

The information in this preliminary prospectus supplement is not complete and may be changed. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell the securities and are not soliciting an offer to buy the securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, dated February 17, 2022

PRELIMINARY PROSPECTUS SUPPLEMENT
To Prospectus, dated September 16, 2019



Shares of Common Stock
Pre-Funded Warrants to Purchase Shares of Common Stock
Warrants to Purchase Shares of Common Stock

Calyxt is offering (i) _____ shares of its common stock, \$0.0001 par value per share, (ii) pre-funded warrants to purchase _____ shares of its common stock (each a “Pre-Funded Warrant” and collectively, the “Pre-Funded Warrants”) and (iii) accompanying warrants to purchase _____ shares of its common stock (each a “Common Warrant” and collectively, the “Common Warrants,” and, together with the Pre-Funded Warrants, the “Warrants”), in combinations of one share of common stock and one Common Warrant or one Pre-Funded Warrant and one Common Warrant, pursuant to this prospectus supplement and the accompanying prospectus.

Each share of common stock is being sold together with an accompanying Common Warrant to purchase one share of common stock. The shares of common stock and the accompanying Common Warrants will be issued separately but can only be purchased together in this offering. The combined offering price for each share of common stock and the accompanying Common Warrant is \$ _____.

Each Pre-Funded Warrant is being sold together with an accompanying Common Warrant to purchase one share of common stock. The Pre-Funded Warrants are being offered separately from the Common Stock and will be issued separately from the accompanying Common Warrants, but the Pre-Funded Warrants and accompanying Common Warrants can only be purchased together in this offering. The combined offering price for each Pre-Funded Warrant and the accompanying Warrants is \$ _____.

The Pre-Funded Warrants will not have an expiration date and will be exercisable immediately. The exercise price for the Pre-Funded Warrants will be equal to \$0.0001.

The Common Warrants will have a term of five years from the date such Common Warrants are first exercisable. The Common Warrants are exercisable commencing on the date six months after the date of issuance. The exercise price for the warrants initially will be \$ _____ per share, and will be subject to adjustments as described herein.

Calyxt’s common stock is listed on the Nasdaq Global Market under the symbol “CLXT.” On February 16, 2022, the last reported sale price of Calyxt’s common stock on the Nasdaq Global Market was \$1.45 per share.

There is no established public trading market for the Warrants, and Calyxt does not expect a market to develop. In addition, Calyxt does not intend to apply for the listing of the Warrants on any national securities exchange or other nationally recognized trading system. Without an active trading market, Calyxt expects the liquidity of the Warrants will be limited.

Investing in Calyxt’s securities involves a high degree of risk. Before making an investment decision, please read the information in the section titled “[Risk Factors](#)” beginning on page S-5 of this prospectus supplement and in the documents incorporated by reference into this prospectus supplement and the accompanying prospectus.

	Per Share and Accompanying Common Warrant	Per Pre-Funded Warrant and Accompanying Common Warrant	Total
Offering price	\$ _____	\$ _____	\$ _____
Underwriting discounts (1)	\$ _____	\$ _____	\$ _____
Proceeds, before expenses, to Calyxt (2)	\$ _____	\$ _____	\$ _____

- (1) In addition to underwriting discounts, Calyxt has agreed to reimburse the underwriter for certain expenses. See “Underwriting” beginning on page S-47 of this prospectus supplement for additional information regarding total underwriter compensation.
- (2) Does not give effect to any exercise of the Warrants being issued in this offering.

Neither the U.S. Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

Delivery of the securities offered hereby is expected to be made on or about _____, 2022, subject to the satisfaction of certain closing conditions.

Canaccord Genuity

The date of this prospectus supplement is _____, 2022.

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Prospectus

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus are part of a registration statement that Calyxt filed with the Securities and Exchange Commission, or the SEC, utilizing a “shelf” registration process. This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference herein. The second part, the accompanying prospectus, provides more general information. Generally, when Calyxt refers to this prospectus, it is referring to both parts of this document combined. To the extent there is a conflict between the information contained in this prospectus supplement and the information contained in the accompanying prospectus or any document incorporated by reference therein filed prior to the date of this prospectus supplement, you should rely on the information in this prospectus supplement; provided that if any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference in the accompanying prospectus—the statement in the document having the later date modifies or supersedes the earlier statement.

Calyxt further notes that the representations, warranties and covenants made by it in any agreement that is filed as an exhibit to any document that is incorporated by reference herein or in the accompanying prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of Calyxt’s affairs.

Calyxt has not authorized anyone to provide you with information that is different from the information contained or incorporated by reference in this prospectus supplement or the accompanying prospectus and any free writing prospectus prepared by or on behalf of the Company to which the Company has referred you. Calyxt takes no responsibility for, and can provide no assurance as to the reliability of, any other information others may give you.

The information contained in this prospectus supplement or the accompanying prospectus, or incorporated by reference herein or therein, or in any free writing prospectus that Calyxt has authorized for use in connection with this offering, is accurate only as of the respective dates thereof, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus or of any sale of Calyxt’s securities. Calyxt’s business, financial condition, results of operations and prospects may have changed since those dates. It is important for you to read and consider all information contained in this prospectus supplement and the accompanying prospectus, including the documents incorporated by reference herein and therein, in making your investment decision. You should also read and consider the information in the documents to which Calyxt has referred you in the sections entitled “Where You Can Find Additional Information” and “Incorporation of Certain Information by Reference” in this prospectus supplement and in the accompanying prospectus.

Calyxt is offering to sell, and seeking offers to buy, the shares of common stock and the accompanying Common Warrants (and the Pre-Funded Warrants and accompanying Common Warrants) offered by this prospectus supplement only in jurisdictions where offers and sales are permitted. The distribution of this prospectus supplement and the accompanying prospectus and the offering of such securities offered by this prospectus supplement in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement and the accompanying prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the accompanying Common Warrants (and the Pre-Funded Warrants and accompanying Common Warrants) and the distribution of this prospectus supplement and the accompanying prospectus outside the United States. This prospectus supplement and the accompanying prospectus do not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus supplement and the accompanying prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

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This prospectus supplement and the documents incorporated by reference in this prospectus supplement contain market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although Calyxt believes that these sources are reliable, it does not guarantee the accuracy or completeness of this information and Calyxt has not independently verified this information. Although the Company is not aware of any misstatements regarding the market and industry data presented or incorporated by reference in this prospectus supplement, these estimates involve risks and uncertainties and are subject to change based on various factors, including those discussed in the section titled “Risk Factors” in this prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus supplement. Accordingly, investors should not place undue reliance on this information.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information contained elsewhere in this prospectus supplement or incorporated by reference in this prospectus supplement, and does not contain all of the information that you need to consider in making your investment decision. You should carefully read the entire prospectus supplement and accompanying prospectus, and any related free writing prospectus, including the risks of investing in Calyxt's securities discussed in the section titled "Risk Factors" contained in this prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus supplement. You should also carefully read the information incorporated by reference into this prospectus supplement, including Calyxt's financial statements, and the exhibits to the registration statement of which this prospectus supplement is a part. Throughout this prospectus supplement, the terms "Calyxt," the "Company," and "it," refer to Calyxt, Inc. The term "Collectis" refers to Collectis S.A., Calyxt's majority stockholder.

The Company

Calyxt is a plant-based synthetic biology company that leverages its proprietary PlantSpring™ technology platform to engineer plant metabolism to produce innovative, high-value plant-based chemistries for use in customers' materials and products. As plant-based solutions, the Company's synthetic biology products can be used in helping customers meet their sustainability targets and financial goals. The Company is focused on developing these synthetic biology solutions for customers in large and differentiated end markets, including the cosmeceutical, nutraceutical, and pharmaceutical industries, which are the Company's initial target markets. See "Business" in this prospectus supplement for additional information regarding the Company.

Relationship with Collectis

Calyxt is a majority-owned subsidiary of Collectis S.A. As of December 31, 2021, Collectis owned 61.8 percent of Calyxt's 38,773,994 outstanding shares of common stock. Collectis has certain contractual rights as well as rights pursuant to Calyxt's certificate of incorporation and bylaws, in each case, for so long as it maintains threshold beneficial ownership levels in Calyxt's shares. Several of Collectis' rights remain in effect for so long as Collectis beneficially owns at least 15 percent of Calyxt's outstanding shares.

Calyxt holds an exclusive license from Collectis that broadly covers the use of engineered nucleases for plant gene editing. This intellectual property covers methods to edit plant genes using "chimeric restriction endonucleases," which include TALEN®, CRISPR/Cas9, zinc finger nucleases, and some types of meganucleases.

Calyxt's agreements with Collectis are described in "Certain Relationships and Related Transactions—Relationship with Collectis" in Calyxt's definitive proxy statement, incorporated by reference herein.

Recent Developments

Preliminary Fiscal Year 2021 Estimated Results

Although Calyxt's consolidated financial statements for the year ended December 31, 2021 are not yet complete, certain preliminary estimated balance sheet data is available and is shown as estimated below.

(in millions, unaudited)	As of December 31, 2021
Cash and cash equivalents	\$ 13.7
Restricted cash	\$ 0.6
Total current liabilities	\$ 4.1
Financing lease obligations (including current portion)	\$ 17.9

The preliminary financial information does not represent a comprehensive statement of the Company's financial condition as of the year ended December 31, 2021.

The Company has provided the estimated results described above on a preliminary basis because its financial closing procedures for the year ended December 31, 2021 are not yet complete. The preliminary estimated information set forth above have not been audited and are subject to change pending completion of the Company's audited financial statements for the year ended December 31, 2021. It is possible that the Company or its independent registered public accounting firm may identify items that require them to make adjustments to the preliminary estimates set forth above and those changes could be material. In addition, these preliminary estimates are not necessarily indicative of the results to be achieved in any future period. There can be no assurance that these estimates will be realized, and estimates are subject to risks and uncertainties, many of which are not within the Company's control. Accordingly, you should not place undue reliance on the preliminary estimated financial information.

Corporate Information

Calyxt was incorporated in the State of Delaware in 2010. The Company's corporate headquarters is located at 2800 Mount Ridge Road, Roseville, Minnesota 55113 and Calyxt's phone number is (651) 683-2807. Calyxt's filings with the SEC are posted on its corporate website at www.calyxt.com. The information contained in, or accessible through, Calyxt's corporate website does not constitute part of this prospectus supplement.

Calyxt's common stock is listed on the Nasdaq Global Market under the symbol "CLXT."

THE OFFERING

Common stock offered by Calyxt	shares of common stock, plus shares of common stock underlying the Warrants offered in this offering. Each share of common stock sold in this offering will be sold with an accompanying Common Warrant to purchase one share of common stock.
Pre-Funded Warrants offered by Calyxt	Calyxt is offering Pre-Funded Warrants to purchase shares of its common stock. Each Pre-Funded Warrant will have an exercise price equal to \$0.0001 per share and is immediately exercisable. The Pre-Funded Warrants will not expire. Each Pre-Funded Warrant sold in this offering will be sold with an accompanying Common Warrant to purchase one share of common stock. See “Description of Securities—Pre-Funded Warrants to be Issued in this Offering.”
Common Warrants offered by Calyxt	Calyxt is offering warrants to purchase shares of its common stock. Each Common Warrant has an initial exercise price of \$ per share and will be exercisable beginning on the six-month anniversary of the issuance date for a period of five years from the date such warrants are first exercisable. See “Description of Securities—Common Warrants to be Issued in this Offering.”
Common stock to be outstanding immediately after this offering	shares of common stock (assuming none of the Warrants issued in this offering are exercised).
Use of proceeds	<p>Calyxt estimates that net proceeds from this offering will be approximately \$ million after deducting underwriting discounts and the Company’s estimated expenses related to the offering and assuming none of the Warrants issued in this offering are exercised.</p> <p>Calyxt intends to use the net proceeds from the offering for enhancing the capabilities of its BioFactory production system and increasing its capacity to produce at larger scales, continuing to build its PlantSpring technology platform and artificial intelligence / machine learning capabilities, furthering customer relationships, and for working capital and general corporate purposes. See the section titled “Use of Proceeds.”</p>
Risk factors	Investment in Calyxt’s securities involves a high degree of risk. You should read the section titled “Risk Factors” in this prospectus supplement and in the documents incorporated by reference into this prospectus supplement for a discussion of factors to consider before deciding to purchase Calyxt’s securities offered in this offering.

Nasdaq Global Market symbol

Calyxt's common stock is traded on the Nasdaq Global Market under the symbol "CLXT."

There is no established public trading market for the Warrants, and Calyxt does not expect a market to develop. In addition, Calyxt does not intend to apply for the listing of the Warrants on any national securities exchange or other nationally recognized trading system. Without an active trading market, Calyxt expects the liquidity of the Warrants will be limited.

Except as otherwise noted, the number of shares of common stock to be outstanding after this offering is based on 37,301,724 shares outstanding as of September 30, 2021, and excludes as of that date:

- 4,613,868 shares of common stock issuable upon the exercise of outstanding stock options with a weighted average exercise price of \$9.66 per share;
- 607,620 shares of common stock issuable upon the vesting and settlement of restricted stock units outstanding;
- 745,000 shares of common stock issuable upon the vesting and settlement of performance stock units outstanding; and
- 5,613,334 shares of common stock reserved for future issuance under Calyxt's 2017 Omnibus Plan.

Unless otherwise stated, information in this prospectus supplement assumes no further exercise of outstanding options and no future issuances by Calyxt of shares of its common stock. For purposes of Nasdaq Rule 5635(d), the Company has made requisite calculations based on 38,838,930 shares of common stock outstanding immediately prior to this offering.

RISK FACTORS

You should consider carefully the risks described below, which update and supersede the risk factors discussed under the section titled “Risk Factors” in Calyxt’s Annual Report on Form 10-K for the year ended December 31, 2020, as the below risk factors may be updated by the Company’s subsequent filings under the Securities Exchange Act of 1934, as amended, or the Exchange Act, that are incorporated by reference in this prospectus supplement, together with other information in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement, and any free writing prospectus that Calyxt has authorized for use in connection with this offering before you make a decision to invest in Calyxt’s securities. If any of these risks actually occur, Calyxt’s business, operating results, prospects or financial condition could be harmed. This could cause the trading price of Calyxt’s common stock to decline and you may lose all or part of your investment. The risks below and incorporated by reference in this prospectus supplement are not the only ones Calyxt faces. Additional risks not currently known to Calyxt or that Calyxt currently deems immaterial may also affect Calyxt’s business operations. Please also read carefully the section below titled “Cautionary Note Regarding Forward-Looking Statements.”

Risks Relating to the Offering

If you purchase securities in this offering, you will experience substantial and immediate dilution.

The offering price of Calyxt’s common stock and the accompanying Common Warrants (or, in the case of Pre-Funded Warrants and the accompanying Common Warrants, the offering price per share of Calyxt’s common stock and the accompanying Common Warrant, minus \$0.0001) is substantially higher than the net tangible book value per share of Calyxt’s common stock as of September 30, 2021, before giving effect to this offering. Accordingly, if you purchase securities in this offering, you will incur immediate and substantial dilution of approximately \$ per share of common stock, representing the difference between the offering price of \$ per share and accompanying Common Warrant (or Pre-Funded Warrants and accompanying Common Warrant, as applicable) and Calyxt’s adjusted net tangible book value per share as of September 30, 2021, after giving effect to this offering. For a further description of the dilution that you will experience immediately after this offering, see the section in this prospectus supplement entitled “Dilution” beginning on page S-46.

The Company’s ability to continue as a going concern will depend on its ability to obtain additional financing in addition to the proceeds of this offering.

The Company’s primary sources of liquidity are its cash and cash equivalents, with additional liquidity accessible, subject to market conditions and other factors, from the capital markets. As of December 31, 2021, the Company had \$14.3 million of cash, cash equivalents, and restricted cash. Current liabilities were \$4.1 million as of December 31, 2021.

The Company’s ability to continue as a going concern will depend on its ability to obtain additional public or private equity or debt financing, attain further operating efficiencies, reduce or contain expenditures, and, ultimately, to generate revenue. Even if this offering is successful, the Company expects that there will be substantial doubt about its ability to continue as a going concern. To finance the Company’s continued operations under its current business plan over the next 12 months, the Company anticipates that it will need to raise additional capital, including after giving effect to this offering. This estimate is based on assumptions that may prove to be wrong. Although management anticipates that can implement cost reduction and other cash-focused measures in order to manage liquidity to a certain extent, expenses could prove to be significantly higher than expected, leading to a more rapid consumption of the Company’s existing resources.

If the Company is unable to continue as a going concern, it may have to liquidate its assets and may receive less than the value at which those assets are carried on its audited consolidated financial statements, and it is likely that investors will lose all or part of their investment. If the Company seeks additional financing to fund its business activities in the future and there is substantial doubt about the Company’s ability to continue as a going concern, investors or other financing sources may be unwilling to provide additional funding to the Company on commercially reasonable terms or at all.

You may experience future dilution as a result of future equity offerings.

In order to raise additional capital, Calyxt expects in the future to offer additional shares of Calyxt's common stock or other securities convertible into or exchangeable for Calyxt's common stock, including sales of Calyxt's common stock pursuant to a sales agreement between the Company and Jefferies LLC, pursuant to which the Company may, from time to time, sell shares of its common stock having an aggregate offering price of up to \$50,000,000 through Jefferies, as the Company's sales agent, in an at-the-market offering (the "ATM Facility"), under which approximately \$45.4 million of availability remained at January 31, 2022.

Calyxt cannot assure you that it will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price paid by investors in this offering for a share of common stock and an accompanying Common Warrant (or a Pre-Funded Warrant and an accompanying Common Warrant, as applicable) and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which Calyxt sells additional shares of common stock or other securities convertible into or exchangeable for Calyxt's common stock in future transactions may be higher or lower than the price per share of common stock and accompanying Common Warrant (or a Pre-Funded Warrant and an accompanying Common Warrant, as applicable) in this offering.

Furthermore, if outstanding options or Warrants, including the warrants issued in this offering, are exercised, you could experience further dilution. As of September 30, 2021, approximately 11,579,822 shares of common stock that are either subject to outstanding options, issuable upon vesting of outstanding restricted stock units, or reserved for future issuance under Calyxt's equity incentive plans are eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules.

If Calyxt issues additional shares of Calyxt's common stock, you could experience further dilution.

The Warrants are speculative in nature and may never have any value.

Commencing on the date of issuance, holders of Pre-Funded Warrants may exercise their right to acquire Calyxt's common stock and pay an exercise price per share equal to \$0.0001 per share, subject to certain adjustments, without expiration. Following this offering, the market value of the Pre-Funded Warrants, if any, is uncertain and there can be no assurance that the market price of Calyxt's common stock will ever equal or exceed their imputed offering price.

The Common Warrants, which have an initial exercise price of \$ _____ per share of common stock, subject to adjustments, are exercisable beginning on the six-month anniversary of the issuance date for a period of five years from the date such warrants are first exercisable. If Calyxt's common stock price does not increase to an amount sufficiently above the exercise price of the warrants during the period during which the warrants are exercisable, you will be unable to recover any of your investment in the Common Warrants. In such event, the Common Warrants will not have any value.

There can be no assurance that the market price of Calyxt's common stock will ever equal or exceed the exercise price of the Common Warrants, and consequently, whether it will ever be profitable for holders of the Common Warrants to exercise such Common Warrants.

There is no public market for the Warrants being offered in this offering.

There is no established public trading market for the Warrants to purchase shares of Calyxt's common stock being offered in this offering, and Calyxt does not expect a market to develop. In addition, Calyxt does not intend to apply to list the Warrants on any national securities exchange or other nationally recognized trading system, including the Nasdaq Global Market. Without an active market, the liquidity of the Warrants will be limited.

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Holders of Calyxt's Warrants will have no rights as a common stockholder until such holders exercise their Warrants and acquire Calyxt's common stock.

Until you acquire shares of Calyxt's common stock upon exercise of your Warrants, you will have no rights with respect to the shares of Calyxt's common stock underlying such Warrants. Upon exercise of your Warrants, you will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

Calyxt's management will have broad discretion over the use of the proceeds Calyxt receives in this offering and might not apply the proceeds in ways that increase the value of your investment.

Calyxt's management will have broad discretion to use the net proceeds from this offering, and you will be relying on the judgment of Calyxt's management regarding the application of these proceeds. You will not have the opportunity to influence Calyxt's decisions on how to use the proceeds, and the Company may not apply the net proceeds of this offering in ways that increase the value of your investment. Because of the number and variability of factors that will determine Calyxt's use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. The failure by Calyxt's management to apply these funds effectively could harm Calyxt's business. Pending their use, the Company intends to invest the net proceeds from this offering in marketable securities that may include investment-grade interest-bearing securities, money market accounts, certificates of deposit, commercial paper and guaranteed obligations of the U.S. government in accordance with Calyxt's investment policy. These investments may not yield a favorable return to Calyxt's stockholders. If Calyxt does not invest or apply the net proceeds from this offering in ways that enhance stockholder value, the Company may fail to achieve expected financial results, which could cause its stock price to decline.

Future sales of Calyxt's common stock by Collectis or others, or the perception that such sales may occur, could depress the market price of Calyxt's common stock.

As of December 31, 2021, Collectis owned 61.8 percent of Calyxt's outstanding shares of common stock. Future sales of Calyxt's common stock in the public market will be subject to the volume and other restrictions of Rule 144 under the Securities Act for so long as Collectis is deemed to be Calyxt's affiliate, unless the shares to be sold are registered with the SEC. Calyxt is unable to predict whether or when Collectis will sell a substantial number of shares of Calyxt's common stock. The sale by Collectis of a substantial number of shares, or a perception that such sales could occur, could significantly reduce the market price of Calyxt's common stock.

Certain rights that Collectis possesses will prevent you and other stockholders from influencing significant decisions, even after Collectis' ownership of Calyxt common stock falls substantially below a majority.

As of December 31, 2021, Collectis owned 61.8 percent of Calyxt's outstanding shares of common stock. Pursuant to the stockholders' agreement between Calyxt and Collectis, Collectis will continue to retain substantial rights with respect to the Company for so long as it beneficially owns at least 15 percent of the outstanding shares of the Company's common stock ("Continuing Collectis Rights").

The Continuing Collectis Rights, include the right to nominate a number of designees for the Calyxt board of directors representing a majority of the directors, to designate the Chairman of the board of directors and to have at least one designated director serve on each board committee. In addition, the Continuing Collectis Rights include information rights for Collectis, as well as approval rights over a significant number of key aspects of Calyxt's operations and management, including certain changes to Calyxt's constitutive documents, the making of any regular or special dividends, the commencement of any voluntary bankruptcy proceeding or any consent to any bankruptcy proceeding, any appointment to or removal from the board of directors, and the consummation of any public or private offering, merger, amalgamation or consolidation of Calyxt, the spinoff of a business of the Company, or any sale, conveyance, transfer or other disposition of Calyxt's assets.

