ADM), continued declines in the Company's working capital investment associated with the wind down of that grain sales activity, and strong operating expense management.
- As of today, Calyxt has nearly completed the sale of its inventory of 2020 grain to ADM. This series of transactions, which began in the third quarter of 2020, has generated \$35.7 million in total cash proceeds. The Company remains on track to complete these sales by the end of the year.

### **Conference Call and Webcast**

President and Chief Executive Officer Michael A. Carr, Chief Financial Officer Bill Koschak, and Chief Technology Officer Dr. Travis Frey will host a conference call and webcast discussing Calyxt's business update, followed by a question-and-answer session. The conference call will be accompanied by a presentation, which can be viewed during the webcast or accessed via the investor relations section of Calyxt's website, [www.calyxt.com](http://www.calyxt.com).

To access the call, please use the following information:

Date: Tuesday, October 5, 2021

Time: 4:30 p.m. ET, 1:30 p.m. PT

Toll Free dial-in number: +1 888-317-6003

Toll/International dial-in number: +1 412-317-6061

Conference ID: 9817980

Participants should call the conference telephone number 5 to 10 minutes prior to the start time. An operator will register participants' names and organizations. The conference call will also be broadcast live and available for replay via the investor relations section of the company's website, [www.calyxt.com](http://www.calyxt.com). A replay of the webcast will be available for 30 days following the event.

Toll Free Replay Number: +1-877-344-7529

International Replay Number: +1-412-317-0088

Replay ID: 10160509

## **About Calyxt**

Calyxt (Nasdaq: CLXT) is a plant-based synthetic biotechnology company. The Company leverages its proprietary PlantSpring™ technology platform to engineer innovative materials and products for its customers to help them meet their sustainability goals. Calyxt's diversified offerings are delivered through its proprietary BioFactory™ manufacturing process. For more information, visit [www.calyxt.com](http://www.calyxt.com).

PlantSpring, BioFactory and the Calyxt logo are trademarks of Calyxt, Inc. Any other trademarks belong to their respective owners.

## **Forward-Looking Statements**

This communication contains "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. In some cases, you can identify these statements by forward-looking words such as "anticipates," "believes," "continue," "estimates," "expects," "intends," "may," "might," "plans," "predicts," "projects," "should," "targets," "will," or the negative of these terms and other similar terminology. Forward-looking statements in this press release include statements about our future financial performance; product pipeline and development; our business model and strategies for the development, commercialization and sales of commercial products; commercial demand for our synthetic biology solutions; the development and deployment of our PlantSpring technology platform; the ability to scale production capability for our BioFactory; flaws in artificial intelligence and machine learning (AI/ML) algorithms, insufficiency of data inputs required by such algorithms, and human error in interacting with AI/ML; potential collaborations, partnerships, customer relationships, and licensing arrangements and their contribution to our financial results, cash usage, and growth strategies; and anticipated trends in our business. These and other forward-looking statements are predictions and projections about future events and trends based on our current expectations, objectives and intentions and premised on current assumptions. Our actual results, level of activity, performance, or achievements could be materially different than those expressed, implied, or anticipated by forward-looking statements due to a variety of factors, including, but not limited to: the severity and duration of the evolving COVID-19 pandemic and the resulting impact on macro-economic conditions; the impact of increased competition, including competition from a broader array of synthetic biology companies; disruptions at our key facilities, including disruptions impacting our BioFactory; changes in customer preferences and market acceptance of our products; changes in market consensus as to what attributes are required for a product to be considered "sustainable," competition for collaboration partners and licensees and the successful execution of collaborations and licensing agreements; the impact of adverse events during development,

including unsuccessful pilot production of molecules or field trials; the impact of improper handling of our product candidates during development; failures by third-party contractors; inaccurate demand forecasting; the effectiveness of commercialization efforts by commercial partners or licensees; disruptions to supply chains, including raw material inputs for our BioFactory; the impact of changes or increases in oversight and regulation; disputes or challenges regarding intellectual property; proliferation and continuous evolution of new technologies; management changes; dislocations in the capital markets; and other important factors discussed under the caption entitled "Risk Factors" in our Annual Report on Form 10-K and subsequent filings on Form 10-Q or 8-K with the U.S. Securities and Exchange Commission. We do not assume any obligation to publicly provide revisions or updates to any forward-looking statements, whether as a result of new information, future developments or otherwise, should circumstances change, except as otherwise required by law.

The financial information as of, and for the quarter ended, September 30, 2021, included in this press release is preliminary and is based on the latest estimated unaudited management accounts. Such information is subject to the completion of management's reviews and other financial closing processes and potential adjustments. Accordingly, the Company's actual cash, cash equivalents and restricted cash position as of September 30, 2021, and cash usage for the quarter may differ materially from the preliminary estimated data presented in this press release. The information contained in this press release has not been, and is not based on information that has been, audited or reviewed by Calyxt's independent auditor.

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