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For so long as Collectis continues to hold at least 50 percent of the outstanding shares of Calyxt's common stock, Collectis possesses approval rights over a broader, more expansive number of key aspects of Calyxt's operations and management, as set forth in the stockholders' agreement. Collectis' rights under the stockholders agreement, including the Continuing Collectis Rights, are incorporated into, and form a part of, the Company's certificate of incorporation and bylaws, which makes any amendment, repeal or modification of such rights burdensome.

As a result of the foregoing rights, Collectis currently controls the direction of Calyxt's business and is expected, for so long as it holds 15 percent of the Company's outstanding common stock, to continue to have extensive influence over important operational decisions. The extent of Collectis' influence and the nature of its rights could prevent other stockholders from influencing significant decisions of the Company.

In addition, following the first date on which Collectis no longer beneficially owns more than 50 percent of the Company's outstanding common stock, certain provisions of the Company's certificate of incorporation, bylaws and other agreements may make it more difficult for the Company's stockholders to influence the Company's decisions or for a third party to acquire control of Calyxt, or may discourage a third-party from attempting to acquire control of Calyxt, in each case, even if these actions were considered beneficial by many stockholders or might involve transactions in which the Company's stockholders might otherwise receive a premium for their shares of Calyxt common stock. Further, these provisions could limit the price that investors might be willing to pay in the future for shares of Calyxt's common stock, possibly depressing the market price of Calyxt's common stock. As a result, stockholders may be limited in their ability to obtain a premium for their shares both while ownership of Calyxt common stock is concentrated with Collectis and after.

Following the date on which Collectis and its affiliates no longer beneficially own more than 50 percent of the outstanding shares of Common Stock of the Company:

- Calyxt's Board of Directors will switch to a staggered board divided into three classes, with directors serving three-year terms;
- no director may be removed by the stockholders except for cause upon a majority vote of the stockholders;
- stockholder action may only be taken upon a majority vote of stockholders at a duly noticed stockholder meeting called in accordance with Calyxt's bylaws and may not be taken by written consent without a meeting;
- special stockholder meetings may be called only by a majority of the entire board of directors and not by the stockholders;
- Calyxt shall be governed by Section 203 of the Delaware General Corporation Law, which, subject to certain exceptions, prohibits a public Delaware corporation from engaging in a business combination (as defined in such section) with an "interested stockholder" (defined generally as any person who beneficially owns 15 percent or more of the outstanding voting stock of such corporation or any person affiliated with such person) for a period of three years following the time that such stockholder became an interested stockholder, unless certain conditions are satisfied; and
- specified provisions of the Company's Certificate of Incorporation and Bylaws, including those described in this risk factor, may not be repealed, amended or modified, unless such action is approved by a super-majority (66 2/3 percent) stockholder vote of all outstanding voting securities.

You may be subject to tax upon an adjustment to the exercise price or number of shares of common stock issuable upon exercise of the Warrants even though you do not receive a corresponding cash distribution.

The exercise price and number of shares of common stock issuable upon exercise of the Warrants may be proportionally adjusted upon the occurrence of specific events, including stock dividends, stock splits,

combinations and certain recapitalizations of Calyxt's common stock. If the exercise price or number of shares issuable upon exercise of the Warrants are adjusted as a result of a distribution that is taxable to Calyxt's common stockholders, such as a cash dividend, you generally will be deemed to have received for U.S. federal income tax purposes a taxable dividend without the receipt of any cash. In addition, a failure to adjust (or to adjust adequately) the exercise price or number of shares of common stock issuable upon exercise of the Warrants after an event that increases your proportionate interest in Calyxt could be treated as a deemed taxable dividend to you. See the discussion under "Certain United States Federal Income Tax Considerations." If you are a "Non-U.S. Holder" (as defined in "Certain United States Federal Income Tax Considerations"), U.S. federal withholding tax at a rate of 30 percent (or at a lower rate if an applicable income tax treaty so provides and an applicable withholding agent has received proper certification as to the application of that treaty) generally will apply to the gross amount of deemed or constructive dividends received by you. If an applicable withholding agent pays such withholding taxes on your behalf with respect to such deemed or constructive dividends, the withholding agent may withhold any such withholding tax from any cash to be paid to or set-off such amount against certain other funds or assets belonging to you.

Calyxt's ability to use its net operating losses to offset future taxable income may be subject to certain limitations.

As of December 31, 2021, Calyxt had approximately \$228.5 million of net operating losses, or NOLs, for federal and state income tax purposes, which may be available to offset federal income tax liabilities in the future. In addition, Calyxt may generate additional NOLs in future years. Calyxt has established a full valuation allowance for its deferred tax assets, including NOLs, due to the uncertainty that enough taxable income will be generated to utilize the assets.

Calyxt's ability to utilize its NOLs may be limited if it experiences an "ownership change" as defined in Section 382 ("Section 382") of the Internal Revenue Code of 1986, as amended. An ownership change generally occurs if certain direct or indirect 5% shareholders increase their aggregate percentage ownership of a corporation's stock by more than 50 percentage points over their lowest percentage ownership at any time during the testing period, which is generally the three-year period preceding any potential ownership change.

There is no assurance that Calyxt will not experience a current or future ownership change under Section 382 that would significantly limit or possibly eliminate its ability to use its NOLs. Current or potential future transactions by Calyxt involving the sale or issuance of Calyxt's common stock or Pre-Funded Warrants, or the exercise of Common Warrants, including pursuant this offering, or a combination of such transactions, may result in ownership changes under Section 382. In addition, Calyxt may experience ownership changes as a result of shifts in the direct or indirect ownership of its stock, some of which may be outside of its control.

Under Section 382, a current or future ownership change would subject Calyxt to an annual limitation that applies to the amount of pre-ownership change NOLs that may be used to offset post-ownership change taxable income. This limitation is generally determined by multiplying the value of a corporation's stock immediately before the ownership change by the applicable long-term tax-exempt rate. Any unused annual limitation may, subject to certain limits, be carried over to later years, and the limitation may under certain circumstances be increased by built-in gains in the assets held by such corporation at the time of the ownership change. This limitation could cause Calyxt's U.S. federal income taxes to be greater, or to be paid earlier, than they otherwise would be, and could cause some of Calyxt's NOLs to expire unused. Similar rules and limitations may apply for state income tax purposes. There is also a risk that future legal or regulatory changes may limit Calyxt's ability to use current or future NOLs to offset Calyxt's future federal income tax liabilities.

Risks Related to Calyxt's Business and Operations

The Company's operational and financial success depends on its ability to successfully deliver synthetic biology solutions for an expanded group of end markets, which is subject to a variety of risks and uncertainties.

Since the Company's inception, it has deployed its technology platform toward delivering plant-based innovations and solutions, primarily to the agriculture end market. In October 2021, the Company announced a strategic initiative to focus it on engineering plant-based synthetic biology solutions across an expanded group of end markets, including the Company's initial target end-markets—the cosmeceutical, nutraceutical and pharmaceutical markets—as well as other potential end markets, including advanced materials and chemical industries, in addition to the agriculture end market. This expanded and diversified focus places significant demands on the Company's management, requires adaptations to the Company's operational infrastructure, and necessitates incremental capital expenditures. If the Company fails to effectively and efficiently manage and implement the strategic initiative, its business, financial condition, and results of operations would be adversely impacted. The Company would face similar adverse impacts if it is unable to differentiate its offerings and capabilities from competitors in the synthetic biology industry, who may have a more established position in the synthetic biology industry, greater financial and operational resources than the Company, and other competitive advantages over the Company, or if the Company is otherwise not successful in marketing its offerings and capabilities to new target customers.

In addition, to the extent the Company faces technological and other challenges, including unanticipated costs or delays in the development of compounds intended to be produced using the BioFactory production system, challenges adapting its technology platform for specific customer-driven plant-based chemistry needs, or the inability to effectively or efficiently scale production, the Company's business, financial condition and results of operations would be adversely impacted.

The AIML capabilities that the Company is developing for its PlantSpring platform remain in the early stages of development, and their implementation and effectiveness could be adversely affected by flawed algorithms, insufficient datasets, or errors resulting from human intervention. Further, the BioFactory production system and the Company's ability to produce plant-based chemistries remain relatively unproven and may not be successful at scale or at all.

The market, including customers and potential investors, may be skeptical of the viability and benefits of the Company's PlantSpring technology platform, its AIML capabilities, and its BioFactory production system because they are based on a novel approach and the adoption of complex and emerging technologies. There can be no assurance that the Company's technology will be understood, approved, or accepted by customers, regulators, and potential investors or that the Company will be able to sell its services and products profitably at competitive prices and with features sufficient to establish demand. If potential investors are skeptical of the Company's technology, its ability to raise capital and the value of its common stock may be adversely affected.

Moreover, because of the novelty and complexity of the Company's PlantSpring platform and BioFactory production system, achieving broad commercial success may require that the Company overcomes potential customer skepticism regarding its capabilities, particularly in light of the historical challenges of scaling production in the field of synthetic biology. If the Company does not achieve the technical specifications required by its customers or successfully manage new product development processes, or if development work is not performed according to schedule, then the Company's revenue growth from new pipeline products may be prevented or delayed, and the Company's business and operating results may be harmed.

In order for novel products from the Company's PlantSpring technology platform and its BioFactory production system to be successfully commercialized, it will be important for the Company to establish relationships not only with customers, but also with their suppliers in order to gain visibility into market trends, feature and specification demands, and manufacturing, regulatory, and distribution challenges. If the Company is

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unable to convince potential customers or their suppliers of the value of its synthetic biology products, the Company will not be successful in entering these markets and its business and results of operations will be adversely affected.

The Company has a limited operating history, which makes it difficult to evaluate its current business and prospects and may increase the risk an investment in the Company.

The Company is an early-stage synthetic biology company with a limited operating history that to date has been focused primarily on R&D and the Company's previous go-to-market strategies. The Company's limited operating history may make it difficult to evaluate its current business and prospects. The Company's operating results for periods prior to October 2021 reflect results under the Company's prior business models, which involved different areas of strategic focus, different cost structures, and different sources of revenues, which, in combination with its limited operating history, may make it difficult to evaluate its current business and prospects.

In implementing the Company's current strategic focus on the development of plant-based synthetic biology products, the Company will encounter risks and difficulties frequently experienced by companies in rapidly developing and changing emergent industries, including challenges in developing products, determining appropriate investments of its limited resources, capital raising, and gaining customers for its novel products and innovations.

Investment in plant-based synthetic biology product development is a highly speculative endeavor. It entails significant upfront R&D investment to scale the BioFactory production system to sufficient levels to support commercialization, and there is significant risk that the Company will not be able to scale the BioFactory to these levels, or at all.

To commercialize its products, the Company must be successful in using its PCMs to produce target molecules at commercial scale and at a commercially viable cost. If the Company cannot achieve commercial scale production levels or commercially viable production economics for enough products to support its business plan, including through establishing and maintaining sufficient commercial scale and volume, it will be unable to achieve a sustainable business. The Company's commercial scale production costs depend on many factors that could have a negative effect on its ability to sell products developed for customers at competitive prices, including, the Company's ability to establish and maintain sufficient commercial scale and volume to attract third party contract manufacturing, referred to as infrastructure partners. There can be no assurance that the Company will be able to engage infrastructure partners on acceptable terms, including reasonable costs per unit of production, or at all.

If the Company is unable to achieve these economies of scale and targeted unit commercial production, its revenues, profitability, and financial condition will be adversely affected.

The Company expects that it will need to raise additional funding, which may not be available on acceptable terms or at all. Failure to obtain this necessary capital when needed may force it to delay, limit or terminate its product development efforts or other operations.

The Company has incurred losses since its inception. As of September 30, 2021, the Company had an accumulated deficit of \$189.0 million. The Company's net losses were \$22.1 million for the nine months ended September 30, 2021, and the Company used \$14.7 million of cash for operating activities for the nine months ended September 30, 2021. The Company's primary sources of liquidity are its cash and cash equivalents, with additional liquidity accessible, subject to market conditions and other factors, including limitations that may apply to the Company under applicable SEC regulations, from the capital markets, including under its Open Market Sale AgreementSM with Jefferies LLC (the ATM Facility).

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As of December 31, 2021, the Company had \$14.3 million of cash, cash equivalents, and restricted cash. The Company's restricted cash is associated with its equipment financing leases and was \$1.0 million as of September 30, 2021 and \$0.6 million as of December 31, 2021. Current liabilities were \$5.1 million as of September 30, 2021 and \$4.1 million as of December 31, 2021.

The Company anticipates that it will continue to generate losses for the next several years. Over the longer term and until the Company can generate cash flows sufficient to support its operating capital requirements, it expects to finance a portion of future cash needs through (i) cash on hand, (ii) commercialization activities, which may result in various types of revenue streams from (a) future product development agreements and technology licenses, including upfront and milestone payments, annual license fees, and royalties; and (b) product sales from its proprietary BioFactory production system; (iii) government or other third-party funding, which the Company expects to be more readily available if Collectis were to own less than 50 percent of the Company's common stock, (iv) public or private equity or debt financings, or (v) a combination of the foregoing. However, additional capital may not be available on reasonable terms, if at all.

For example, the Company currently expects that based on the Company's public float, as of the date of the filing of the Company's Annual Report for the year ended December 31, 2021, the Company will only be permitted to utilize a "shelf" registration statement, including the registration statement under which the Company's ATM Facility is operated, subject to Instruction I.B.6 to Form S-3, which is referred to as the "baby shelf" rules. From the date of the filing of the Annual Report for the year ended December 31, 2021 and for so long as the Company's public float remains less than \$75,000,000, it will not be permitted to sell more than the equivalent of one-third of its public float during any 12 consecutive months pursuant to the baby shelf rules. Although alternative public and private transaction structures are expected to be available, these may require additional time and cost, may impose operational restrictions on the Company, and may not be available on attractive terms.

The Company's current operating plans reflect a modest level of payments from customers for commercial activities in 2022 and planned spending to support the further scale up of the production of the BioFactory production system. The Company will require additional liquidity through public or private equity or debt financings to continue operations under this business plan over the next 12 months.

If the Company is unable to raise additional capital in a sufficient amount or on acceptable terms, management may be required to implement various cost reduction and other cash-focused measures to manage liquidity and the Company may have to significantly delay, scale back, or discontinue its development or commercialization activities. Failure to receive additional funding could cause the Company to cease operations, in part or in full. If the Company raises additional funds through the issuance of additional debt or equity securities, it could result in dilution to its existing stockholders and increased fixed payment obligations, and these securities may have rights senior to those of the Company's shares of common stock. Any of these events could significantly harm the Company's business, financial condition, and prospects.

The Company faces significant competition and many of its competitors have substantially greater financial, technical, and other resources than Calyxt.

The market for products developed with synthetic biology is highly competitive, and the Company faces significant direct and indirect competition in several aspects of its business. See "Business—Competition". Many of these competitors have substantially greater financial, technical, marketing, sales, distribution, and other resources than the Company. Many of the Company's competitors engage in ongoing R&D, and technological developments by its competitors could render the Company's technology less competitive or obsolete, resulting in reduced revenues compared to expectations. As a result, the Company may be unable to compete successfully against its current or future competitors, which may result in reductions in revenue, reduced margins, and the inability to achieve market acceptance for its products. The Company expects to continue to face significant competition.

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The synthetic biology industry is still emerging and is characterized by rapid and significant technological changes, frequent new product introductions and enhancements, and evolving industry demands and standards. The Company's future success will depend on its ability to sign and initiate commercial programs using its customer demand-driven approach to selecting compounds for development and scaling the production of those compounds in its BioFactory production system. Once commercial scale production occurs those customers will need to purchase the compound and integrate it into their business. The Company's development activity needs to occur on a timely and cost-effective basis, and it will need to continue to advance its technology. Additionally, the Company's customers may face significant competition or other risks that may adversely impact their business and results of operations.

The Company's ability to compete effectively and to achieve commercial success also depends, in part, on its ability to identify and attract customers who contract with the Company to develop products for use in their production and contracting with those same third parties for the commercialization of those products. The Company may not be successful in achieving these factors and any such failure may adversely affect its business, results of operations and financial condition. Due to the lead time involved in developing a product for a customer using the Company's platform, its potential customers will be required to make a number of assumptions and estimates regarding the commercial feasibility of the plant-based chemistry, including assumptions and estimates regarding the demand for those end-products and processes that will utilize the plant-based chemistry developed with the Company's technology, the existence or non-existence of products being simultaneously developed by competitors, potential market penetration and obsolescence, whether planned or unplanned. As a result, it is possible that the Company may reach an agreement with a customer who wishes to develop a product that has been displaced by the time of launch, addresses a market that no longer exists or is smaller than previously thought, that end-consumers do not like or otherwise is not competitive at the time of launch, in each case, after the incurrence of significant opportunity costs by the Company to develop such a product.

From time to time, third parties who may have competed in the agriculture end market once pursued by the Company may seek to license its technology. The Company has, in the past, entered such licensing arrangements and may enter such arrangements in the future. In certain circumstances, competitors who license the Company's technology could use those technologies to develop their own products that would compete with products commercialized by the Company's agriculturally focused collaboration partners, which may impact the Company's future royalties.

The Company also anticipates increased competition in the future as new companies enter the market and new technologies become available. The Company's technology may be rendered obsolete or uneconomical by technological advances or entirely different approaches developed by one or more of its competitors that are more effective or that enable them to develop and commercialize products more quickly or with lower expense than the Company is able to. At the same time, the expiration of patents covering existing technologies reduces the barriers to entry for competitors. If for any reason the Company's technology becomes obsolete or uneconomical relative to competitors' technologies, this would prevent or limit the Company's ability to generate revenues from the commercialization of its products.

If the Company cannot enter into new customer partnerships and successfully execute on the underlying product development projects to bring a customer's plant-based chemistry to commercial scale production and ultimately sell them the product, its business will be adversely affected.

The Company's approach to product development is customer demand-driven and as a result, its success depends on the number, size, and scope of customer collaborations. The Company's ability to win new business depends on many factors, including its reputation in the market, the differentiation of its PlantSpring technology platform and BioFactory production system relative to alternatives, the pricing and efficiency of its offerings relative to alternatives, its financial stability, and its technical capabilities. If the Company fails to establish a position of strength in any of these factors, its ability to either sign new customer agreements may suffer and this could adversely affect its prospects.

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The Company engages in conversations about collaborations with potential customers regularly. The Company may spend considerable time and money engaging in these conversations and feasibility assessments, including understanding the technical specifications of a particular plant-based chemistry, customer concerns and limitations, and the legal or regulatory landscape of a potential program or offering, which may not result in a commercial agreement. Even if an agreement is reached, the resulting relationship may not be successful for many reasons, including the Company's inability to complete the development of a plant-based chemistry to the customers' specifications or within the customers' time frames, or unsuccessful development or commercialization of products or processes by the Company's customers. In such circumstances, the Company's revenues from such an agreement might be meaningfully reduced.

Development of new or improved plant-based synthetic biology products that meet customer demand-driven specifications involves risks of failure inherent in the deployment of innovative and complex emerging technologies. Accordingly, if the Company or its infrastructure partners experience any significant delays in the development of new products or if new products do not meet customer specifications, the Company's business, operating results, and financial condition would be adversely affected.

The Company intends to rely on third parties for at-scale BioFactory production and other services, and any performance issues by such third parties, or the Company's inability to engage third parties on acceptable terms, may impact the Company's ability to successfully meet its commercial obligations.

The Company's current plan is to contract with third-party infrastructure partners for at-scale BioFactory production and for other R&D services. Although the Company intends to provide for audit and/or inspection rights and will provide the infrastructure partners with protocols regarding the production and handling of its plant-based chemistries, it will have limited control over the execution of their activities. Poor execution, failure to follow required protocols or regulatory requirements, or mishandling of the plant-based chemistry by these infrastructure partners could impair success, delay production, cause the Company to incur incremental costs, or damage the customer relationship.

Even if the Company's infrastructure partners adhere to protocols, production runs and other R&D activities may fail to succeed for a variety of other reasons. Ultimately, the Company remains responsible for ensuring work performed is conducted in accordance with the applicable protocol and standards, and reliance on infrastructure partners does not relieve the Company of its responsibilities. Should these infrastructure partners fail to comply with these standards, the Company's ability to develop plant-based chemistries in accordance with customer specifications or in a timely manner could be adversely impacted.

Additionally, if the Company is unable to maintain or enter into agreements with infrastructure partners on acceptable terms, or if engagement is terminated prematurely, the Company may be unable to conduct or complete research, development, and production in the anticipated manner. For example, establishing and operating infrastructure partner facilities may require the Company to make significant capital expenditures, which reduces its cash and places such capital at risk. Also, infrastructure partner agreements may contain terms that commit the Company to pay for other costs and amounts incurred or expected to be earned by the plant operators and owners, which can result in contractual liability and losses for it even if it terminates a particular infrastructure partner arrangement or decides to reduce or stop production under such an arrangement. Further, the Company cannot be sure that contract manufacturers will be available when it needs their services, that they will be willing to dedicate a portion of their capacity to the Company's projects, or that it will be able to reach acceptable price, delivery, and other terms with the infrastructure partners for the provision of their production services.

If the Company's relationship with any of these infrastructure partners is terminated, it may be unable to enter arrangements with alternative infrastructure partners on commercially reasonable terms, or at all. Switching or adding infrastructure partners can involve substantial cost and require extensive management time and focus. In addition, there is a natural transition period when any new infrastructure partners commences work. As a

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result, delays may occur, which could materially impact the Company's ability to meet desired development timelines, and its achievement of product-related revenues and profitability.

If the Company's technology licensees are delayed or unsuccessful in their development activities associated with their license of the technology, its financial results could be affected.

The Company expects to license its technology and its historically developed seed-trait product candidates for traditional agriculture to third parties. If the Company's licensees are delayed, are unsuccessful in their development and commercialization efforts, or if they fail to devote sufficient time and resources to support the marketing and selling efforts of products developed using the licenses of the Company's technology, it may not receive milestone and/or royalty payments as expected, and its financial results could be harmed. Further, if these licensee customers fail to market the licensed seed-trait products or products developed with the Company's licensed technology at prices that will achieve or sustain market acceptance for those products, the Company's future royalty revenues could be further harmed. If a product is commercialized by a licensee, its performance may also be impacted by numerous risks, including competition from alternative products, product defects, changes in end-consumer demand, changes in law or regulation, or changes in economic conditions. Moreover, licensees have significant discretion in determining the efforts and resources applied to commercializing products utilizing the plant-based chemistries developed by the Company, and they may not commit sufficient resources to successfully advance a product candidate or achieve commercial success. Disputes may arise with licensees that cause the delay or termination of commercial contracts for current or future products or that results in costly litigation or arbitration that diverts management attention and resources.

Any outdoor agriculture product development agreements that the Company may enter in the future may be delayed or may be unsuccessful, which could adversely affect its financial results.

The Company may opportunistically enter into product development arrangements with third parties for the development and commercialization of certain outdoor agriculture seed traits. For example, in the third quarter of 2021, the Company announced that it had entered into a research collaboration with a global food ingredient manufacturer based in Asia to develop an improved soybean capable of producing an oil as a commercial alternative to palm oil.

To the extent the Company enters into such product development agreements, their success will depend heavily on the efforts and activities of its customer's commercialization efforts and as a result its ability to achieve milestone payments or generate royalties will not be within its direct control. If an outdoor agriculture product is commercialized by a licensee, its performance may also be impacted by numerous risks, including:

- Adverse weather conditions, natural disasters, crop disease, pests and other natural conditions;
- Climate change that may cause changes in weather patterns and conditions, including changes in rainfall and storm patterns and intensities, water shortages, changes in sea levels, and changes in temperature levels;
- Licensee field trials may be unsuccessful;
- Licensee products, and food containing those products, may fail to meet standards established by third-party non-GMO verification organizations;
- The unintended presence of the Company's traits in other products or plants may have a negative effect on the licensee's operations.

The Company is subject to various risks related to public health crises, including the COVID-19 pandemic, that could have material and adverse impacts on its business, financial condition, liquidity, and results of operations.

Any outbreaks of contagious diseases and other adverse public health developments could have a material and adverse impact on the Company's business, financial condition, liquidity, and results of operations. As has

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occurred with the COVID-19 pandemic, a global pandemic could cause significant disruption to the global economy, including in regions in which we, the Company's suppliers, infrastructure partners, and customers do business. A regional epidemic or global pandemic and efforts to manage it, including those by governmental authorities, could have significant impacts on national and global financial markets, and could have a significant, negative impact on the Company's and the Company's customers' operating results. Disruptions could include partial shutdowns of the Company's facilities as mandated by government decree, significant travel restrictions, "work-from-home" orders, limited availability of the Company's workforce, supplier constraints, supply chain interruptions, logistics challenges and limitations, and reduced demand from customers. The COVID-19 pandemic has had, and could continue to have, these effects on the economy and the Company's business.

The extent to which the COVID-19 pandemic will continue to impact the Company's business going forward will be dependent on future developments such as the length and severity of the crisis, the potential resurgence of the crisis, variant strains of the virus, vaccine availability and effectiveness, future government actions in response to the crisis and the overall impact of the COVID-19 pandemic on the global economy and capital markets, among many other factors, all of which remain highly uncertain and unpredictable. This unpredictability could limit the Company's ability to respond to future developments quickly. Additionally, the impacts described above and other impacts of a global pandemic, including the COVID-19 pandemic and responses to it, could substantially increase the risk to the Company from the other risks described herein.

Risks Related to Calyxt's Intellectual Property

Patents and patent applications involve highly complex legal and factual questions, which, if determined adversely to the Company, could negatively impact its competitive position.

The patent positions of biotechnology companies and other actors in the Company's fields of business can be highly uncertain and involve complex scientific, legal, and factual analyses. The interpretation and breadth of claims allowed in some patents covering biological compositions may be uncertain and difficult to determine and are often affected materially by the facts and circumstances that pertain to the patented compositions and the related patent claims. The issuance and scope of patents cannot be predicted with certainty. Patents, if issued, may be challenged, invalidated, narrowed, or circumvented. Challenges to the Company or its licensors' patents and patent applications, if successful, may result in the denial of it or its licensors' patent applications or the loss or reduction in their scope. In addition, defending against such challenges may be costly and involve the diversion of significant management time. Accordingly, rights under any of the Company or its licensors' patents may not provide it with enough protection against competitive products or processes and any loss, denial, or reduction in scope of any of such patents and patent applications may have a material adverse effect on its business.

Even if not challenged, the Company or its licensors' patents and patent applications may not adequately protect its product candidates or technology or prevent others from designing their products or technology to avoid being covered by the Company or its licensors' patent claims. If the breadth or strength of protection provided by the patents the Company owns or licenses is threatened, it could dissuade companies from partnering with it to develop, and could threaten the ability to successfully commercialize, the Company's product candidates.

If the Company or its licensors fail to obtain and maintain patent protection and trade secret protection of its product candidates and technology, it could lose competitive advantage and competition the Company faces would increase, reducing any potential revenues and have a material adverse effect on its business.

The Company will not seek to protect its intellectual property rights in all jurisdictions throughout the world and it may not be able to adequately enforce its intellectual property rights even in the jurisdictions where it seeks protection.

Filing, prosecuting, and defending patents in all countries and jurisdictions throughout the world would be prohibitively expensive. Patent protection must be sought on a country-by-country basis, which is an expensive

and time-consuming process with uncertain outcomes. The Company's intellectual property rights in some countries outside the United States could be less extensive than those in the United States, assuming that rights are obtained in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, the Company may not be able to prevent third parties from practicing its inventions in all countries outside the United States, or from selling or importing products made using its inventions in and into the United States or other jurisdictions.

Competitors may use the Company's technologies in jurisdictions where it or its licensors do not pursue and obtain patent protection. Further, competitors may export otherwise infringing products to territories where the Company or its licensors have patent protection, but where the ability to enforce those patent rights is not as strong as in the United States. These products may compete with the Company's products and its intellectual property rights and such rights may not be effective or enough to prevent such competition.

In addition, changes in, or different interpretations of, patent laws in the United States and other countries may permit others to use the Company's discoveries or to develop and commercialize its technology and products without providing any notice or compensation or may limit the scope of patent protection that the Company or its licensors are able to obtain. The laws of some countries do not protect intellectual property rights to the same extent as United States laws and those countries may lack adequate rules and procedures for defending the Company's intellectual property rights.

Furthermore, proceedings to enforce the Company's licensors' and its patent rights and other intellectual property rights in foreign jurisdictions could result in substantial costs and divert its efforts and attention from other aspects of its business, could put the Company or its licensors' patents at risk of being invalidated or interpreted narrowly, could put it or its licensors' patent applications at risk of not issuing and could provoke third parties to assert claims against it or its licensors. The Company may not prevail in any lawsuits that initiates, and the damages or other remedies awarded to it, if any, may not be commercially meaningful, while the damages and other remedies the Company may be ordered to pay such third parties may be significant. Accordingly, the Company's licensors and its efforts to enforce its intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that it develops or licenses.

Third parties may assert rights to inventions the Company develops or otherwise regards as its own.

Third parties may in the future make claims challenging the inventorship or ownership of the Company or its licensors' intellectual property. The Company has written agreements with R&D partners that provide for the ownership of intellectual property arising from the relationship. Some agreements provide that the Company must negotiate certain commercial rights at a later date and others may not include or clearly address the allocation of intellectual property rights. If the Company cannot successfully negotiate sufficient ownership and commercial rights to the inventions that result from the Company's use of a third-party partner's materials, or if disputes otherwise arise with respect to the intellectual property developed through the use of a partner's samples, the Company may be limited in its ability to capitalize on the full market potential of these inventions. In addition, the Company may face claims by third parties that its agreements with employees, contractors, or consultants obligating them to assign intellectual property to it are ineffective or are in conflict with prior or competing contractual obligations of assignment. Litigation may be necessary to resolve an ownership dispute, and if the Company is not successful, it may be precluded from using certain intellectual property and associated products and technology, which could have a material adverse effect on its business.

In addition, the research resulting in certain of the Company's in-licensed patent rights and technology was funded in part by the United States government. As a result, the United States government has certain rights to such patent rights and technology, which include march-in rights. When new technologies are developed with government funding, the government generally obtains certain rights in any resulting patents, including a non-exclusive license authorizing the government to use the invention or to have others use the invention on its

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behalf. The government can exercise its march-in rights if it determines that action is necessary because the Company fails to achieve practical application of the government-funded technology, or because action is necessary to alleviate health or safety needs, to meet requirements of federal regulations, or to give preference to United States industry. Any exercise by the government of any of the foregoing rights could have a material adverse effect on the Company's business.

Any infringement, misappropriation, or other violation by the Company of intellectual property rights of others may prevent or delay its product development efforts and may prevent or increase the costs of successful commercialization by the Company, its customers or its licensees.

The Company's success will depend in part on its ability to operate without infringing, misappropriating, or otherwise violating the intellectual property and proprietary rights of third parties. The Company cannot assure that its business operations, products developed, historically developed agriculture-focused product candidates, and methods and the business operations, products, product candidates and methods of its customers or licensees do not or will not infringe, misappropriate, or otherwise violate the patents or other intellectual property rights of third parties.

The biotechnology industry is characterized by extensive litigation regarding patents and other intellectual property rights. Other parties may allege that the Company's product development activities, products, product candidates or the use of its technologies infringe, misappropriate, or otherwise violate patent claims or other intellectual property rights held by them or that it is employing their proprietary technology without authorization. Patent and other types of intellectual property litigation can involve complex factual and legal questions, and their outcome is uncertain. Any claim relating to intellectual property infringement that is successfully asserted against the Company may require it to pay substantial damages, including treble damages and attorneys' fees if it or its partners are found to be willfully infringing another party's patents, for past use of the asserted intellectual property and royalties and other consideration going forward if the Company is forced to take a license. Such a license may not be available on commercially reasonable terms, or at all. Even if the Company was able to obtain a license, it could be non-exclusive, thereby giving its competitors access to the same intellectual property rights or technologies licensed to the Company. In addition, if any such claim were successfully asserted against the Company and it could not obtain a license, the Company or its partners may be forced to stop or delay developing, manufacturing, selling or otherwise commercializing its products, product candidates or other infringing technology, or those it develops with its R&D partners.

Even if the Company is successful in these proceedings, it may incur substantial costs and divert management time and attention pursuing these proceedings, which could have a material adverse effect on the organization. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of the Company's confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of the Company's common stock. Such litigation or proceedings could substantially increase the Company's operating losses and reduce the resources available for development activities or any future sales, marketing, or distribution activities. If the Company is unable to avoid infringing the patent rights of others, it may be required to seek a license, defend an infringement action, or challenge the validity of the patents in court, or redesign its products. Patent litigation is costly and time consuming. The Company may not have enough resources to bring these actions to a successful conclusion.

Any of these risks coming to fruition could have a material adverse effect on the Company's business, results of operations, financial condition, and prospects.

The Company may be unsuccessful in developing, licensing, or acquiring intellectual property that may be required to develop and commercialize its product candidates.

The Company's programs may involve additional product candidates that may require the use of intellectual property or proprietary rights held by third parties; the growth of its business may depend in part on its ability to acquire, in-license or use these intellectual property and proprietary rights. However, the Company may be unable to acquire or in-license any third-party intellectual property or proprietary rights that may be key to development. Even if the Company can acquire or in-license such rights, it may be unable to do so on commercially reasonable terms. The licensing and acquisition of third-party intellectual property and proprietary rights is a competitive area, and several more established companies are also pursuing strategies to license or acquire third-party intellectual property and proprietary rights that the Company may consider attractive or necessary. These established companies may have a competitive advantage over the Company due to their size, capital resources and agricultural development and commercialization capabilities.

In connection with his appointment as chair of the Scientific Advisory Board, Dr. Dan Voytas is no longer the Company's Chief Science Officer, a position he held from the Company's founding in January 2010 through February 2021. The consulting agreement with Dr. Voytas, while he served as Chief Science Officer, and the current engagement letter with Dr. Voytas, as chair of the Scientific Advisory Board, each generally obligates Dr. Voytas to assign to the Company any intellectual property solely or jointly conceived, developed or reduced to practice by him in the course of the performance of his services to the Company. However, the Company does not have any rights, including any assignment or right of first refusal rights, to intellectual property conceived, developed, or reduced to practice by Dr. Voytas outside the course of the performance of his services to the Company, including in connection with his employment at the University of Minnesota.

In addition, companies that perceive the Company to be a competitor may be unwilling to assign or license intellectual property and proprietary rights to the Company. The Company also may be unable to license or acquire third-party intellectual property and proprietary rights on terms that would allow it to make an appropriate return on its investment or at all. If the Company is unable to successfully acquire or in-license rights to required third-party intellectual property and proprietary rights or maintain the existing intellectual property and proprietary rights the Company has, it may have to cease development of the relevant program, product, or product candidate, which could have a material adverse effect on its business.

The Company licenses a portion of its intellectual property from Collectis, its majority stockholder, and the University of Minnesota.

The Company relies on the intellectual property it licenses from Collectis and the University of Minnesota. If it does not comply with obligations under the license agreements, it may be subject to damages, which may be significant, and in some cases Collectis and/or the University of Minnesota may have the right to terminate the license agreement. Any termination of the Company's license agreement with Collectis or the University of Minnesota could have a material adverse effect on its business and results of operations.

Moreover, any enforcement of the licensed intellectual property could be subject to challenge by third parties and if any such challenge is successful, such intellectual property could be narrowed in scope or held to be invalid or unenforceable, which could materially impair any competitive advantage afforded to the Company by such intellectual property. There can be no assurance that Collectis or the University of Minnesota will prosecute and maintain such intellectual property in the best interests of the Company's business or at all, and, if Collectis or the University of Minnesota fails to properly prosecute and maintain such intellectual property, the Company could lose rights to such intellectual property, which would materially impair any competitive advantage afforded to it by such intellectual property. For more information regarding the Company's license agreement with Collectis or the license agreement between Collectis and the University of Minnesota, please see "Business—Intellectual Property."

Risks Related to Regulatory and Legal Matters

Ethical, legal, and social concerns about products using genetically modified or edited plant cells could limit or prevent the use of the Company's products and technologies and could harm its business.

The Company's technologies and products involve the use of genetically modified or edited plant cells. Public perception about the safety of, and ethical, legal, or social concerns over, genetically engineered products, including genetically modified or edited plant genetic materials, could affect public acceptance of the Company's products. If the Company is not able to overcome any such concerns relating to its products, these technologies may not be accepted by its customers or end-users of the customers' products that incorporate the Company's products. In addition, the use of genetically modified or edited plant cells has in the past received negative publicity, which could lead to greater regulation or restrictions on imports of the Company's products. If the Company's technologies and products are not accepted by its customers or their end-users due to negative publicity or lack of public acceptance, the Company's business could be materially harmed.

The Company may become subject to increasing regulation as a result of its hemp development activities, which could require it to incur additional costs associated with compliance requirements.

The Company has developed hemp product candidates and is currently exploring licensing opportunities in the crop. Hemp is legally distinct from marijuana and recognized as an agricultural crop by the United States government. Federal and state laws and regulations on hemp address production, monitoring, manufacturing, distribution, and laboratory testing to ensure that the hemp has a THC concentration of not more than 0.3 percent on a dry weight basis. Federal laws and regulations may also address the transportation or shipment of hemp or hemp products. It is difficult to predict whether regulators, such as the USDA or the MDA, will alter the manner in which they interpret existing federal and state laws and regulations on hemp or institute new regulations, or otherwise modify regulations in a way that will render compliance more burdensome. As the Company continues to pursue hemp as a product candidate, it may become subject to increasing regulation particular to hemp, which could require it to incur additional costs associated with compliance requirements.

The regulatory environment outside the United States varies greatly from jurisdiction to jurisdiction and there is less certainty how the Company's products will be regulated.

The regulatory environment around gene editing and genetic modification in plants is greatly uncertain outside of the United States and varies greatly from jurisdiction to jurisdiction. Each jurisdiction may have its own regulatory framework regarding genetically modified and gene edited products and materials, which continue to evolve, and which may encapsulate the Company's products. To the extent regulatory frameworks outside of the United States are not receptive to the Company's genetic modification and gene editing technologies, this may limit its ability to expand into other global markets.

Complying with the regulatory requirements outside the United States will be costly and time-consuming, and there is no guarantee the Company will be able to commercialize its products outside the United States. Such regulatory requirements may also inhibit the Company's ability to market and sell its products to customers located outside of the United States.

The Company cannot predict whether or when any jurisdiction will change its regulations with respect to its products. Advocacy groups have engaged in publicity campaigns and filed lawsuits in various countries against companies and regulatory authorities, seeking to halt regulatory approval or clearance activities or influence public opinion against genetically engineered and/or gene edited products. In addition, governmental reaction to negative publicity concerning the Company's products could result in greater regulation of genetic research and derivative products or regulatory costs that render its products cost prohibitive.

The scale of the industries in which the Company intends as the end markets for its products may make it difficult to monitor and control the distribution of the Company's products. As a result, the Company's products

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may be sold inadvertently within jurisdictions where they are not approved for distribution. Such sales may lead to regulatory challenges or lawsuits against the Company, which could result in significant expenses and management attention.

The Company may use biological materials in its business and is subject to numerous environmental, health and safety laws and regulations. Compliance with such laws and regulations and any claims relating to improper handling, storage or disposal of these materials could be time consuming and costly.

The Company is subject to numerous federal, state, local and foreign environmental, health and safety laws and regulations, including those governing laboratory procedures, the handling, use, storage, treatment, manufacture and disposal of hazardous materials and wastes, discharge of pollutants into the environment and human health and safety matters. The Company's R&D processes involve the controlled use of hazardous materials, including biological materials. The Company may be sued for any injury or contamination that results from its use or the use by third parties of these materials, or may otherwise be required to remediate such contamination, and its liability may exceed any insurance coverage and its total assets. Compliance with environmental, health and safety laws and regulations may be expensive and may impair the Company's R&D efforts. If the Company fails to comply with these requirements, it could incur substantial costs and liabilities, including civil or criminal fines and penalties, clean-up costs or capital expenditures for control equipment or operational changes necessary to achieve and maintain compliance. In addition, the Company cannot predict the impact on its business of new or amended environmental, health and safety laws or regulations or any changes in the way existing and future laws and regulations are interpreted and enforced. These current or future laws and regulations may impair the Company's research, development or production efforts or result in increased expense of compliance.

The regulatory environment in the United States is uncertain and evolving and may impact Calyxt's customers' willingness to utilize the Company's products.

The Company anticipates that its customers will be responsible for any regulatory activities associated with development of compounds commissioned from the Company. Such regulatory activities may involve significant expense and changes in applicable regulatory requirements could result in a substantial increases in the time and costs associated with such activities. It is difficult for the Company and its customers to predict whether regulators, such as the USDA or FDA, will alter the manner in which they interpret existing laws and regulations or institute new regulations, or otherwise modify regulations in a way that will subject products utilizing the Company's synthetic biology products to more burdensome standards, thereby substantially increasing the time and costs associated with the regulatory activities of the Company's customers. If the regulatory burden and expense required for the utilization of the Company's products becomes too significant, the Company's customers may seek alternatives that involve lesser regulatory costs.

If the Company is sued for defective products and if such lawsuits were determined adversely, it could be subject to substantial damages, for which insurance coverage is not available.

The Company expects that some applications of its products will be used as components of customers' end products and therefore its success will be tied, in part, to the success of such end products. The Company cannot assure you that material performance problems, defects, errors or delays will not arise in its products or the end products in which they are used as components.

The Company expects to provide warranties that its products will meet customer specifications. The costs incurred in correcting any failures to meet such specifications may be substantial and could adversely affect the Company's business. If the Company's products or the end products of which they are components, contain defects or are delayed, it may experience:

- a failure to achieve commercial traction with the Company's target customers;

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- loss of customer contracts or delays in fulfilling the Company's contractual obligations;
- damage to the Company's brand reputation;
- product recalls or replacements;
- inability to attract new customers and collaboration opportunities;
- diversion of resources from the Company's R&D and sales activities; and
- legal and regulatory claims against the Company, including product liability claims, which could be costly, time consuming to defend, result in substantial damages and result in reputational damage.

Risks Related to Ownership of Calyxt's Common Stock and its Relationship with Collectis

The market price of the Company's common stock has been and could remain volatile, which could adversely affect the market price of its common stock.

The market price of Calyxt's common stock has experienced, and may continue to experience, volatility in response to various factors, such as:

- the Company's strategic initiatives and technologies;
- fluctuations in the Company's financial results or outlook or peer companies;
- changes in estimates of the Company's financial results or recommendations by securities analysts;
- changes in the Company's capital structure, such as future issuances of common stock or the incurrence of debt;
- announcements by the Company or its competitors of significant contracts, acquisitions or strategic partnerships;
- regulatory developments in the United States, and/or other foreign countries;
- litigation involving the Company, its general industry or both;
- additions or departures of key personnel;
- market perceptions regarding Calyxt's prospects and technologies; and
- changes in general economic, industry and market conditions affecting the Company, its competitors, or Collectis; and
- the ongoing impacts of the COVID-19 pandemic and resulting impact on stock market performance.

Between January 1, 2021, and February 16, 2022, the closing sales price of Calyxt's common stock on the Nasdaq Global Market fluctuated from a high of \$12.43 per share to a low of \$1.38 per share.

These and other market and industry factors may cause the market price and demand for Calyxt's common stock to fluctuate substantially, regardless of Calyxt's actual operating performance, which may limit or prevent investors from readily selling their common stock at a favorable price or at all and may otherwise negatively affect the liquidity of Calyxt's common stock.

Furthermore, stock markets have experienced price and volume fluctuations that have affected, and continue to affect, the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market fluctuations, as well as general economic, political and market conditions, such as recessions, interest rate changes and international currency fluctuations, may negatively affect the market price of the Company's common stock.

Certain rights that Collectis possesses will prevent other stockholders from influencing significant decisions, even after Collectis' ownership of Calyxt common stock falls substantially below a majority.

As of December 31, 2021, Collectis owned 61.8 percent of the Company's outstanding shares of common stock. Pursuant to the stockholders' agreement between the Company and Collectis, Collectis will continue to retain substantial rights with respect to the Company for so long as it beneficially owns at least 15 percent of the outstanding shares of the Company's common stock ("Continuing Collectis Rights").

The Continuing Collectis Rights, include the right to nominate a number of designees for the Company's board of directors representing a majority of the directors, to designate the Chairman of the board of directors and to have at least one designated director serve on each board committee. In addition, the Continuing Collectis Rights include information rights for Collectis, as well as approval rights over a significant number of key aspects of Calyxt's operations and management, including certain changes to Calyxt's constitutive documents, the making of any regular or special dividends, the commencement of any voluntary bankruptcy proceeding or any consent to any bankruptcy proceeding, any appointment to or removal from the board of directors, and the consummation of any public or private offering, merger, amalgamation or consolidation of Calyxt, the spinoff of a business of the Company, or any sale, conveyance, transfer or other disposition of Calyxt's assets.

For so long as Collectis continues to hold at least 50 percent of the outstanding shares of the Company's common stock, Collectis possesses approval rights over a broader, more expansive number of key aspects of its operations and management, as set forth in the stockholders' agreement. Collectis' rights under the stockholders agreement, including the Continuing Collectis Rights, are incorporated into, and form a part of, the Company's certificate of incorporation and bylaws, which makes any amendment, repeal or modification of such rights burdensome.

Following the date on which Collectis and its affiliates no longer beneficially own more than 50 percent of the outstanding shares of Common Stock of the Company:

- the Company's Board of Directors will switch to a staggered board divided into three classes, with directors serving three-year terms;
- no director may be removed by the stockholders except for cause upon a majority vote of the stockholders;
- stockholder action may only be taken upon a majority vote of stockholders at a duly noticed stockholder meeting called in accordance with the Company's bylaws and may not be taken by written consent without a meeting;
- special stockholder meetings may be called only by a majority of the entire board of directors and not by the stockholders;
- the Company shall be governed by Section 203 of the Delaware General Corporation Law, which, subject to certain exceptions, prohibits a public Delaware corporation from engaging in a business combination (as defined in such section) with an "interested stockholder" (defined generally as any person who beneficially owns 15 percent or more of the outstanding voting stock of such corporation or any person affiliated with such person) for a period of three years following the time that such stockholder became an interested stockholder, unless certain conditions are satisfied; and
- specified provisions of the Company's Certificate of Incorporation and Bylaws, including those described in this risk factor, may not be repealed, amended or modified, unless such action is approved by a super-majority (66 2/3 percent) stockholder vote of all outstanding voting securities.

In addition, following the first date on which Collectis no longer beneficially owns more than 50 percent of the Company's outstanding common stock, certain provisions of the Company's certificate of incorporation, bylaws and other agreements may make it more difficult for the Company's stockholders to influence its

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decisions or for a third party to acquire control of the Company, or may discourage a third-party from attempting to acquire control of the Company, in each case, even if these actions were considered beneficial by many stockholders or might involve transactions in which the Company's stockholders might otherwise receive a premium for their shares of the Company's common stock. Further, these provisions could limit the price that investors might be willing to pay in the future for shares of the Company's common stock, possibly depressing the market price of its common stock. As a result, stockholders may be limited in their ability to obtain a premium for their shares both while ownership of the Company's common stock is concentrated with Collectis and after such time it is not.

As a result of the foregoing rights, Collectis currently controls the direction of the Company's business and is expected, for so long as it holds 15 percent of the Company's outstanding common stock, to continue to have extensive influence over important operational decisions. The extent of Collectis' influence and the nature of its rights could prevent other stockholders from influencing significant decisions of the Company.

Future sales and issuances of the Company's common stock could result in additional dilution of the percentage ownership of its stockholders and could cause the stock price to decline.

From time to time, the Company has sold a substantial number of shares of its common stock, which results in dilution to the Company's stockholders. In the future, the Company may sell additional equity securities in one or more transactions at prices and in a manner the Company determines from time-to-time, to finance its business operations and investments. To the extent the Company raises capital by issuing equity securities, its stockholders may experience substantial dilution.

If Collectis sells a substantial number of shares of the Company's common stock in either the private or public markets, the market price of the Company's common stock could decrease materially. The perception in the public market that these stockholders might sell the Company's common stock could also depress the market price of its common stock and could impair the Company's future ability to obtain capital, especially through an offering of equity securities.

Shares of the Company's common stock issued or issuable under its equity incentive plans to employees and directors have been registered on Form S-8 registration statements and may be freely sold in the public market upon issuance.

If Collectis sells a controlling interest in the Company to a third party, stockholders may not realize any change-of-control premium on shares of the Company's common stock.

Collectis has the ability, should it choose to do so, to sell some or all its shares of the Company's common stock to a third party, which, if sufficient in size, could result in a change of control of the Company. In certain circumstances, a third-party buyer may not be willing to pay a premium over the current market price of the Company's common stock to acquire a controlling interest in Calyxt. The Company's stockholders would not have the right to participate in Collectis' sale of its common stock to a third-party buyer nor would the third-party buyer be required to make an offer to acquire shares of the common stock from any stockholder other than Collectis.

If Collectis sold a controlling interest to a third party, any change-of-control premium on shares of the Company's common stock would only accrue to Collectis and not to any of the Company's other stockholders. Additionally, through its ownership of a majority of its common stock and its contractual rights under the stockholders' agreement, Collectis will also determine whether a change of control of Calyxt occurs and if so, on what terms. In certain circumstances, including in connection with a proposed sale of Calyxt, Collectis' interests as a stockholder of Calyxt may be different than the interests of other stockholders.

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Future sales of common stock by Collectis or others of the Company's common stock, or the perception that such sales may occur, could depress the market price of its common stock.

As of December 31, 2021, Collectis owned 61.8 percent of the Company's outstanding shares of common stock. Future sales of these shares in the public market will be subject to the volume and other restrictions of Rule 144 under the Securities Act for so long as Collectis is deemed to be the Company's affiliate, unless the shares to be sold are registered with the SEC. If Collectis were to register its shares with the SEC, it could dispose of them at will. The Company is unable to predict with certainty whether or when Collectis will sell a substantial number of shares of the Company's common stock. The sale by Collectis of a substantial number of shares, or a perception that such sales could occur, could significantly reduce the market price of the Company's common stock.

Collectis and the Company's directors who have relationships with Collectis may have conflicts of interest with respect to matters involving the company.

The Company's certificate of incorporation provides that none of Collectis, or any of its officers, directors, agents, shareholders, members, partners, subsidiaries (other than Calyxt and any future subsidiaries) and their affiliates will be liable to the Company or its stockholders for breach of any fiduciary duty by reason of the fact that Collectis or any such individual directs a corporate opportunity to Collectis or its affiliates instead of the Company, or does not communicate information regarding a corporate opportunity to the Company that such person or affiliate has directed to Collectis or its affiliates.

The Company's certificate of incorporation also provides that neither Collectis nor any of its affiliates or any of the Company's nonemployee directors will have any duty to refrain from engaging in a corporate opportunity in the same or similar lines of business in which it or any future subsidiaries now engage or propose to engage or otherwise competing with it or any of its future subsidiaries.

The Company's license agreement with Collectis does not restrict Collectis from competing with the Company generally. Collectis could develop and commercialize agricultural and food products that may compete with the Company's current products or products in its pipeline using Collectis intellectual property or technologies other than the gene editing technologies Collectis has licensed to the Company. Collectis could also use the licensed gene editing technologies to develop and commercialize products involving animals and animal cells and these animal-based products may be competitive with the Company's plant-based products in certain circumstances.

One of the Company's directors, Laurent Arthaud, is also a director of Collectis, and Collectis has the right to designate additional directors to serve on the Calyxt board of directors. Mr. Arthaud and any other directors designated by Collectis who have relationships with Collectis will have fiduciary duties to the Company and in addition will have duties to Collectis.

Accordingly, there may be real or apparent conflicts of interest with respect to matters affecting both the Company and Collectis, whose interests, in some circumstances, may be different than the interests of other stockholders or its interests.

The concentration of ownership of the Company's common stock and provisions in its Certificate of Incorporation, Bylaws and Delaware law may prevent or delay an acquisition of the Company, which could decrease the trading price of its common stock.

The fact that Collectis owns 61.8 percent of the Company's common stock and Collectis' rights under the stockholders' agreement to approve a sale of Calyxt and other changes to the Board of Directors and management will prevent a third party from attempting to acquire control of Calyxt and prevent changes to the Board of Directors or management, even if a sale of Calyxt or the changes would be considered beneficial by many stockholders other than Collectis.

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Following the first date on which Collectis no longer beneficially owns more than 50 percent of the outstanding shares of the Company's common stock, certain provisions of its certificate of incorporation, bylaws and other agreements may make it more difficult for a third party to acquire or discourage a third-party from attempting to acquire control of Calyxt. These provisions could also make it more difficult for a third party to acquire the Company, even if the third party's offer may be considered beneficial by many stockholders, including transactions in which its stockholders might otherwise receive a premium for their shares of the Company's common stock. Further, these provisions could limit the price that investors might be willing to pay in the future for shares of the Company's common stock, possibly depressing the market price of its common stock. As a result, stockholders may be limited in their ability to obtain a premium for their shares both while ownership of the Company's common stock is concentrated with Collectis and after.

The Company is a "controlled company" within the meaning of the rules of the Nasdaq Global Market and, as a result, relies on exemptions from certain corporate governance requirements. The Company's stockholders do not have the same protections afforded to stockholders of companies that are subject to such requirements.

Because Collectis controls the majority of the voting power of the Company's outstanding common stock, it is a "controlled company" within the meaning of the corporate governance standards of the Nasdaq Global Market. Under these rules, a listed company of which more than 50 percent of the voting power is held by an individual, group or another company is a "controlled company" and may elect not to comply with certain corporate governance requirements, including the requirement to have a majority independent board of directors or fully independent nominating and compensation committees. The Company is relying upon and expects to continue to rely upon some of these exemptions from the Nasdaq Global Market corporate governance requirements. Accordingly, not all stockholders will have the same protections afforded to stockholders of companies that are subject to all the corporate governance requirements of the Nasdaq Global Market.

The Company is an "emerging growth company" and has reduced disclosure requirements that may make its common stock less attractive to investors.

The Company is an "emerging growth company," as defined in the JOBS Act, and takes advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not "emerging growth companies" including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in its periodic reports and proxy statements, and not being required to submit certain executive compensation matters to stockholder advisory votes, such as "say-on-pay," "say-on-frequency" and "say-on-golden parachutes". Investors may find the Company's common stock less attractive because of its reliance on these exemptions and, as a result, there may be a less active trading market for its common stock and its stock price may be more volatile.

Risks Related to the Organization and Governance

Changes to the Company's strategic business focus have placed significant demands on the Company's management and the Company's infrastructure.

Since the Company's initial public offering, the strategic focus of the business has undergone changes. Most recently, in October 2021, the Company announced the launch of a strategic initiative which focused it on engineering synthetic biology solutions. The changes to the Company's strategic focus has placed, and may continue to place, significant demands on the Company's management and its operational and financial infrastructure. Managing a significant change in business focus requires significant expenditures and allocation of valuable management resources. If the Company fails to achieve the necessary level of efficiency in its organization as it evolves, its business, financial condition and results of operations would be adversely impacted.

The Company depends on key management personnel and attracting and retaining other qualified personnel, and its business could be harmed if it loses key management personnel or cannot attract and retain other qualified personnel.

The Company's success depends to a significant degree upon the technical skills and continued service of certain members of its management and other key employees. The loss of the services of the Company's management or key employees may delay or prevent the timely and successful execution of its business strategies and objectives. The Company's business is dependent on its ability to recruit and maintain a highly skilled and educated workforce with expertise in a range of disciplines, including biology, biochemistry, plant genetics, mathematics, and other subjects relevant to its operations. The Company's ability to successfully implement its strategic focus also depends on recruiting and retaining personnel with the necessary background and ability to understand its systems at a technical level to effectively identify and sell to potential new customers. Competition for these highly skilled employees is intense.

To attract top talent, the Company believes it will need to offer competitive compensation and benefits packages, including equity incentive compensation, which may require significant investment. If the Company is unable to offer competitive compensation this may make it more difficult for it to attract and retain key employees. Moreover, if the perceived value of the Company's equity awards declines, it may adversely affect the Company's ability to attract and retain key employees. Further, all of the Company's current employees are employed at-will and could depart with little or no prior notice. If the Company does not maintain the necessary personnel to accomplish its business objectives, it may experience staffing constraints that adversely affect its ability to support its R&D programs, customer acquisition efforts, and operations.

There can be no assurance that the Company will be successful in attracting or retaining such personnel and the failure to do so could have a material adverse effect on its business, financial condition, and results of operations.

The Company's business and operations would suffer in the event of computer system failures, cyber-attacks, or a deficiency in its cyber-security.

Increased information systems security threats, cyber- or phishing-attacks and more sophisticated, targeted computer invasions pose a risk to the security of the Company's systems and networks, and the confidentiality, availability, and integrity of its data, operations, and communications, and the exposure to such risks is enhanced in the Company's remote work environment as a result of the COVID-19 pandemic. Cyber-attacks against the Company's technology platform and infrastructure could result in exposure of confidential information, the modification of critical data, and/or the failure of critical operations. Likewise, improper or inadvertent employee behavior, including data privacy breaches by employees and others with permitted access to the Company's systems may pose a risk that sensitive data may be exposed to unauthorized persons or to the public. While the Company attempts to mitigate these risks by employing a number of measures, including security measures, employee training, comprehensive monitoring of networks and systems, maintenance of backup and protective systems, and incident response procedures, if these measures prove inadequate, the Company could be adversely affected by, among other things, loss or damage of intellectual property, proprietary and confidential information, data integrity, and communications or customer data, increased costs to prevent, respond to, or mitigate these cyber security threats and interruptions of its business operations.

The Company's business activities are currently conducted at a limited number of locations, which makes it susceptible to damage or business disruptions caused by natural disasters or acts of vandalism.

The Company's current headquarters and R&D facilities, which include an office, labs, the BioFactory pilot facility, greenhouses, and field-testing plots are in Roseville, Minnesota. The Company takes precautions to safeguard its facilities, including insurance, health and safety protocols, and off-site storage of critical research results and computer data. Although the Company maintains levels of insurance that it believes are customary for

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its industry, its insurance policies may not cover certain losses, or losses may exceed the Company's coverage limits. A natural disaster, such as a hurricane, drought, fire, flood, tornado, earthquake, or other intentional or negligent acts, including acts of vandalism, could damage or destroy the Company's equipment, inventory, development projects, data, and cause it to incur significant additional expenses to repair or replace the damaged physical facilities, which increase the development schedule for the products under development for customers.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the documents incorporated herein contain “forward-looking statements” within the meaning of the federal securities laws, including Section 27A of the Securities Act and Section 21E of the Exchange Act.

Calyxt has made these forward-looking statements in reliance on the safe harbor provisions of the 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 prospectus supplement and the documents incorporated herein include statements about the Company’s future financial performance, including its cash runway; its product pipeline and development; the Company’s business model and strategies for the development, commercialization and sales of commercial products; commercial demand for its synthetic biology solutions; the development and deployment of its PlantSpring technology platform; its ability to deploy and leverage its artificial intelligence and machine learning (AIML) capabilities; the ability to scale production capability for its BioFactory production system; potential development agreements, partnerships, customer relationships, and licensing arrangements and their contribution to the Company’s financial results, cash usage, and growth strategies; the potential impact of the COVID-19 pandemic on the Company’s business and operating results; and anticipated trends in its business.

These and other forward-looking statements are predictions and projections about future events and trends based on Calyxt’s current expectations, objectives, and intentions and are premised on current assumptions. Calyxt’s 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 impact of increased competition, including competition from a broader array of synthetic biology companies;
- competition for customers, partners, and licensees and the successful execution of development and licensing agreements;
- disruptions at its key facilities, including disruptions impacting its BioFactory production system;
- flaws in AIML algorithms, insufficiency of data inputs required by such algorithms, and human error in interacting with AIML;
- changes in customer preferences and market acceptance of its products; changes in market consensus as to what attributes are required for a product to be considered “sustainable”;
- the impact of adverse events during development, including unsuccessful pilot production of plant-based chemistries or field trials;
- the impact of improper handling of its product candidates during development;
- failures by third-party contractors; inaccurate demand forecasting or milestone and royalty payment projections;
- the effectiveness of commercialization efforts by commercial partners or licensees; disruptions to supply chains, including raw material inputs for its 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;

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- the severity and duration of the evolving COVID-19 pandemic and the resulting impact on macro-economic conditions;
- other important factors discussed under the heading “Risk Factors” in this prospectus supplement, as may be amended or supplemented by Calyxt’s subsequent reports on Forms 10-Q and 8-K filed with the SEC.

While the list of factors presented here is considered representative, no such list should be considered to be a complete statement of all potential risks and uncertainties. Unlisted factors may present significant additional obstacles to the realization of forward-looking statements. Any of these factors, in whole or in part, could materially and adversely affect Calyxt’s business, financial condition, results of operations and the price of Calyxt’s common stock.

Any forward-looking statement made by Calyxt in this prospectus supplement and the documents incorporated by reference herein or therein is based only on information currently available to Calyxt and speaks only as of the date of this prospectus supplement or such incorporated document, as the case may be. Calyxt does not assume any obligation to publicly provide revisions or updates to any forward-looking statements after the date of the document in which such statement appears, whether as a result of new information, future developments or otherwise, should circumstances change, except as otherwise required by securities and other applicable laws.

You should read this prospectus supplement together with the documents Calyxt has filed with the SEC that are incorporated by reference and any free writing prospectus that the Company may authorize for use in connection with this offering completely and with the understanding that Calyxt’s actual future results may be materially different from what Calyxt currently expects. Calyxt qualifies all of the forward-looking statements in the foregoing documents by these cautionary statements.

BUSINESS

Company Overview

Calyxt, Inc. was founded in 2010 and incorporated in Delaware. Calyxt is a plant-based synthetic biology company that leverages its proprietary PlantSpring™ technology platform to engineer plant metabolism to produce innovative, high-value plant-based chemistries for use in customers' materials and products. As plant-based solutions, the Company's synthetic biology products can be used in helping customers meet their sustainability targets and financial goals. The Company is focused on developing these synthetic biology solutions for customers in large and differentiated end markets, including the cosmeceutical, nutraceutical, and pharmaceutical industries, which are the Company's initial target markets.

The Company will produce its plant-based chemistries in its proprietary BioFactory™ production system. This strategic initiative was announced in October 2021. In the context of the Company's PlantSpring technology platform and BioFactory production system, the term "sustainable", as used herein, refers to the plant-based chemistry production methods that use plant biomass as a raw material and are therefore renewable and do not completely use up or destroy natural resources.

The Company also out-licenses elements of the PlantSpring technology platform, has historically developed seed-trait product candidates for the traditional agriculture market, and may selectively develop products for customers in traditional agriculture. For example, in the third quarter of 2021, the Company announced it had entered into a research collaboration with a global food ingredient manufacturer based in Asia to develop an improved soybean capable of producing oil that would serve as a commercial alternative to palm oil.

The Company was previously focused on the development of traits for traditional agriculture that it planned to commercialize using either a vertically integrated or licensing business model. The Company's first commercial product, a high oleic soybean, was launched in this manner in the first quarter of 2019. In August 2020, the Company announced it was winding down the vertically integrated soybean product line. The wind-down of this product line was completed in late 2021 with the final sales of soybean grain to a large soybean processor. The Company's second product, an improved digestibility alfalfa, was developed with and licensed to S&W Seed Company (S&W). S&W is pursuing regulatory clearance for their product candidate and is targeting commercialization in 2022 at which time the Company expects to begin to receive royalty payments. The Company intends to use this licensing strategy for other historically developed, traditional agriculture seed-trait product candidates.

The Company has historically operated in a single segment primarily within the United States and its assets are located within the United States.

Prior to its initial public offering (IPO) on July 25, 2017, the Company was a wholly owned subsidiary of Collectis S.A. (Collectis). As of December 31, 2021, Collectis owned 61.8 percent of the Company's issued and outstanding common stock. Collectis has certain contractual rights as well as rights pursuant to the Company's certificate of incorporation and bylaws, in each case, for so long as it maintains threshold beneficial ownership levels in the Company's shares.

The PlantSpring Technology Platform, AIML Capabilities, and Calyxt's Development Process

The PlantSpring technology platform is founded on the Company's more than a decade of experience engineering plant metabolism and incorporates its scientific knowledge, its proprietary systems, tools and technologies, and an expanding set of artificial intelligence and machine learning (AIML) capabilities. Through the PlantSpring platform, the Company seeks to unleash the natural capabilities of plants—the original biological systems—and make available commercial innovations that produce unique plant-based chemistries from plant species, including rare or undomesticated species, in a manner that the Company believes is more robust and sustainable than other methods of production.

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Plants naturally produce many chemistries that may be valuable inputs for end products. Of the approximately 170,000 known and classified compounds derived from plants, bacteria, and fungi, approximately 78 percent are derived from plants. Moreover, some estimates suggest that there may be up to one million additional chemical compounds yet to be discovered.

However, the yield of plant-based chemistries that occurs naturally may be insufficient for commercialization using traditional production methods, the plant that produces the chemistry may be scarce in nature or difficult to harvest, or there may be a socioeconomic concern with the harvest of the plant producing the chemistry. Additionally, the quality or quantity of a natural plant chemistry may be inconsistent, varying considerably over each variety, harvest, or field, and can be impacted by different contaminants in the soil where grown.

In PlantSpring, the Company identifies metabolic pathways to produce plant-based chemistries, designs strategies to reprogram host cells, engineers plant cell metabolism to optimally produce targeted compounds, and produces those targeted compounds at laboratory scale.

The Company has implemented AIML capabilities for the identification of targets for editing specific genetic pathways and continues to develop AIML capabilities across the PlantSpring platform, which will enable learning and adaptation of knowledge gained from past activity and are expected to be combined with predictive analytics to rapidly prototype and provide feedback, accelerate the time to complete the development cycle and help mitigate the risk associated with commercial scale-up. The Company expects to leverage its deep scientific experience and vast amounts of data that it has accumulated over its history, including a large proprietary database of genomic information across numerous plant species, in its future AIML development efforts.

The Company uses an efficient development process to deliver innovation through PlantSpring platform, leveraging its extensive knowledge of plants and their metabolism when developing a plant-based chemistry. The Company's synthetic biology product development process is comprised of three primary stages: Design, Engineer, and Verify. The development process is also designed to use an iterative learning mechanism through which accumulated knowledge is leveraged. As the Company expands and develops its AIML capabilities, Calyxt intends to utilize them throughout the balance of the PlantSpring development cycle. The typical timeline to complete the Design-Engineer-Verify process is currently estimated at twelve months, at which point the verified chemistry would advance to pilot production. With the expansion and further deployment of its AIML capabilities and systematic learning as additional compounds move through the development process, the Company expects this development cycle time may be accelerated. Additional development time is required to achieve commercial scale for compounds to be produced in the BioFactory production system, as discussed below.

- **Design**—identify metabolic pathways to produce the target compound and the genes controlling these pathways, develop strategies for the optimized expression of the target genes, and design the technical approach to achieve the production of the targeted compound. A metabolic pathway is a linked series of chemical reactions occurring within a cell. The reactants, products, and intermediates of an enzymatic reaction are known as metabolites, which are modified by a sequence of chemical reactions catalyzed by enzymes.
- **Engineer**—direct changes in the plant cells using one or more genetic transformation and plant tissue culture techniques, and enhancements of genes in that plant species.
- **Verify**—use a combination of analytical tools to verify the compound produced against the customer's specifications. The analytical tools used include natural product chemistry, metabolomics, genomics, gene expression tools, and other analytics.

The Company is in the process of implementing AIML more broadly to assist in the identification of pathways and targets, and in scaling production beyond the laboratory. The Company has a near term focus of

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expanding current AIML capabilities in the Design and Engineer phases of development and expanding AIML capabilities toward optimizing pilot production, reducing production variables and designing critical steps in the scale-up process.

As the Company incorporates AIML techniques further into its development process it has the aim of accelerating development cycles and reducing development costs, improving and influencing its rapid prototyping capabilities, and discovering new pathways or new plant-derived compounds for future commercialization efforts. Because of the promise of AIML and the Company's focus on expanding its AIML capabilities, the Company believes it will be able to develop compounds in plants for customers at faster speeds than its competitors in the synthetic biology industry.

Commercialization Strategies

The Company intends to commercialize its PlantSpring technology platform using three strategies: (i) the development and sale of high-value synthetic biology products from the Company's proprietary BioFactory production system, (ii) the licensing of elements of the PlantSpring technology platform and historically developed, traditional agriculture seed-trait product candidates, and (iii) selective product development for customers in traditional agriculture. The Company's current focus is on development of synthetic biology products for its customers using its BioFactory production system.

The BioFactory Production System

The BioFactory is a bioreactor-based production system that is designed to be capable of continuous production of plant-based chemistries. The bioreactor can be of any size depending upon factors including yield and titer necessary to reach the required commercial scale. For production, multicellular Plant Cell Matrix™ (PCM™) structures are placed inside the bioreactor, and hormone-free growth media bathes the PCM structures to provide them with nutrition, which differentiates the Company's process from other methods that require complete submersion of cells in growth media and/or the application of hormones to facilitate growth. A PCM structure is a living system of various cell types, which is designed to emulate the intercellular metabolism of an entire plant, that grows over time and produces and stores, or excretes, the target chemistries. The growth media is the feedstock of the BioFactory production system and contains the essential inputs to support growth of the PCM structures and necessary chemistry production. The growth media is expected to be reused throughout the production cycle, which may run for an extended time period. To scale production in the BioFactory production system, the Company expects to move the PCM structures from its current bioreactor into larger capacity bioreactors or groups of bioreactors.

The Company began running lab-scale bioreactors in early 2021. The Company's first pilot-scale bioreactor became operational in December 2021 and is scalable up to 200 liters. Since activation of the pilot-scale bioreactor, the Company has successfully produced proof-of-concept compounds—ovalbumin, a plant-based protein, and betanin, a red colorant typically derived from beets. The pilot stage of development takes a compound developed with the PlantSpring platform through to commercial production. Depending on the compound to be produced, there may be a range of vessel sizes between the initial pilot facility and the commercial production facility. The Company's current plan is to engage third parties, referred to as infrastructure partners, for at-scale commercial production. Infrastructure partners are likely to be companies with processing assets that can be converted from current production to the Company's bioreactor-based approach. If an infrastructure partner is used for production, the Company expects to pay a fee for that production. Because of the expected modular nature of the BioFactory production system and the types of high value compounds the Company expects to develop for customers, it is also possible that commercial production could also occur in a customer's in-house facility. The Company expects to expand the scope of its pilot facilities based on customer demand, and the scope of production could extend, subject to regulatory and other considerations, outside the United States.

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The Company believes the typical development time from initiation of the pilot stage of development through to commercialization is 24 months with the customer addressing formulation and regulatory matters. Some industries, such as pharmaceuticals, are expected to have a longer path to regulatory clearance. In combination with the Design-Engineer-Verify stages of the development process, the timeline to achieve commercial availability is currently estimated at approximately 36 months, subject to potential regulatory extensions for certain industries. As the Company broadens, develops and deploys its AIML capabilities across the development process, the Company anticipates that this timeline can be accelerated for future development efforts.

In parallel with developing additional AIML capabilities across the PlantSpring platform, the Company is developing its AIML capabilities to increase the efficiency and productivity of the BioFactory system. Synthesizing plant-based chemistry in the BioFactory system at scale involves optimizing a large number of parameters. AIML approaches to planning, designing, executing, and analyzing BioFactory production runs are expected to enable the Company to tune the operation of the BioFactory system through prediction and refinement of the optimal operating points for each targeted compound. The enormous amount of data produced by the BioFactory system will be augmented with synthetic experiments generated from the Company's process models that are expected to enable it to explore and model many more combinations of control settings than can be achieved in the absence of AIML.

Based on the customer demand-driven approach to product development that the Company is expecting to employ, it anticipates that the compounds it produces in the BioFactory system will be primarily replacements or enhancements of plant-based chemistries that are hard to source, either because they are scarce in nature or difficult to harvest, or where there may be a socioeconomic concern with the harvest of the plant producing the chemistry. The Company may also selectively explore the development of high-value and novel plant-based chemistries without a partner and may opt to bring these to market using its own resources.

The Company also believes the BioFactory system has the potential to be a highly sustainable synthetic biology production system because of the BioFactory's production methodology, which relies upon a limited quantity of media and nutrients in a continuous flow system that operates for long periods of time, potentially more than one year, in an operating cycle. The BioFactory system involves fewer of the sustainability challenges associated with other traditional plant-based indoor and outdoor production systems, including excess heating, cooling, fertilizer and pesticide uses, and because the BioFactory does not use fermentation, there is no off-gassing, the media can be recycled, and only depleted components are replaced resulting in lower waste levels. This production method is expected to align well with customers' goals of replacing existing compounds that may be scarce in nature, have an unstable supply chain, cannot be produced through fermentation or other similar methods, or are currently produced in a non-sustainable process, with high-value, sustainable, plant-based synthetic biology compounds.

As a result, the Company believes that in combination its PlantSpring technology platform and its BioFactory production system are capable of unlocking the power of plants to produce high value and complex plant-based chemistries that are finite, that are difficult to source sustainably, that may not be able to be produced through other production systems, or that cannot be produced as efficiently in single cell plant culture systems.

The Company's go-to-market strategy for BioFactory-produced compounds is expected to be customer demand-driven. The strategy encompasses customer needs, the Company's development and production capabilities, and seeks to drive financial returns throughout the product's lifecycle. The Company has developed a set of criteria it employs to evaluate customer-driven opportunities and ensure focus for its development efforts. Those criteria include the nature of the customers' need, the capabilities of the BioFactory system, the estimated size of the customers' demand for targeted compound, the customers' anticipated speed of adoption, and potential financial returns.

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The Company currently targets having two to four plant-based chemistries in its development process by the end of 2022 and each year thereafter.

From a financial standpoint, the Company anticipates that its customers may fund the development of their compounds, and once at-scale production is achieved, the customers are expected to purchase their compounds from the Company pursuant to supply agreements. The Company also anticipates that customers will be responsible for any regulatory activities associated with development of their commissioned compounds.

Technology Licensing & Product Development for Agriculture

In addition to the core demand-driven synthetic biology solutions to be executed through the PlantSpring platform and the BioFactory system, the Company maintains the capability to implement broad technology licensing arrangements and to selectively develop agricultural products. The Company may pursue commercial opportunities for the licensing of elements of the PlantSpring technology platform as well as historically developed, traditional agriculture seed-trait product candidates.

With respect to licensing opportunities for select elements of the PlantSpring technology platform, the opportunities span the Company's intellectual property portfolio built for more than a decade as a leading plant-based biotechnology company, including multiple gene editing platforms, plant breeding, and other capabilities. The Company's PlantSpring technology platform has been utilized to drive industry-leading modernization of the hemp species, including improved characteristics for protein and oil production and use in advanced materials. Hemp can also contribute to enhancing a wide variety of materials, including strengthening plastics, reducing petroleum-based content, and providing greater strength and longevity compared to other plant-based fabrics like linen or cotton. The Company has successfully transformed the hemp genome and also has produced "pollen-proof" (seedless) hemp with its triploid breeding technology. Combined, the Company's hemp advancements offer significant potential advantages in innovation, crop management, and harvest yield.

Additional technology-licensing activity may also continue in connection with the licensing of historically developed, traditional agriculture seed-trait product candidates, including soybeans with improved fatty-acid profiles; an improved digestibility alfalfa, which has been licensed for commercialization to S&W; wheat with a higher fiber content than traditionally bred varieties, and its second generation soybean product, which has an improved fatty acid profile compared to commodity soybeans and the Company's initial soybean product launched in 2019. Among the Company's other development successes are a soybean with improved flavor to help enable wider adoption for plant-based protein applications and controlling the production of storage sugars in potatoes to improve fry quality and reduce acrylamide. While the Company will pursue licensing opportunities for these product candidates, it expects there will be limited investment in further development until licensee customers are identified.

The Company may also continue to opportunistically develop seed-trait product candidates for customers focused on traditional outdoor agriculture market. For example, in the third quarter of 2021, the Company announced that it had entered into a research collaboration with a global food ingredient manufacturer based in Asia to develop an improved soybean capable of producing an oil that would serve as a commercial alternative to palm oil.

To manage prioritization of resources and to drive returns on its investment, the Company has developed a set of criteria by which all agricultural seed trait licensing and seed trait development opportunities are evaluated, which include the size of the overall opportunity, the nature of the product to be developed, and the amount of cash it expects to receive both up front and over time.

Research and Development

The Company's proprietary technologies and intellectual property portfolio are focused on the PlantSpring technology platform, BioFactory production system, TALEN, and other adjacent technologies, data analytics, plant breeding, systems, and work processes.

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The Company's Research and Development ("R&D") team has technical expertise in AIML, biochemistry, bioinformatics, chemistry, genetics and genetic engineering, molecular biology, plant physiology, tissue culture techniques, and other related fields. The Company's R&D activities are conducted principally at its Minnesota facility. The Company's current R&D cash usage consists of the following:

- Continued investments in the development, enhancement and deployment of the Company's AIML capabilities;
- Expenses to continue to enhance the capabilities of its PlantSpring technology platform and BioFactory system, including chemistry, natural product chemistry isolation and purification, and capital assets for advanced analytics systems; and
- Various expenses and capital expenditures to expand its BioFactory production system from lab through various pilot vessel sizes.

The Company has made, and will continue to make, substantial investments in R&D.

Market and Industry Overview

Calyxt believes that it has a unique opportunity to revolutionize how the world uses plants. The Company's focus is on innovating in the space where customers' needs to consume finite resources and their enhanced focus on the sustainability of the planet intersect. The global economy today faces numerous sustainability challenges, as evidenced by metrics such as carbon pollution, water scarcity, and soil erosion. To address their sustainability goals, many companies must produce products differently, and plant—based chemistries represent a differentiated and a more sustainable alternative to many products and materials in use today. More than 20 percent of the world's 2,000 largest public companies have committed to carbon-neutrality, supporting a shift to plant-based solutions.

The synthetic biology industry has expanded significantly over the past several years. New companies are being formed, investment capital is being deployed, and the number of public exits for once-private synthetic biology companies have accelerated. Companies within this group are pursuing novel methods of production to replace current approaches to the production of various compounds or products. Examples of such compounds include plant-based proteins, colorants, advanced materials, pharma-grade products (such as vaccine adjuvants and antibiotics), and many others. The Company believes it is the only company in the synthetic biology industry exclusively using plants as its core innovation species, with most competitors focused on single-cell organisms including yeast, bacteria (such as *e coli*), and algae.

Target addressable markets for the BioFactory are expected to be valuable and diverse because plant-based synthetic biology can be used to produce compounds and products relatively quickly and cost-effectively, and with many desirable sustainability features. The Company believes that potential end markets for plant-based sustainable solutions are vast. In the near term, the Company intends to focus its customer activation and development efforts in a narrower market segmentation where it believes its current BioFactory capability gives it the best opportunity to capture a share of the addressable market. These end markets include the cosmeceutical, nutraceutical, and pharmaceutical industries. These end markets contain attractive potential customers, as many significant market participants are taking action to achieve corporate sustainability targets and to reduce their carbon footprints.

The Company also maintains the capability to implement broad technology licensing arrangements and to develop agricultural product candidates. Under the technology licensing and product candidate development for agriculture strategies, the Company expects that its potential customers will primarily be seed companies, biotechnology companies, germplasm providers, large agricultural processors, and others in the relevant plant species' supply chain. The Company will also continue to opportunistically develop seed traits for customers focused on traditional agriculture.

Intellectual Property

Intellectual property protection is key to the Company. As of December 31, 2021, the Company's patent estate is composed of patents and patent applications owned by the Company and in-licensed from other parties. Most of the in-licensed patents and patent applications are licensed from Collectis or the University of Minnesota. The license from Collectis includes technologies invented at Collectis, technologies invented by the Company when it was a wholly owned subsidiary of Collectis, and technologies licensed to Collectis from third parties. The Company also has access to additional patents and patent applications through in-licensing agreements with other research institutions and universities.

The Company's patent portfolio is categorized into three major platforms: PlantSpring, BioFactory and other products, and Licensing. Some patents and patent applications are applicable to multiple platforms, and as such are included in multiple categories.

The PlantSpring platform elements of the Company's patent portfolio is intellectual property used with its PlantSpring platform and includes gene-editing technologies and hemp breeding technologies. This portion of the Company's patent portfolio includes nearly 150 patents and patent applications worldwide.

The BioFactory and products platform elements of the Company's patent portfolio includes outputs from its BioFactory, gene edited crops, and its Plant Cell Matrix, or PCM technology. This portion of the Company's patent portfolio includes approximately 40 patents and patent applications worldwide.

The technologies available for licensing within the Company's patent portfolio includes in-licensed technology and Calyxt-originated IP, and includes gene-editing technologies (e.g., TALEN®), gene-edited traits for agriculture, and hemp breeding technologies. This portion of the Company's patent portfolio includes approximately 550 patents and patent applications worldwide.

The Company is actively involved in the prosecution and protection of its technology. The Company's global patent portfolio includes approximately 68 patent families comprised of 413 patents and 125 patent applications. Of those patents, 39 have been issued in the United States, with the remaining issued in key geographies outside the United States, primarily Europe, Japan, and China. This number also includes European patents validated in individual European countries. Of those patent applications, approximately 30 are pending in the United States, with the remaining pending as international applications or country-specific applications in key geographies outside the United States.

Individual patent terms extend for varying periods of time, depending upon the date of filing of the patent application, the date of patent issuance, and the legal term of patents in the countries in which they are obtained. The issued patents that the Company has licensed in will expire on dates ranging from 2022 to 2037. If patents are issued on the pending patent applications owned by the Company or that it has in-licensed, the resulting patents are projected to expire on dates ranging from 2022 to 2042. The Company does not believe that the expiration of any patents expected to occur during 2022 would have a material effect on the Company's business, including any impact on its future operations and financial position. For more information regarding the risks related to the Company's intellectual property, please see "Risk Factors—Risks Related to Intellectual Property."

License Agreement with Collectis

Through its license agreement with Collectis, the Company has access to intellectual property that broadly covers the use of engineered nucleases for plant gene editing. This intellectual property covers methods to edit plant genes using "chimeric restriction endonucleases," which include TALEN, CRISPR/Cas9, zinc finger nucleases, and some types of meganucleases. The Company believes this umbrella intellectual property applies broadly across gene editing in plants and makes it a key player in the gene editing intellectual property space.

Under its license agreement with Collectis, the Company has exclusive sublicense rights (subject to existing non-exclusive sublicenses to third parties) to intellectual property exclusively licensed to Collectis from the

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University of Minnesota in the field of researching, developing, and commercializing agricultural and food products, including traits, seeds, and feed and food ingredients (excluding any application in connection with animals or animal cells). These patent applications cover the use of DNA replicons for gene editing.

The Company has also been granted a non-exclusive license to use the TALEN trademark in connection with its use of licensed products under the agreement. Any improvements it makes to the in-licensed intellectual property are owned by the Company and licensed back to Collectis on an exclusive basis for any use outside of its exclusive agricultural field of use. The exclusivity of the Company's license agreement with Collectis is subject to certain non-exclusive licenses Collectis granted to third parties in the field of research.

In consideration for the license from Collectis, the Company is required to pay to Collectis, on a product-by-product and country-by-country basis, a royalty of three percent of net sales less certain items as defined, including costs for grain and seed of any products that are covered by the patents licensed from Collectis. In addition, the Company is required to pay Collectis 30 percent of revenue it receives for sublicensing its rights under the agreement to third parties. The Company's payment obligations to Collectis will expire upon the expiration of the last-to-expire valid claim of the patents licensed to the Company by Collectis.

Under the Company's license agreement with Collectis, and as between the parties, Collectis has the first right to control the prosecution, maintenance, defense and enforcement of the licensed intellectual property and the Company will have the right to step in and assume such control with respect to the patents owned by Collectis and exclusively licensed to it under the agreement if Collectis elects to not prosecute, maintain, defend, or enforce such patents. In certain circumstances, if Collectis elects to abandon any patents owned by Collectis and exclusively licensed to the Company under the agreement, it has the right to assume ownership of such patents. In addition, some of the intellectual property that is licensed to the Company by Collectis consists of a sublicense of intellectual property originally licensed to Collectis by the University of Minnesota. The Company's license from Collectis is subject to the license agreement between the University of Minnesota and Collectis and should its activities under such sublicense violate the license agreement between Collectis and the University of Minnesota, the Company is responsible for any related damages that Collectis may incur. In addition, the Company is required to reimburse Collectis for any payments made by Collectis to the University of Minnesota pursuant to the license agreement between the University of Minnesota and Collectis to the extent that such payments are required to be made as a result of its applicable activities. Under the license agreement between Collectis and the University of Minnesota, the University of Minnesota has the first right to control the prosecution and maintenance of the licensed intellectual property.

The Company's license agreement with Collectis is perpetual. However, the agreement may be terminated at any time upon the mutual written agreement of both parties, either party's uncured material breach of the agreement, or upon certain bankruptcy and insolvency related events.

License Agreement between Collectis and Regents of the University of Minnesota—TALEN

In January 2011, Collectis entered into an exclusive license agreement with the University of Minnesota, which was amended in 2012, 2014 and 2015. Pursuant to the agreement, as amended, Collectis and its affiliates were granted an exclusive, worldwide, royalty-bearing, sublicensable license, under certain patents and patent applications owned by the University of Minnesota, to make, use, sell, import, and otherwise dispose of products covered by the licensed patents, in all fields of use. These licensed patents relate to TALEN molecules and their use in gene editing.

Pursuant to the agreement, with respect to the agricultural field, Collectis is required to pay to the University of Minnesota a yearly fee, as well as a commercialization fee for every seed variety containing new traits developed using the licensed technology. Collectis is also required to pay the University of Minnesota milestone payments based on the net sales of licensed products in the agricultural field. Collectis must also pay the University of Minnesota certain patent-related expenses for prosecuting and maintaining the licensed patents; and

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under the Company's license agreement with Collectis, it is obligated to reimburse Collectis for these prosecution costs.

The agreement will expire upon the expiration of the last to expire valid claim of the licensed patents. The University of Minnesota may terminate the agreement upon advance written notice in the event of the insolvency or bankruptcy of Collectis, and immediately upon written notice if Collectis challenges the validity or enforceability of any licensed patent in a court or other applicable authority. Collectis and the University of Minnesota may terminate the agreement by written notice in the event of the other party's breach that has not been cured within a specified number of days after receiving notice of such breach.

Trademarks

As of December 31, 2021, the Company had 24 registered trademarks in the United States.

Government Regulation and Product Compliance

The Company's PlantSpring technology platform and its BioFactory production system operate in contained environments without the need for outdoor cropping systems. Any regulated materials used under this process, such as specific bacteria, are therefore subject to well-defined regulations in the United States.

The Company's development and production processes involve the use, generation, handling, storage, transportation and disposal of hazardous chemicals and regulated biological materials. The Company is subject to a variety of federal, state, and local laws, regulations and permit requirements governing the use, generation, manufacture, transportation, storage, handling and disposal of these materials in the United States. In the future, to the extent the Company may operate or sell its products outside the United States, the Company would be subject to corresponding international laws and regulations. These laws, regulations and permits can require expensive fees, exposure or pollution control equipment or operational changes to limit actual or potential impact of the Company's technology on the environment and violation of these laws could result in significant fines, civil sanctions, permit revocation or costs from environmental remediation. Future developments, including the commencement of or changes in the processes relating to commercial manufacturing of one or more of the Company's products, more stringent environmental regulation, policies and enforcement, the implementation of new laws and regulations or the discovery of unknown environmental conditions, may require expenditures that could have a material adverse effect on the Company's business, results of operations or financial condition.

Hemp, as defined in the 2018 Farm Bill as *Cannabis sativa* containing a delta-9 tetrahydrocannabinol ("THC") concentration of not more than 0.3 percent on a dry weight basis, has been removed from the United States Federal Controlled Substances Act and is legally distinct from marijuana/cannabis, which is *Cannabis sativa* containing a THC concentration of more than 0.3 percent on a dry weight basis. Hemp is recognized as an agricultural crop by the United States federal government. Federal and state laws and regulations on hemp address production, monitoring, manufacturing, distribution, and laboratory testing to ensure that that the hemp has a THC concentration of not more than 0.3 percent on a dry weight basis. Federal laws and regulations also address the transportation or shipment of hemp or hemp products.

Consistent with the 2018 Farm Bill, the Minnesota Department of Agriculture ("MDA") operates a Hemp Program under its United States Department of Agriculture ("USDA") approved Minnesota state plan. This plan establishes that a commercial hemp production license is required for growing and processing of hemp in the State of Minnesota. The Company holds an MDA Hemp Program License and has implemented an internal hemp compliance system including procedures, quality control and internal audits. USDA and/or MDA may audit the Company at any time for compliance with license requirements.

Additionally, Calyxt has obtained USDA permits for specific regulated materials (e.g., bacteria) that are used as part of its PlantSpring technology platform and BioFactory production system. The Company has

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implemented the required compliance system in order to meet USDA permit conditions and ensure adequate documentation is in place. The USDA may audit the Company at any time for compliance with permit requirements.

The BioFactory production system has the capability of producing a diverse range of plant-derived compounds that may be used for applications in cosmeceuticals, nutraceuticals, pharmaceuticals, and more. As the Company delivers these valuable compounds to its customers, each customer will be responsible for determining for which applications the compounds are utilized and such customer-determined specific uses will determine applicable regulatory requirements. It is anticipated that because the Company's customers would incorporate the purchased compounds into their existing product development processes and areas of applications, the customers will be best positioned to apply their specific expertise in the field to establish regulatory compliance and determine any additional requirements.

The Company also expects to continue to license its technology and develop seed traits for agricultural customers based on their needs. This would include the use of gene editing in crops for outdoor use. Neither the Company, nor its commercial partners, currently deploy the Company's technology for use outside of the United States with the exception of the Company's High Oleic Soybean product, which in addition to having clearance from the USDA and FDA, also has clearance from the Canadian Food Inspection Agency and Health Canada for use in Canada. In today's global market, overall business development strategy for plant biology companies depends, in part, on the availability of regulatory clearance in strategic export markets, which enables broader flexibility for product expansion and is a key consideration in evaluating global trade opportunities. Regulatory predictability is critical in order to establish accurate product launch strategies. The costs of achieving clearance in foreign countries is often high, due to stricter regulatory environments than the United States, and there can be no assurance the Company will be granted clearance on favorable terms, if at all.

Under the Company's partner-driven model, agricultural customers would likely be contractually responsible for obtaining the needed global regulatory clearance for agricultural products developed by the Company or using its licensed technology. Accordingly, outside of permitting expenses incurred in the ordinary course of business, the Company does not expect compliance with government regulations, including environmental regulations, to have a material effect on the Company's capital expenditures, earnings, or competitive position.

Competition

The market for more sustainably produced products is highly competitive, and the Company faces significant direct and indirect competition in several aspects of its business. Competition in synthetic biology is largely from fermentation-based companies who generally pursue the development of compounds by combining a single cell organism like a microbe, bacteria, or yeast with another organism's DNA to achieve a desired result. These compounds are then marketed by third parties or directly by the fermentation company. These organizations may have substantially larger budgets for R&D, product commercialization, and regulatory process management.

Through its technology licensing, the Company believes that it faces competition from large agricultural biotechnology, seed, and chemical companies, certain of which have been actively involved in new trait discovery, development, and commercialization. Many of the Company's competitors—particularly large chemical companies—have substantially larger budgets for R&D, product commercialization, and regulatory process management. Trait research and development companies as well as research universities and institutions are competitors that typically focus on a limited number of traits and do not generally have the product development, gene editing technologies, and regulatory infrastructure necessary to bring traits to market. They generally out-license trait technologies to large industry players with in-house development and regulatory capabilities at a relatively early stage of development.

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The Company believes that it can compete favorably based on its expertise and the precision, specificity, cost effectiveness and development speed of its proprietary technologies. Nevertheless, certain of the Company's competitors are more established in the synthetic biology industry and many of the Company's current or potential competitors, either alone or with their R&D or collaboration partners, have significantly greater financial resources and expertise in R&D, manufacturing, testing, and marketing approved products than the Company.

The Company's commercial opportunity could be reduced or eliminated if its competitors develop and commercialize products faster, with lower research costs than the Company.

Human Capital

As of December 31, 2021, the Company had 55 employees, 36 of whom were in R&D. The Company's multidisciplinary R&D team includes experts in AIML, biochemistry, bioinformatics, chemistry, genetics and genetic engineering, molecular biology, plant physiology, tissue culture techniques, and other related fields. None of the Company's employees are represented by a labor union or covered by a collective bargaining agreement. The Company considers its relationship with employees to be good.

The Company's employees are a critical asset. The Company believes that a critical component to its success depends on its ability to attract, develop, and retain key personnel. Recognizing the core importance of its personnel, the Company attracts and retains human capital by providing competitive wages and benefits, providing support to employees by promoting health and safety, providing training and development that builds technical and professional skills, and adhering to its code of conduct and business ethics and labor policy at all levels.

In accordance with the Company's COVID-19 Preparedness Plan, Minnesota executive order requirements, and guidelines promoted by the Centers for Disease Control and Prevention, the Company implemented health and safety measures for the protection of its onsite workers, maintained remote work arrangements for its non-laboratory personnel, and implemented, as necessary, appropriate self-quarantine precautions for potentially affected laboratory personnel. In addition, the Company supported employees impacted by COVID-19 related school and childcare restrictions by offering flexible work arrangements and generous paid leave for those sick with COVID-19. On May 28, 2021, nearly all Minnesota COVID-19 restrictions came to an end, including all capacity limits and distancing requirements—both indoors and outdoors. The Company's non-laboratory personnel returned to working onsite in July 2021. For additional information on the impact of the COVID-19 pandemic to the Company, please see "Risk Factors—Risks Related to the Business and Operations."

The Company values and celebrates the diversity of its employee base and provides regular opportunities to learn about contributions of various ethnic and minority groups on the culture and achievements of the United States, including scientific advancements.

Human capital management strategies are developed collectively by senior management and are overseen by the Board of Directors. The Company is committed to efforts that ensure that the workplace is respectful, equitable, ethical, and fosters an inclusive work environment across its workforce. This commitment has been reinforced through required diversity and inclusion trainings for all employees.

Seasonality

The BioFactory production system is expected to be able to produce compounds year-round in a controlled environment bioreactor, limiting the impact of seasonality that exists with traditional agriculture.

The Company maintains the capability to implement broad arrangements for technology licensing and product development for agriculture. Technology licensing opportunities span the Company's intellectual

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property portfolio built over more than a decade as a leading plant-based biology company, including multiple gene editing platforms, plant breeding, and other capabilities. The Company may be exposed to the impact of seasonality that exists with traditional agriculture depending on the arrangement.

Corporate Information

The Company incorporated in Delaware on January 8, 2010, and its majority stockholder is Collectis S.A. (société anonyme). The Company's principal executive offices are located at 2800 Mount Ridge Road, Roseville, MN 55113, United States of America, and its telephone number is +1 (651) 683-2807. The Company also maintains a website at www.calyxt.com. The information contained in, or that can be accessed through, its website is not part of this prospectus supplement.

USE OF PROCEEDS

Calyxt estimate that the net proceeds it will receive from this offering will be approximately \$ _____ million after deducting the underwriting discounts and commissions and estimated offering expenses payable by the Company. To the extent the Warrants issued in this offering are exercised, Calyxt may receive additional proceeds.

Calyxt currently intends to use the net proceeds from this offering for enhancing the capabilities of its BioFactory production system and increasing its capacity to produce at larger scales, continuing to build out its PlantSpring technology platform and artificial intelligence / machine learning capabilities, furthering customer relationships, and for working capital and general corporate purposes.

Calyxt has not determined the amounts that it plans to spend on any specific area or the timing of such expenditures. Accordingly, Calyxt's management will have broad discretion to use the net proceeds from this offering. Pending Calyxt's use of the net proceeds from this offering, the Company intends to invest the net proceeds in marketable securities that may include investment-grade interest-bearing securities, money market accounts, certificates of deposit, commercial paper and guaranteed obligations of the U.S. government in accordance with Calyxt's investment policy.

DESCRIPTION OF SECURITIES

General

Calyxt's authorized capital stock consists of 275,000,000 shares of common stock, par value \$0.0001 per share, and 50,000,000 shares of preferred stock, par value \$0.0001 per share. The only equity securities currently outstanding are shares of common stock. As of September 30, 2021, there were 37,301,724 shares of common stock issued and outstanding.

Common Stock

Calyxt's common stock is listed on the Nasdaq Global Market under the symbol "CLXT". The transfer agent and registrar for Calyxt's common stock is Broadridge Corporate Issuer Solutions, Inc., 1155 Long Island Avenue, Edgewood, NY 11717.

The material terms of Calyxt's common stock are described under the heading "Description of Capital Stock" in the accompanying prospectus.

Common Warrants to be Issued in this Offering

The following is a brief summary of certain terms and provisions of the Common Warrants that are being offered hereby. This summary is subject to and qualified in its entirety by the form of Common Warrants, which has been provided to the investors in this offering and which will be filed with the SEC as an exhibit to a Current Report on Form 8-K in connection with this offering and incorporated by reference into the registration statement of which this prospectus supplement and the accompanying prospectus form a part. Prospective investors should carefully review the terms and provisions of the form of Common Warrant for a complete description of the terms and conditions of the Common Warrants. All Common Warrants will be issued in certificated form.

General Terms of the Common Warrants

The Common Warrants represent the right to purchase _____ shares of common stock at an initial exercise price of \$ _____ per share. Each Common Warrant may be exercised at any time beginning on the six-month anniversary of the issuance date and from time to time thereafter through and including the five-year anniversary of the date the Common Warrants are first exercisable. After the exercise period, holders of the Common Warrants will have no further rights to exercise the Common Warrants.

Exercisability

Each Common Warrant will be exercisable beginning on the six month anniversary of the date of issuance and will expire five years from the date of issuance. The Common Warrants will be exercisable, at the option of each holder, in whole or in part by delivering to Calyxt a duly executed exercise notice and payment in full for the number of shares of Calyxt's common stock purchased upon such exercise, except in the case of a cashless exercise as discussed below.

The number of shares of common stock issuable upon exercise of the Common Warrants is subject to adjustment in certain circumstances, including a stock split of, stock dividend on, or a subdivision, combination or recapitalization of the common stock.

Cashless Exercise

If at the time of exercise there is no effective registration statement registering, or the prospectus contained therein is not available for issuance or resale of the shares issuable upon exercise of the Common Warrant, the

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holder may exercise the Common Warrant on a cashless basis. When exercised on a cashless basis, a portion of the Common Warrant is cancelled in payment of the purchase price payable in respect of the number of shares of Calyxt's common stock purchasable upon such exercise.

Exercise Price

Each Common Warrant represents the right to purchase one share of common stock at an exercise price of \$ _____ per share. Subject to limited exceptions, a holder of Common Warrants will not have the right to exercise any portion of the Common Warrant to the extent that, after giving effect to the exercise, the holder, together with its affiliates, and any other person acting as a group together with the holder or any of its affiliates, would beneficially own in excess of 4.99 percent of the number of shares of Calyxt's common stock outstanding immediately after giving effect to its exercise (the "Common Warrant Beneficial Ownership Limitation"). The holder, upon notice to the Company, may increase or decrease the beneficial ownership limitation provisions of the Common Warrant, provided that in no event shall the limitation exceed 9.99 percent of the number of shares of Calyxt's common stock outstanding immediately after giving effect to the exercise of the Common Warrant. Any increase in the Common Warrant Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to Calyxt. Purchasers of Common Warrants in this offering may also elect prior to the issuance of the Common Warrants to those purchasers to have the initial exercise limitation set at 9.99 percent of Calyxt's outstanding common stock.

Certain Adjustments

The exercise price and number of shares of common stock issuable upon exercise of the warrants may be proportionally adjusted upon the occurrence of specific events, including stock dividends, stock splits, combinations and certain recapitalizations of Calyxt's common stock.

Rights Upon Distribution of Assets; Purchase Rights

If Calyxt distributes assets, including cash dividends, any securities (other than a stock dividend of Calyxt Common Stock, described under "— Certain Adjustments") or other property, to Calyxt's stockholders, the warrant holders shall be entitled to participate in such distribution to the same extent that such holder would have participated had the holder held the number of shares of common stock acquirable upon complete exercise of its warrant. If such distribution would cause such holder to exceed the Common Warrant Beneficial Ownership Limitation, the holder will not be entitled to participate in the distribution to such extent that Common Warrant Beneficial Ownership Limitation would be exceeded and the distribution will be held in abeyance for the holder's benefit until such time or times, if ever, as would not result in the holder exceeding the Common Warrant Beneficial Ownership Limitation.

If Calyxt grants, issues or sells pro rata to its stockholders, any options, convertible securities or rights to purchase stock, warrants, securities or other property, the Common Warrant holders will be entitled to acquire such purchase rights to the same extent such holder would have acquired had the holder held the number of shares of common stock acquirable upon complete exercise of its warrant. If such right to participate in any such purchase rights would cause such holder to exceed Common Warrant Beneficial Ownership Limitation, then the holder will not be entitled to participate in such purchase right to such extent that the Common Warrant Beneficial Ownership Limitation would be exceeded such purchase right, to the extent necessary to prevent such occurrence, will be held in abeyance for the holder's benefit until such time or times, if ever, as would not result in the holder exceeding the Common Warrant Beneficial Ownership Limitation.

Transferability

Subject to applicable laws and restrictions, a holder may transfer a Common Warrant upon surrender of the Common Warrant to Calyxt with a duly executed assignment in the form attached to the Common Warrant. The transferring holder will be responsible for any tax that liability that may arise as a result of the transfer.

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No Listing

There is no established public trading market for the Common Warrants and Calyxt does not expect a market to develop. In addition, Calyxt does not intend to apply for listing of the Common Warrants on any securities exchange or trading system. Without an active market, the liquidity of the Common Warrants will be limited.

Rights as Stockholder

Except as otherwise provided or by virtue of such holder's ownership of shares of Calyxt's common stock, the holder of a Common Warrant, solely in such holder's capacity as a holder of a Common Warrant, will not be entitled to vote, to receive dividends, or to any of the other rights of Calyxt's stockholders.

Fundamental Transactions

In the event Calyxt (or Calyxt and all of its subsidiaries, taken as a whole) effects certain mergers, consolidations, sales of substantially all of its assets, tender or exchange offers, reclassifications or share exchanges in which its common stock is effectively converted into or exchanged for other securities, cash or property, Calyxt consummates a business combination in which another person acquires 50% of the outstanding shares of its common stock, or any person or group becomes the beneficial owner of 50% of the aggregate ordinary voting power represented by Calyxt's issued and outstanding common stock, then, upon any subsequent exercise of the Common Warrants, the holders of the Common Warrants will have the right to receive any shares of the acquiring corporation or other consideration it would have been entitled to receive if it had been a holder of the number of shares of common stock then issuable upon exercise of the Common Warrants. Additionally, as more fully described in the Common Warrants, in the event of certain fundamental transactions, the holders of the Common Warrants will be entitled to receive consideration in an amount equal to the Black Scholes value of the Common Warrants on the date of the consummation of such fundamental transaction.

Amendments and Waivers

The provisions of each Common Warrant may be modified or amended or the provisions thereof waived with the written consent of Calyxt and the holder.

No Fractional Shares

No fractional shares or scrip representing fractional shares shall be issued upon the exercise of the Common Warrants. As to any fraction of a share which the holder would otherwise be entitled to purchase upon such exercise, Calyxt shall or shall cause, at Calyxt's option, the payment of a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the exercise price of the Common Warrant per whole share or round such fractional share up to the nearest whole share.

Pre-Funded Warrants to be Issued in this Offering

The following is a summary of the material terms and provisions of the Pre-Funded Warrants that are being offered hereby. This summary is subject to and qualified in its entirety by the form of Pre-Funded Warrants, which has been provided to the investors in this offering and which will be filed with the SEC as an exhibit to a Current Report on Form 8-K in connection with this offering and incorporated by reference into the registration statement of which this prospectus supplement and the accompanying prospectus form a part. Prospective investors should carefully review the terms and provisions of the form of Pre-Funded Warrant for a complete description of the terms and conditions of the Pre-Funded Warrants. All Pre-Funded Warrants will be issued in certificated form.

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General Terms of the Common Warrants

Each Pre-Funded Warrant offered hereby will have an initial exercise price per share equal to \$0.0001. The Pre-Funded Warrants will be immediately exercisable and may be exercised at any time until the Pre-Funded Warrants are exercised in full. The exercise price and number of shares of common stock issuable upon exercise is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting Calyxt's common stock and the exercise price.

Exercisability

The Pre-Funded Warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to the Company a duly executed exercise notice accompanied by payment in full for the number of shares of Calyxt's common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of the Pre-Funded Warrant to the extent that the holder would own more than 9.99 percent of the outstanding common stock immediately after exercise (the "Pre-Funded Warrant Beneficial Ownership Limitation"), except that upon at least 61 days' prior notice from the holder to Calyxt, the holder may increase the amount of ownership of outstanding stock after exercising the holder's Pre-Funded Warrants up to 9.99 percent of the number of shares of Calyxt's common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Pre-Funded Warrants. Purchasers of Pre-Funded Warrants in this offering may also elect prior to the issuance of the Pre-Funded Warrants to those purchasers to have the initial exercise limitation set at 9.99% of Calyxt's outstanding common stock.

Cashless Exercise

If at the time of exercise there is no effective registration statement registering, or the prospectus contained therein is not available for issuance of, the shares issuable upon exercise of the Pre-Funded Warrant, the holder may exercise the Pre-Funded Warrant on a cashless basis. When exercised on a cashless basis, a portion of the Pre-Funded Warrant is cancelled in payment of the purchase price payable in respect of the number of shares of Calyxt's common stock purchasable upon such exercise.

Certain Adjustments

The exercise price and number of shares of common stock issuable upon exercise of the warrants may be proportionally adjusted upon the occurrence of specific events, including stock dividends, stock splits, combinations and certain recapitalizations of Calyxt's common stock.

Rights Upon Distribution of Assets; Purchase Rights

If Calyxt distributes assets, including cash dividends, any securities (other than a stock dividend of Calyxt Common Stock, described under "— Certain Adjustments") or other property, to Calyxt's stockholders, holders of Pre-Funded Warrants shall be entitled to participate in such distribution to the same extent that such holder would have participated had the holder held the number of shares of common stock acquirable upon complete exercise of its warrant. If such distribution would cause such holder to exceed the Pre-Funded Warrant Beneficial Ownership Limitation, the holder will not be entitled to participate in the distribution to such extent that the Pre-Funded Warrant Beneficial Ownership Limitation would be exceeded and the distribution will be held in abeyance for the holder's benefit until such time or times, if ever, as would not result in the holder exceeding the Pre-Funded Warrant Beneficial Ownership Limitation.

If Calyxt grants, issues or sells pro rata to its stockholders, any options, convertible securities or rights to purchase stock, warrants, securities or other property, the Pre-Funded Warrant holders will be entitled to acquire such purchase rights to the same extent such holder would have acquired had the holder held the number of

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shares of common stock acquirable upon complete exercise of its warrant. If such right to participate in any such purchase rights would cause such holder to exceed the Pre-Funded Warrant Beneficial Ownership Limitation, then the holder will not be entitled to participate in such purchase right to such extent that the Pre-Funded Warrant Beneficial Ownership Limitation would be exceeded such purchase right, to the extent necessary to prevent such occurrence, will be held in abeyance for the holder's benefit until such time or times, if ever, as would not result in the holder exceeding the Pre-Funded Warrant Beneficial Ownership Limitation.

Transferability

Subject to applicable laws and restrictions, a holder may transfer a Pre-Funded Warrant upon surrender of the Pre-Funded Warrant to Calyxt with a duly executed assignment in the form attached to the Pre-Funded Warrant. The transferring holder will be responsible for any tax that liability that may arise as a result of the transfer.

No Listing

There is no established public trading market for the Pre-Funded Warrants and Calyxt does not expect a market to develop. In addition, Calyxt does not intend to apply for listing of the Pre-Funded Warrants on any securities exchange or trading system. Without an active market, the liquidity of the Pre-Funded Warrants will be limited.

Rights as a Stockholder

Except as otherwise provided in the Pre-Funded Warrant or by virtue of a holder's ownership of shares of our common stock, the holders of the Pre-Funded Warrants do not have the rights or privileges of holders of Calyxt's common stock, including any voting rights, until they exercise their Pre-Funded Warrants.

Fundamental Transactions

In the event Calyxt effects certain mergers, consolidations, sales of substantially all of the Company's assets, tender or exchange offers, reclassifications or share exchanges in which Calyxt's common stock is effectively converted into or exchanged for other securities, cash or property, Calyxt consummates a business combination in which another person acquires 50% of the outstanding shares of Calyxt's common stock, or any person or group becomes the beneficial owner of 50% of the aggregate ordinary voting power represented by Calyxt's issued and outstanding common stock, then, upon any subsequent exercise of the Pre-Funded Warrants, the holders of the Pre-Funded Warrants will have the right to receive any shares of the acquiring corporation or other consideration it would have been entitled to receive if it had been a holder of the number of shares of common stock then issuable upon exercise of the Pre-Funded Warrants.

Amendments and Waivers

The provisions of each Pre-Funded Warrant may be modified or amended or the provisions thereof waived with the written consent of Calyxt and the holder.

No Fractional Shares

No fractional shares or scrip representing fractional shares shall be issued upon the exercise of the Pre-Funded Warrants. As to any fraction of a share which the holder would otherwise be entitled to purchase upon such exercise, Calyxt shall or shall cause, at Calyxt's option, the payment of a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the exercise price of the Pre-Funded Warrant per whole share or round such fractional share up to the nearest whole share.

DILUTION

If you invest in this offering, you will experience immediate and substantial dilution to the extent of the difference between the offering price per share and accompanying Common Warrant paid in this offering (or the offering price per Pre-Funded Warrant and accompanying Common Warrant, as applicable), in each case excluding shares of common stock issuable upon exercise of the Warrants being offered in this offering and the payment of the exercise price therefor) and the adjusted net tangible book value per share of Calyxt's common stock as of September 30, 2021, as adjusted to give effect to this offering.

Calyxt's net tangible book value as of September 30, 2021, was \$15.8 million, or \$0.42 per share of common stock. Net tangible book value per share is determined by dividing Calyxt's total tangible assets, less total liabilities, by the number of shares of Calyxt's common stock outstanding as of September 30, 2021. Dilution with respect to net tangible book value per share represents the difference between the amount per share (and accompanying warrant) paid by purchasers in this offering and the net tangible book value per share of Calyxt's common stock immediately after this offering.

After giving effect to the sale of _____ shares of Calyxt's common stock in this offering (excluding shares of common stock issuable upon exercise of the Warrants being offered in this offering) at an offering price of \$ _____ per share and accompanying Common Warrant (or the offering price per Pre-Funded Warrant and accompanying Common Warrant at an offering price of \$ _____) and after deducting estimated offering expenses payable by Calyxt and underwriting discounts), Calyxt's as adjusted net tangible book value as of September 30, 2021 would have been approximately \$ _____ million, or \$ _____ per share of common stock. This represents an immediate increase in net tangible book value of \$ _____ per share to existing stockholders and immediate dilution of \$ _____ per share to investors purchasing securities in this offering at the offering price. The following table illustrates this dilution on a per share basis:

Offering price per share and accompanying Common Warrant (or per Pre-Funded Warrant and accompanying Common Warrant)	\$
Net tangible book value per share as of September 30, 2021	\$ 0.42
Increase in net tangible book value per share attributable to this offering	<u> </u>
As adjusted net tangible book value per share as of September 30, 2021, after giving effect to this offering	<u> </u>
Dilution per share to investors purchasing shares of Calyxt's common stock and the accompanying Common Warrants or Pre-Funded Warrants and the accompanying Common Warrants in this offering	<u><u> </u></u>

The above discussion and table are based on 37,301,724 shares outstanding as of September 30, 2021, and excludes:

- 4,613,868 shares of common stock issuable upon the exercise of outstanding stock options with a weighted average exercise price of \$9.66 per share;
- 576,020 shares of common stock issuable upon the vesting and settlement of restricted stock units outstanding;
- 745,000 shares of common stock issuable upon the vesting and settlement of performance stock units outstanding; and
- 5,613,334 shares of common stock reserved for future issuance under Calyxt's 2017 Omnibus Plan.

The above illustration of dilution per share to investors participating in this offering assumes no further exercise of outstanding options and no further issuance of shares upon vesting of outstanding restricted stock units or performance units. To the extent that any outstanding options are exercised or other shares are issued upon vesting of outstanding awards or otherwise, there will be further dilution to new investors. In addition, Calyxt may choose to raise additional capital. To the extent that Calyxt raises additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to Calyxt's stockholders.

UNDERWRITING

The Company and the underwriter for the offering named below have entered into an underwriting agreement with respect to the securities being offered. Subject to the terms and conditions of the underwriting agreement, the underwriter has agreed to purchase from the Company the number of securities set forth opposite its name below.

<u>Underwriter</u>	<u>Number of Shares</u>	<u>Number of Pre-Funded Warrants</u>	<u>Number of Common Warrants</u>
Canaccord Genuity LLC			
Total			

The underwriting agreement provides that the obligations of the underwriter are subject to certain conditions precedent and that the underwriter has agreed to purchase all of the securities sold under the underwriting agreement if any of these securities are purchased.

The Company has agreed to indemnify the underwriter against specified liabilities, including liabilities under the Securities Act, and to contribute to payments the underwriter may be required to make in respect thereof.

The Company's common stock is listed on the Nasdaq Global Market under the symbol "CLXT." There is no established public trading market for the Pre-Funded Warrants or Common Warrants, and the Company does not expect a market to develop. The Company does not intend to list the Pre-Funded Warrants or Common Warrants on the Nasdaq Global Market, any other national securities exchange or any other nationally recognized trading system.

The underwriter is offering the shares of common stock or Pre-Funded Warrants and the accompanying Common Warrants, subject to prior sale, when, as and if issued to and accepted by it, subject to approval of legal matters by its counsel and other conditions specified in the underwriting agreement. The underwriter reserves the right to withdraw, cancel or modify offers and to reject orders in whole or in part.

Discounts. The following table shows the offering price, underwriting discounts and proceeds, before expenses, to the Company from the sale of common stock (or Pre-Funded Warrants) and accompanying Common Warrants.

	<u>Per Share and Accompanying Common Warrant</u>	<u>Per Pre-Funded Warrant and Accompanying Common Warrant</u>	<u>Total</u>
Offering price	\$	\$	\$
Underwriting discounts	\$	\$	\$
Proceeds, before expenses, to Calyxt	\$	\$	\$

The Company estimates that the total expenses of the offering payable by it, excluding underwriting discounts, will be approximately \$. The Company has agreed to reimburse the underwriter for expenses, including the fees and expenses of counsel for the underwriter, in an amount not to exceed \$100,000.

The underwriter proposes to offer the securities offering price set forth on the cover of this prospectus supplement. If all of the securities are not sold at the offering price, the underwriter may change the offering price and other selling terms.

Discretionary Accounts. The underwriter does not intend to confirm sales of the securities to any accounts over which it has discretionary authority.

Stabilization. In connection with this offering, the underwriter may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of common stock in the open market for the purpose of

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preventing or retarding a decline in the market price of the common stock while this offering is in progress. These stabilizing transactions may include making short sales of the common stock, which involves the sale by the underwriter of a greater number of shares of common stock than it is required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales.

The underwriter has advised the Company that, pursuant to Regulation M of the Securities Act, the underwriter may also engage in other activities that stabilize, maintain or otherwise affect the price of the common stock, including the imposition of penalty bids.

These activities may have the effect of raising or maintaining the market price of the common stock or preventing or retarding a decline in the market price of the common stock, and, as a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If the underwriter commences these activities, it may discontinue them at any time. The underwriter may carry out these transactions on the Nasdaq Global Market, in the over the counter market or otherwise.

Passive Market Making. In connection with this offering, underwriter may engage in passive market making transactions in the Company's common stock on the Nasdaq Global Market in accordance with Rule 103 of Regulation M under the Securities Exchange Act of 1934, as amended, during a period before the commencement of offers or sales of securities and extending through the completion of the distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, such bid must then be lowered when specified purchase limits are exceeded.

Lock-Up Agreements. Pursuant to certain "lock-up" agreements, the Company and its executive officers and directors and Collectis S.A., the Company's majority stockholder, have agreed, subject to certain exceptions, not to (i) directly or indirectly, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise transfer or dispose of any shares of the Company's common stock or any securities convertible into or exercisable or exchangeable for the Company's common stock or file any registration statement under the Securities Act with respect to any of the foregoing or (ii) enter into any swap or any other agreement or any transaction that transfers, in whole or in part, directly or indirectly, the economic consequence of ownership of the Company's common stock, whether any such swap or transaction described in clause (i) or (ii) above is to be settled by delivery of the Company's common stock or other securities, in cash or otherwise, without the prior written consent of the underwriter, for a period of 90 days after the date of the pricing of the offering.

The underwriter, in its sole discretion, may release the Company's common stock and other securities subject to the lock-up agreements described above in whole or in part at any time. When determining whether or not to release the Company's common stock and other securities from lock-up agreements, the underwriter will consider, among other factors, the holder's reasons for requesting the release, the number of shares for which the release is being requested and market conditions at the time of the request.

Canada. The securities may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should

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refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the underwriter is not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Israel. In the State of Israel this prospectus supplement shall not be regarded as an offer to the public to purchase shares of common stock, Pre-Funded Warrants and Common Warrants under the Israeli Securities Law, 5728 – 1968, which requires a prospectus to be published and authorized by the Israel Securities Authority, if it complies with certain provisions of Section 15 of the Israeli Securities Law, 5728–1968, including, inter alia, if: (i) the offer is made, distributed or directed to not more than 35 investors, subject to certain conditions (the “Addressed Investors”); or (ii) the offer is made, distributed or directed to certain qualified investors defined in the First Addendum of the Israeli Securities Law, 5728 – 1968, subject to certain conditions (the “Qualified Investors”). The Qualified Investors shall not be taken into account in the count of the Addressed Investors and may be offered to purchase securities in addition to the 35 Addressed Investors. The company has not and will not take any action that would require it to publish a prospectus in accordance with and subject to the Israeli Securities Law, 5728 – 1968. The Company has not and will not distribute this prospectus supplement or make, distribute or direct an offer to subscribe for the Company's common stock, Pre-Funded Warrants and Common Warrants to any person within the State of Israel, other than to Qualified Investors and up to 35 Addressed Investors.

Qualified Investors may have to submit written evidence that they meet the definitions set out in of the First Addendum to the Israeli Securities Law, 5728 – 1968. In particular, the Company may request, as a condition to be offered common stock, Pre-Funded Warrants and Common Warrants, that Qualified Investors will each represent, warrant and certify to the Company and/or to anyone acting on its behalf: (i) that it is an investor falling within one of the categories listed in the First Addendum to the Israeli Securities Law, 5728 – 1968; (ii) which of the categories listed in the First Addendum to the Israeli Securities Law, 5728 – 1968 regarding Qualified Investors is applicable to it; (iii) that it will abide by all provisions set forth in the Israeli Securities Law, 5728 – 1968 and the regulations promulgated thereunder in connection with the offer to be issued common stock, Pre-Funded Warrants and Common Warrants; (iv) that the shares of common stock, Pre-Funded Warrants and Common Warrants that it will be issued are, subject to exemptions available under the Israeli Securities Law, 5728 – 1968: (a) for its own account; (b) for investment purposes only; and (c) not issued with a view to resale within the State of Israel, other than in accordance with the provisions of the Israeli Securities Law, 5728 – 1968; and (v) that it is willing to provide further evidence of its Qualified Investor status. Addressed Investors may have to submit written evidence in respect of their identity and may have to sign and submit a declaration containing, inter alia, the Addressed Investor's name, address and passport number or Israeli identification number.

United Kingdom. In the United Kingdom, this prospectus supplement is only addressed to and directed as qualified investors who are (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the Order); or (ii) high net worth entities and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as “relevant persons”). Any investment or investment activity to which this prospectus supplement relates is available only to relevant persons and will only be engaged with relevant persons. Any person who is not a relevant person should not act or relay on this prospectus supplement or any of its contents.

Switzerland. The securities will not be offered, directly or indirectly, to the public in Switzerland and this prospectus supplement does not constitute a public offering prospectus as that term is understood pursuant to article 652a or 1156 of the Swiss Federal Code of Obligations.

European Economic Area. In relation to each Member State of the European Economic Area (each, a “Member State”), no offer of shares may be made to the public in that Member State other than:

- to any legal entity which is a qualified investor as defined in the Prospectus Regulation;

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- to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Regulation), subject to obtaining the prior consent of the underwriter; or
- in any other circumstances falling within Article 1(4) of the Prospectus Regulation, provided that no such offer of securities shall require the Company or the underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation and each person who initially acquires any securities or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with the underwriter and the Company that it is a “qualified investor” as defined in the Prospectus Regulation.

In the case of any securities being offered to a financial intermediary as that term is used in Article 5 of the Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the securities acquired by it in the offer have not been acquired on a nondiscretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any securities to the public other than their offer or resale in a Member State to qualified investors as so defined or in circumstances in which the prior consent of the underwriter has been obtained to each such proposed offer or resale.

For the purposes of this provision, the expression an “offer of securities to the public” in relation to any securities in any Member State means the communication in any form and by means of sufficient information on the terms of the offer and the securities to be offered so as to enable an investor to decide to purchase securities, and the expression “Prospectus Regulation” means Regulation (EU) 2017/1129 (as amended).

The Company has not authorized and does not authorize the making of any offer of securities through any financial intermediary on the Company’s behalf, other than offers made by the underwriter and its affiliates, with a view to the final placement of the securities as contemplated in this document. Accordingly, no purchaser of the securities, other than the underwriter, is authorized to make any further offer of securities on the Company’s behalf or on behalf of the underwriter.

Electronic Offer, Sale and Distribution of Securities. A prospectus supplement in electronic format may be made available on the website maintained by the underwriter and the underwriter may distribute prospectus supplements electronically. The underwriter may agree to allocate a number of shares of Common Stock, Pre-Funded Warrants and Common Warrants for sale to its online brokerage account holders. Internet distributions will be allocated by the underwriter on the same basis as other allocations. Other than the prospectus supplement in electronic format, the information on this website is not part of this prospectus supplement or the registration statement of which this prospectus supplement forms a part, has not been approved or endorsed by the Company or the underwriter in its capacity as underwriter, and should not be relied upon by investors.

Other Relationships. The underwriter and its affiliates may have provided in the past, and may in the future provide, various investment banking, commercial banking and other financial services for the Company and its affiliates for which it has received, or may in the future receive, customary fees.

CERTAIN UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS

Subject to the limitations, assumptions and qualifications described herein, the following is a summary of certain U.S. federal income tax considerations of the purchase, ownership and disposition of shares of Calyxt's common stock issued pursuant to this offering (the "Shares"), the purchase, exercise, disposition and lapse of Pre-Funded Warrants and Common Warrants to purchase shares of Calyxt's common stock issued pursuant to this offering, and the purchase, ownership and disposition of shares of Calyxt's common stock issuable upon exercise of the Pre-Funded Warrants and Common Warrants (the "Warrant Shares"). The Shares, the Pre-Funded Warrants, the Common Warrants and the Warrant Shares are collectively referred to herein as the "Offered Securities." All prospective holders of the Offered Securities should consult their tax advisors with respect to the U.S. federal, state, local and non-U.S. tax consequences of the purchase, ownership and disposition of the Offered Securities.

This discussion is based on current provisions of the U.S. Internal Revenue Code of 1986, as amended (the "Code"), existing U.S. Treasury regulations promulgated thereunder, published administrative pronouncements and rulings of the U.S. Internal Revenue Service (the "IRS"), and judicial decisions, all as in effect as of the date of this prospectus supplement. These authorities are subject to change and to differing interpretation, possibly with retroactive effect. Any change or differing interpretation could alter the tax consequences to holders described in this discussion. There can be no assurance that a court or the IRS will not challenge one or more of the tax consequences described herein, and Calyxt has not obtained, nor does it intend to obtain, a ruling with respect to the U.S. federal income tax consequences to a holder of the purchase, ownership or disposition of the Offered Securities.

This discussion addresses only Offered Securities that are held as capital assets within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all the U.S. federal income tax consequences that may be relevant to particular holders in light of their individual circumstances, nor does it address any alternative minimum, Medicare contribution, estate or gift tax consequences, or any aspects of U.S. state, local or non-U.S. taxes). It does not address holders that are subject to special rules, such as:

- banks, insurance companies or other financial institutions;
- tax-exempt organizations or governmental organizations;
- brokers or dealers in securities;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- persons who hold any of the Offered Securities as a position in a hedging transaction, "straddle," "conversion transaction," or other risk reduction transaction;
- persons deemed to sell any of the Offered Securities under the constructive sale provisions of the Code;
- entities or arrangements classified as partnerships for U.S. federal income tax purposes or other pass-through entities such as subchapter S corporations (or investors in such entities or arrangements);
- regulated investment companies or real estate investment trusts;
- controlled foreign corporations, passive foreign investment companies or corporations that accumulate earnings to avoid U.S. federal income tax;
- U.S. Holders (as defined below) whose functional currency is not the U.S. dollar;
- "qualified foreign pension funds" as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds;
- U.S. expatriates and former citizens or former long-term residents of the United States; or
- holders that acquire the Offered Securities through the exercise of an employee stock option or otherwise as compensation or through a tax-qualified retirement plan.

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If a holder is a partnership or other pass-through entity (including an entity or arrangement treated as a partnership or other type of pass-through entity for U.S. federal income tax purposes), the U.S. federal income tax treatment of a partner or beneficial owner will generally depend on the status of such partner or beneficial owner and the entity's activities. Partnerships, partners and beneficial owners in partnerships or other pass-through entities that own the Offered Securities should consult their tax advisors as to the particular U.S. federal income tax considerations applicable to the acquisition, ownership and disposition of the Offered Securities.

For purposes of this discussion, a "U.S. Holder" is a beneficial owner of the Offered Securities, that, for U.S. federal income tax purposes, is:

- an individual that is a citizen or resident of the United States;
- a corporation, or an entity treated as a corporation, created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- a trust that (1) is subject to (A) the primary supervision of a court within the United States and (B) the authority of one or more "United States persons" (within the meaning of Section 7701(a)(30) of the Code) to control all substantial decisions of the trust or (2) has a valid election in effect under applicable Treasury Regulations to be treated as a United States person; or
- an estate that is subject to U.S. federal income tax on its income regardless of its source.

As used herein, the term "Non-U.S. Holder" means a beneficial owner, other than an entity treated as a partnership for U.S. federal income tax purposes, of the Offered Securities that is for U.S. federal income tax purposes not a U.S. Holder.

PROSPECTIVE INVESTORS ARE URGED TO CONSULT THEIR TAX ADVISORS REGARDING THE PARTICULAR FEDERAL, STATE, LOCAL AND NON-U.S. TAX CONSEQUENCES TO THEM OF THE PURCHASE, OWNERSHIP AND DISPOSITION OF THE OFFERED SECURITIES.

General Treatment of Pre-Funded Warrants

Although it is not entirely free from doubt, a Pre-Funded Warrant should be treated as a share of common stock of Calyxt for U.S. federal income tax purposes and a holder of Pre-Funded Warrants should generally be taxed in the same manner as a holder of common stock as described below. Accordingly, upon exercise, the holding period of a Pre-Funded Warrant should carry over to the Warrant Share received. Similarly, the tax basis of the Pre-Funded Warrant should carry over to the Warrant Share received upon exercise increased by the exercise price of \$0.0001. Holders should consult their tax advisors regarding the risks associated with the acquisition of an investment unit pursuant to this offering (including potential alternative characterizations). The balance of this discussion generally assumes that the characterization described above is respected for U.S. federal income tax purposes.

Allocation of Purchase Price

Each Share, Pre-Funded Warrant and Common Warrant is expected to be treated for U.S. federal income tax purposes as an investment unit consisting of one Share, one Pre-Funded Warrant and one Common Warrant. In determining the tax basis of each Share, Pre-Funded Warrant and Common Warrant constituting a unit, holders should allocate their purchase price for the unit between the Share, Pre-Funded Warrant and Common Warrant on the basis of their relative fair market values at the time of issuance. Calyxt does not intend to advise holders of the Offered Securities with respect to this determination. A holder's allocation of the purchase price between the Shares, Pre-Funded Warrant and Common Warrants is not binding on the IRS or the courts, and no assurance can be given that the IRS or the courts will agree with a holder's allocation. All holders are advised to consult their tax and financial advisors with respect to the relative fair market values of the Shares, Pre-Funded Warrants and Common Warrants for U.S. federal income tax purposes.

Tax Considerations Applicable to U.S. Holders

Distributions on Shares, Warrant Shares and Pre-Funded Warrants

Calyxt does not anticipate declaring or paying any cash dividends to holders of Calyxt's common stock in the foreseeable future. If Calyxt makes distributions of cash or other property on the Shares, Warrant Shares or Pre-Funded Warrants (other than certain distributions of stock), such distributions will constitute dividends to the extent paid out of Calyxt's current or accumulated earnings and profits, as determined for U.S. federal income tax purposes. Dividends received by a corporate U.S. Holder may be eligible for a dividends received deduction, subject to applicable limitations. Dividends received by certain non-corporate U.S. Holders, including individuals, are generally taxed at the lower applicable capital gains rate provided certain holding period and other requirements are satisfied. Distributions in excess of Calyxt's current and accumulated earnings and profits will constitute a return of capital and first be applied against and reduce a U.S. Holder's adjusted tax basis in its Shares, Warrant Shares or Pre-Funded Warrants, as applicable, but not below zero. Any excess will be treated as capital gain and will be treated as described below under "—Sale or Other Taxable Disposition of the Shares, Warrant Shares and Pre-Funded Warrants."

Sale or Other Taxable Disposition of the Shares, Warrant Shares and Pre-Funded Warrants

Upon the sale, exchange or other taxable disposition of the Shares, Warrant Shares or Pre-Funded Warrants, a U.S. Holder will generally recognize capital gain or loss equal to the difference between the amount of cash and the fair market value of any property received upon the sale, exchange or other taxable disposition and such U.S. Holder's adjusted tax basis in the Shares, Warrant Shares or Pre-Funded Warrants. This capital gain or loss will be long term capital gain or loss if the U.S. Holder's holding period in such Shares, Warrant Shares or Pre-Funded Warrants is more than one year at the time of the sale, exchange or other taxable disposition. Long-term capital gains recognized by certain non-corporate U.S. Holders, including individuals, generally will be subject to reduced rates of U.S. federal income tax. The deductibility of capital losses is subject to certain limitations.

Sale or Other Disposition or Exercise of Common Warrants

Upon the sale, exchange or other disposition of a Common Warrant (other than by exercise), a U.S. Holder will generally recognize capital gain or loss equal to the difference between the amount realized on the sale, exchange or other disposition and the U.S. Holder's tax basis in the Common Warrant. This capital gain or loss will be long-term capital gain or loss if the U.S. Holder's holding period in such Common Warrant is more than one year at the time of the sale, exchange or other disposition. The deductibility of capital losses is subject to certain limitations.

In general, a U.S. Holder will not be required to recognize income, gain or loss upon exercise of a Common Warrant for its exercise price. A U.S. Holder's tax basis in Warrant Shares received upon exercise of Common Warrants will be equal to the sum of (i) the U.S. Holder's tax basis in the Common Warrants exchanged therefor and (ii) the exercise price of such Common Warrants. A U.S. Holder's holding period in the Warrant Shares received upon exercise will commence on the day after such U.S. Holder exercises the Common Warrants. Although there is no direct legal authority as to the U.S. federal income tax treatment of an exercise of a warrant on a cashless basis, Calyxt intends to take the position that such exercise will not be taxable, either because the exercise is not a gain realization event or because it qualifies as a tax-free recapitalization. In the former case, the holding period of Warrant Shares received upon exercise of Common Warrants should commence on the day after the Common Warrants are exercised. In the latter case, the holding period of the Warrant Shares received upon exercise of Common Warrants would include the holding period of the exercised Common Warrants. However, Calyxt's position is not binding on the IRS and the IRS may treat a cashless exercise of a warrant as a taxable exchange. U.S. Holders are urged to consult their tax advisors as to the consequences of an exercise of a Common Warrant on a cashless basis, including with respect to their holding period and tax basis in the Warrant Shares received.

Lapse of Common Warrants

If a Common Warrant expires without being exercised, a U.S. Holder will recognize a capital loss in an amount equal to such U.S. Holder's tax basis in the warrant. Such loss will be long-term capital loss if, at the time of the expiration, the U.S. Holder's holding period in such warrant is more than one year. The deductibility of capital losses is subject to certain limitations.

Certain Adjustments to and Distributions on Pre-Funded Warrants and Common Warrants

Under Section 305 of the Code, an adjustment to the number of Warrant Shares that will be issued on the exercise of the Pre-Funded Warrants and Common Warrants, or an adjustment to the exercise price of the Pre-Funded Warrants and Common Warrants (or in certain circumstances, there is a failure to make adjustments), may be treated as a constructive distribution to a U.S. Holder of the Pre-Funded Warrants and Common Warrants if, and to the extent that, such adjustment has the effect of increasing such U.S. Holder's proportionate interest in Calyxt's earnings and profits as determined under U.S. federal income tax principles or Calyxt's assets, depending on the circumstances of such adjustment (for example, if such adjustment is to compensate for a distribution of cash or other property to Calyxt's shareholders). Such distributions will constitute dividends to the extent deemed paid out of Calyxt's current or accumulated earnings and profits, as discussed above under "Distributions on Shares, Warrant Shares and Pre-Funded Warrants." U.S. Holders should consult their tax advisors regarding the proper treatment of any adjustments to the number of Warrant Shares that will be issued on the exercise of the Pre-Funded Warrants or Common Warrants or the exercise price of the Pre-Funded Warrants or Common Warrants.

In addition, if Calyxt were to make a distribution in cash or other property with respect to its common stock after the issuance of the Common Warrants, then Calyxt may, in certain circumstances, make a corresponding distribution to holders of Common Warrants. The taxation of a distribution received with respect to a Common Warrant is unclear. It is possible such a distribution would be treated as a distribution (or constructive distribution), although other treatments are possible. U.S. Holders should consult their tax advisors regarding the proper treatment of distributions received with respect to Common Warrants.

Backup Withholding and Information Reporting

In general, backup withholding and information reporting requirements may apply to payments on the Offered Securities and to the receipt of proceeds on the sale, exchange or other taxable disposition of the Offered Securities. Backup withholding (currently at a rate of 24 percent) may apply if a U.S. Holder fails to furnish its taxpayer identification number, a U.S. Holder fails to certify under penalties of perjury that such taxpayer identification number is correct and that such U.S. Holder is not subject to backup withholding (generally on a properly completed and duly executed IRS Form W-9), the applicable withholding agent is notified by the IRS that the holder previously failed to properly report payments of interest or dividends, or such U.S. Holder otherwise fails to comply with the applicable requirements of the backup withholding rules.

Certain U.S. Holders generally are not subject to backup withholding and information reporting requirements, provided that their exemptions from backup withholding and information reporting are properly established. Backup withholding is not an additional tax. Any amounts withheld from a payment to a U.S. Holder under the backup withholding rules generally will be allowed as a credit against such U.S. Holder's U.S. federal income tax liability and may entitle such U.S. Holder to a refund, provided the required information is furnished to the IRS in a timely manner. U.S. Holders should consult their tax advisors regarding the application of backup withholding, the availability of an exemption from backup withholding, and the procedure for obtaining such an exemption, if available.

Tax Considerations Applicable to Non-U.S. Holders

Distributions on Shares, Warrant Shares and Pre-Funded Warrants

As mentioned above, Calyxt does not anticipate declaring or paying any cash dividends to holders of Calyxt's common stock in the foreseeable future. However, distributions of cash or other property (other than

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certain distributions of stock) on the Shares, Warrant Shares or Pre-Funded Warrants will constitute dividends to the extent paid out of Calyxt's current or accumulated earnings and profits, as determined for U.S. federal income tax purposes. Distributions in excess of Calyxt's current and accumulated earnings and profits will constitute a return of capital and first be applied against and reduce a Non-U.S. Holder's adjusted tax basis in its common stock, but not below zero. Any excess will be subject to the treatment as described below under "— Gain on Sale or Other Taxable Disposition of the Offered Securities".

Dividends paid to a Non-U.S. Holder that are not effectively connected with the Non-U.S. Holder's conduct of a trade or business in the United States generally will be subject to withholding tax at a 30-percent rate or a reduced rate specified by an applicable income tax treaty. In order to obtain a reduced rate of withholding, the Non-U.S. Holder will be required to provide Calyxt or Calyxt's paying agent with a properly executed applicable IRS Form W-8BEN or IRS Form W-8BEN-E (or appropriate successor form), as applicable, certifying under penalties of perjury that the Non-U.S. Holder is not a United States person and is eligible for the benefits under the applicable tax treaty. These forms may need to be periodically updated. If a Non-U.S. Holder holds the Offered Securities through a financial institution or other intermediary, the Non-U.S. Holder generally will be required to provide the appropriate documentation to the financial institution or other intermediary. A Non-U.S. Holder eligible for a reduced rate of U.S. withholding tax pursuant to an income tax treaty who fails to timely provide an IRS Form W-8BEN or W-8BEN-E, as applicable, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim with the IRS.

If dividends paid to a Non-U.S. Holder are effectively connected with the Non-U.S. Holder's conduct of a trade or business in the United States (and, if required by an applicable income tax treaty, are attributable to a permanent establishment or fixed base maintained by the Non-U.S. Holder in the United States), the Non-U.S. Holder will generally be taxed on the dividends in the same manner as a U.S. Holder. In this case, the Non-U.S. Holder will be exempt from the withholding tax discussed in the preceding paragraph, although the Non-U.S. Holder will be required to provide a properly executed IRS Form W-8ECI (or appropriate successor form) in order to claim an exemption from withholding. Such effectively connected dividends, although not subject to U.S. federal withholding tax, are subject to U.S. federal income tax on a net income basis at the regular graduated U.S. federal income tax rates generally applicable to Non-U.S. Holders. Dividends received by a corporate Non-U.S. Holder that are effectively connected with such Non-U.S. Holder's conduct of a trade or business in the United States (and, if required by an applicable income tax treaty, attributable to a permanent establishment or fixed base maintained by the Non-U.S. Holder in the United States) may be subject to an additional branch profits tax at a 30-percent rate (or such lower rate as may be specified by an applicable income tax treaty). Non-U.S. Holders should consult their tax advisors with respect to other U.S. tax consequences of the acquisition, ownership and disposition of the Offered Securities, including the possible imposition of the branch profits tax.

Exercise of Common Warrants

A Non-U.S. Holder generally will not recognize gain or loss on the exercise of a Common Warrant and the related receipt of Warrant Shares. However, if a cashless exercise of Common Warrants results in a taxable exchange, as described above under "—Tax Considerations Applicable to U.S. Holders— Sale or Other Disposition or Exercise of Common Warrants," the rules described below under "Gain on Sale or Other Taxable Disposition of the Offered Securities" would apply.

Gain on Sale or Other Taxable Disposition of the Offered Securities

Subject to the discussions below under "—Information Reporting and Backup Withholding" and "—FATCA," a Non-U.S. Holder generally will not be subject to U.S. federal income or withholding tax on gain realized on a sale, exchange or other taxable disposition of the Offered Securities unless:

- the gain is effectively connected with the Non-U.S. Holder's conduct of a trade or business in the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment or fixed base maintained by the Non-U.S. Holder in the United States),

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- the Non-U.S. Holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- Calyxt is or has been a “United States real property holding corporation,” as defined in the Code, at any time within the five-year period ending on the date of disposition or the Non-U.S. Holder’s holding period, whichever period is shorter, and the Non-U.S. Holder is not eligible for an exemption under an applicable income tax treaty.

Calyxt believes that it is not, and does not anticipate becoming, a United States real property holding corporation. Even if Calyxt is or has been a United States real property holding corporation during the specified testing period, as long as Calyxt’s common stock is regularly traded on an established securities market (such as the Nasdaq Global Market) at any time during the calendar year in which the disposition occurs, a Non-U.S. Holder will not be subject to U.S. federal income tax on the disposition of Shares or Warrant Shares if the Non-U.S. Holder does not own or has not owned (actually or constructively) more than 5 percent of Calyxt’s common stock at any time during the shorter of the two periods mentioned above. Special rules may apply to the determination of the 5-percent threshold in the case of a Non-U.S. Holder of a Pre-Funded Warrants and/or Common Warrants. Non-U.S. Holders are urged to consult their tax advisors regarding the effect of holding Pre-Funded Warrants or Common Warrants on the calculation of such 5-percent threshold. Non-U.S. Holders should consult their tax advisors regarding the application of this regularly traded exception.

In addition, although a 15% withholding tax generally applies to gross proceeds from the sale or other taxable disposition of the stock of or certain other interests in a United States real property holding company, such 15% withholding tax generally will not apply to the disposition of Shares or Warrant Shares so long as Calyxt’s common stock is regularly traded on an established securities market. However, the exception described in the previous sentence may not apply to certain dispositions of Pre-Funded Warrants or the Common Warrants if the Non-U.S. Holder exceeds the 5-percent threshold mentioned above.

If a Non-U.S. Holder recognizes gain on a sale, exchange or other disposition of the Offered Securities that is effectively connected with the Non-U.S. Holder’s conduct of a trade or business in the United States (and if required by an applicable income tax treaty, is attributable to a permanent establishment or fixed base maintained by the Non-U.S. Holder in the United States), the Non-U.S. Holder will generally be subject to U.S. federal income tax at the regular graduated U.S. federal income tax rates generally applicable to a United States person. If the Non-U.S. Holder is a corporation, the Non-U.S. Holder may also be subject to the branch profits tax at a 30-percent rate or such lower rate as may be specified by an applicable income tax treaty. Non-U.S. Holders should consult their tax advisors with respect to other U.S. tax consequences of the acquisition, ownership and disposition of the Offered Securities, including the possible imposition of the branch profits tax.

Certain Adjustments to and Distributions on Pre-Funded Warrants and Common Warrants

As discussed above under “—Tax Considerations Applicable to U.S. Holders—Certain Adjustments to and Distributions on Pre-Funded Warrants and Common Warrants,” certain adjustments to the number of Warrant Shares on the exercise of the Pre-Funded Warrants or Common Warrants, or an adjustment to the exercise price of the Pre-Funded Warrants or Common Warrants (or certain failures to make adjustments), may be deemed to be the payment of a distribution with respect to the Pre-Funded Warrants or Common Warrants. Such a deemed distribution could be deemed to be the payment of a dividend to a Non-U.S. Holder to the extent of Calyxt’s earnings and profits, notwithstanding the fact that such Holder will not receive a cash payment. In the event of such a deemed dividend, Calyxt may be required to withhold tax from subsequent distributions of cash or property to Non-U.S. Holders. Non-U.S. Holders should consult their tax advisors regarding the proper treatment of any adjustments to the Pre-Funded Warrants and Common Warrants.

In addition, as discussed above under “—Tax Considerations Applicable to U.S. Holders— Certain Adjustments to and Distributions on Pre-Funded Warrants and Common Warrants,” the taxation of a distribution received with respect to a Common Warrant is unclear. It is possible such a distribution would be treated as a distribution (or constructive distribution), although other treatments are possible. Non-U.S. Holders should

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consult their tax advisors regarding the U.S. withholding tax and other U.S. tax consequences of distributions received with respect to Common Warrants.

Information Reporting and Backup Withholding

Information returns will be filed with the IRS in connection with payments of dividends on the Offered Securities. Copies of the information returns reporting those dividends and withholding may also be made available to the tax authorities in the country in which a Non-U.S. Holder is a resident under the provisions of an applicable income tax treaty or agreement. Unless a Non-U.S. Holder complies with certification procedures to establish that the Non-U.S. Holder is not a United States person, information returns may also be filed with the IRS in connection with the proceeds from a sale, exchange or other disposition of the Offered Securities to or through the U.S. office (and, in certain cases, the foreign office) of a broker.

A Non-U.S. Holder may be subject to backup withholding (currently at a rate of 24 percent) on payments on the Offered Securities or on the proceeds from a sale, exchange or other disposition of the Offered Securities unless the Non-U.S. Holder complies with certification procedures to establish that the Non-U.S. Holder is not a United States person or otherwise establishes an exemption. Compliance with the certification procedures required to claim a reduced rate of withholding under a treaty (including properly certifying non-U.S. status on an IRS Form W-8BEN, IRS Form W-8BEN-E or other appropriate version of IRS Form W-8 (or appropriate successor form)) generally will satisfy the certification requirements necessary to avoid backup withholding as well. Notwithstanding the foregoing, U.S. federal backup withholding may apply if the payor has actual knowledge, or reason to know, that a holder is a United States person.

Backup withholding is not an additional tax. Any amounts withheld from a payment to a Non-U.S. Holder under the backup withholding rules generally will be allowed as a credit against such Non-U.S. Holder's U.S. federal income tax liability and may entitle such Non-U.S. Holder to a refund, provided the required information is furnished to the IRS in a timely manner. Non-U.S. Holders are urged to consult their tax advisors regarding the application of backup withholding and the availability of and procedure for obtaining an exemption from backup withholding in their particular circumstances.

FATCA

Provisions of the Code commonly referred to as "FATCA" require withholding of 30 percent on payments of dividends on the Offered Securities, as well as payments of gross proceeds of dispositions of the Offered Securities, to a "foreign financial institution" (which is broadly defined for this purpose and in general includes investment vehicles) and certain other non-U.S. entities unless various U.S. information reporting and due diligence requirements (generally relating to ownership by United States persons of interests in or accounts with those entities) have been satisfied or an exemption applies. However, the IRS has issued proposed Treasury regulations that eliminate FATCA withholding on payments of gross proceeds (but not on payments of dividends). Pursuant to the preamble to the proposed Treasury regulations, any applicable withholding agent may (but is not required to) rely on this proposed change to FATCA withholding until final Treasury regulations are issued or the proposed Treasury regulations are withdrawn. An intergovernmental agreement between the United States and an applicable foreign country may modify these requirements. If FATCA withholding is imposed, a beneficial owner that is not a foreign financial institution generally may obtain a refund of any amounts withheld by filing a U.S. federal income tax return (which may entail significant administrative burden). Non-U.S. Holders should consult their tax advisors regarding the effects of FATCA on their investments in the Offered Securities.

Calyxt will not pay any additional amounts to Non-U.S. Holders with respect to any amounts withheld, including pursuant to FATCA.

THE PRECEDING DISCUSSION OF U.S. FEDERAL TAX CONSIDERATIONS IS FOR GENERAL INFORMATION ONLY. IT IS NOT TAX ADVICE. PROSPECTIVE INVESTORS SHOULD CONSULT THEIR TAX ADVISORS REGARDING THE PARTICULAR U.S. FEDERAL, STATE AND LOCAL AND NON-U.S. TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF THE OFFERED SECURITIES, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAWS.

LEGAL MATTERS

Jones Day, New York, New York, will pass upon the validity of the issuance of the securities offered hereby. Certain legal matters relating to the offering will be passed upon for the underwriter by Goodwin Procter LLP, New York, New York.

EXPERTS

The financial statements of Calyxt, Inc. appearing in Calyxt's Annual Report (Form 10-K) for the year ended December 31, 2020 have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon, included therein, and incorporated herein by reference. Such financial statements are, and audited financial statements to be included in subsequently filed documents will be, incorporated herein in reliance upon the report of Ernst & Young LLP pertaining to such financial statements to the extent covered by consents filed with the SEC given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

Calyxt has filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities being offered hereby. This prospectus supplement and accompanying prospectus are part of the registration statement on Form S-3 Calyxt filed with the SEC under the Securities Act and do not contain all the information set forth in the registration statement. Whenever a reference is made in this prospectus supplement to any of Calyxt's contracts, agreements or other documents, the reference may not be complete and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated by reference into this prospectus supplement for a copy of such contract, agreement or other document. For further information about Calyxt and the common stock offered hereby, the Company refers you to the registration statement and the exhibits filed with the registration statement.

Calyxt is subject to the information and reporting requirements of the Exchange Act and, in accordance with this law, is required to file periodic reports, proxy statements and other information with the SEC. You can read Calyxt's SEC filings, including the registration statement, over the internet at the SEC's website at www.sec.gov.

Calyxt makes available free of charge, on or through the investor relations section of Calyxt's website, Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after the Company electronically files such material with, or furnishes it to, the SEC. The information found on Calyxt's website, www.calyxt.com, other than as specifically incorporated by reference in this prospectus supplement, is not part of this prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows Calyxt to incorporate by reference much of the information the Company files with them. This allows Calyxt to disclose important information to you by referring those publicly filed documents. The information that Calyxt incorporates by reference in this prospectus supplement is considered to be part of this prospectus supplement. Because Calyxt is incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus. This means that you must look at all of the SEC filings that Calyxt incorporates by reference to determine if any of the statements in this prospectus supplement or in any document previously incorporated by reference have been modified or superseded. This prospectus supplement incorporates by reference the documents listed below (File No. 001-38161) and any future filings the Company makes with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed) until the offering of the securities under the registration statement is terminated or completed:

- Annual Report on [Form 10-K](#) for the year ended December 31, 2020 (including the information in Part III incorporated therein by reference from Calyxt's [Definitive Proxy Statement on Schedule 14A](#));
- Quarterly Report on Form 10-Q for the quarter ended [March 31, 2021](#), Quarterly Report on Form 10-Q for the quarter ended [June 30, 2021](#), and Quarterly Report on Form 10-Q for the quarter ended [September 30, 2021](#);
- Current Reports on Form 8-K (other than information furnished rather than filed) filed with the SEC on [February 19, 2021](#) (solely with respect to Item 5.02), [March 18, 2021](#), [May 21, 2021](#), [July 15, 2021](#) (solely with respect to Item 5.02), [September 21, 2021](#), and [October 5, 2021](#) (solely with respect to Item 8.01); and
- the description of Calyxt's common stock contained in the Registration Statement on [Form 8-A](#) filed on July 20, 2017, including any amendment or report filed for the purpose of updating such description.

Calyxt also incorporates by reference any future filings (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items unless such Form 8-K expressly provides to the contrary) made with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, including those made after the date of the initial filing of the registration statement of which this prospectus supplement is a part and prior to effectiveness of such registration statement, until Calyxt files a post-effective amendment that indicates the termination of the offering of the shares of Calyxt's common stock made by this prospectus supplement and will become a part of this prospectus supplement from the date that such documents are filed with the SEC. Information in such future filings updates and supplements the information provided in this prospectus supplement. Any statements in any such future filings will automatically be deemed to modify and supersede any information in any document Calyxt previously filed with the SEC that is incorporated or deemed to be incorporated herein by reference to the extent that statements in the later filed document modify or replace such earlier statements.

PROSPECTUS

\$200,000,000



CALYXT, INC.

**Common Stock
Preferred Stock
Warrants
Subscription Rights
Units
Debt Securities**

We may offer and sell from time to time in one or more offerings shares of our common stock, shares of our preferred stock, warrants, subscription rights, units or debt securities for an aggregate offering price of \$200,000,000. Any of these securities may be offered separately or in combination at prices and on other terms to be determined at the time of the offering.

Each time we offer any securities pursuant to this prospectus, we will provide a prospectus supplement that will provide the specific terms of the securities to the extent those terms are not described in this prospectus or are different from the terms described in this prospectus. The prospectus supplements may also add to, update or change information contained in this prospectus. In addition, we may supplement, update or change any of the information contained in this prospectus by incorporating information by reference into this prospectus. You should read this prospectus, any applicable prospectus supplements and any documents incorporated by reference carefully before you invest.

We may offer these securities directly to investors, through agents, underwriters or dealers, or through a combination of these methods. Each applicable prospectus supplement will provide the terms of the plan of distribution relating to the specific offering. If any agents, dealers or underwriters are involved in the sale of any securities, the applicable prospectus supplement will set forth their names and any applicable commissions or discounts.

Our common stock is listed on the Nasdaq Global Market ("Nasdaq") under the symbol "CLXT." On September 13, 2019, the closing sale price of our common stock on Nasdaq was \$7.71 per share.

Investing in our securities involves risks. See "[Risk Factors](#)" on page 4 and any risk factors included in any accompanying prospectus supplement and in the documents incorporated by reference in this prospectus for a discussion of the factors you should carefully consider before investing in our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is September 16, 2019.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the “SEC”) utilizing a “shelf” registration process. Under this shelf registration process, we may offer and sell from time to time any combination of the securities described in this prospectus in one or more offerings in amounts, at prices and on terms that we determine at the time of the offering. This prospectus and the documents we incorporate by reference into this prospectus provide you with a general description of the securities under this shelf registration statement. In connection with a specific offering, we may provide a prospectus supplement and may also provide you with a free writing prospectus that will contain specific information about the terms of that offering. The prospectus supplement or free writing prospectus, if any, may also add to, update or change information contained in this prospectus. Before purchasing any securities, you should carefully read both this prospectus, any applicable accompanying prospectus supplement and any free writing prospectus prepared by or on behalf of us, together with the additional information described under the heading “Where You Can Find Additional Information” in this prospectus.

We have not authorized any other person to provide you with any information different than that contained or incorporated by reference in this prospectus and any applicable accompanying prospectus supplement or free writing prospectus. If anyone provides you with different or inconsistent information, you should not rely on it as having been authorized by us. We are not making offers to sell the securities and are not soliciting offers to buy the securities in any jurisdiction where an offer or solicitation is not permitted. The information in this prospectus is accurate only as of the date on the front cover. You should not assume that the information contained in this prospectus, including any information incorporated in this prospectus by reference, any applicable accompanying prospectus supplement or any free writing prospectus prepared by us, is accurate as of any date other than the date on the front of these documents. Our business, financial condition, results of operations and prospects may have changed since such date. Neither the delivery of this prospectus nor any sale made under it implies that there has been no change in our affairs or that the information in this prospectus is correct as of any date after the date of this prospectus. We encourage you to consult your own counsel, accountant and other advisors for legal, tax, business, financial and related advice regarding an investment in our securities.

When we use the terms “we,” “us,” the “Company,” or “our” in this report, unless the context otherwise requires, we are referring to Calyxt, Inc. When we use the term “Collectis” we are referring to Collectis S.A., our majority stockholder.

We own the name and trademark, Calyxt® and Calyno™; we also own or license other trademarks, trade names and service marks of Calyxt appearing in this this prospectus and any prospectus supplement or free writing prospectus. The name and trademark, “Collectis®” and “TALEN®”, and other trademarks, trade names and service marks of Collectis appearing in this prospectus and any prospectus supplement or free writing prospectus are the property of Collectis. This prospectus, any prospectus supplement and any free writing prospectus may also contain additional trade names, trademarks and service marks belonging to other companies. We do not intend our use or display of other parties’ trademarks, trade names or service marks to imply, and such use or display should not be construed to imply, a relationship with, or endorsement or sponsorship of us by, these other parties.

SUMMARY

Our Company

We are a healthy food ingredient company. We leverage proprietary intellectual property, our technical expertise, and an end-to-end supply chain toward our mission of “Making the Food You Love a Healthier Choice™”.

Using our proprietary technologies and expertise, including TALEN gene-editing technology exclusively licensed to us in the field of agriculture, we develop food crops with targeted traits quickly and more cost effectively than traditional methods. Our technologies enable precise cuts to DNA in a single plant cell. This allows us to use the plant’s natural repair machinery to make our desired genome edit and regenerate the single cell into a full plant that includes this gene edit. We believe that we can identify a consumer need and develop a product from “concept to fork” in cycles as short as six years by utilizing these proprietary technologies.

We believe that we are well-positioned to address consumer preferences that are evolving to demand healthier, more nutritionally rich foods. To bring our consumer-centric products to the marketplace, we intend to repurpose and leverage existing supply chain capacity by contracting, tolling or partnering with players in the existing supply chain, such as seed production companies, seed distributors, farmers, crushers, millers, and refiners. We expect this will allow us to apply our resources to maximizing innovation and product development while minimizing our capital expenditures and overhead. We intend to strategically out-license our intellectual property to maximize our market opportunity.

Our first commercial products are oil and meal derived from a High Oleic Soybean designed to produce a healthier oil that has increased heat stability with zero grams of trans fat per serving. We completed our first sales of our High Oleic Soybean Oil and High Oleic Soybean Meal in the first quarter of 2019. Among our other product candidates are other soybean products and a High Fiber Wheat.

Our current commercial focus is North America. This may expand over time to other geographies, subject to customer demand and regulatory requirements, among other factors. We also intend to explore the ability to add value through our existing product candidates once they are commercialized by combining traits in the same crop, which may allow us to deliver products with additional benefits without adding significant cost.

Relationship with Collectis

Prior to our initial public offering (“IPO”) on July 25, 2017, we were a wholly-owned subsidiary of Collectis S.A. As of June 30, 2019, Collectis owned approximately 69.1% of our outstanding common stock. In connection with the IPO, we and Collectis entered into certain agreements that relate to our relationship with Collectis and provide a framework for our ongoing relationship with Collectis. These agreements include a management services agreement, pursuant to which Collectis provides certain support functions on a centralized basis and allocates a portion of the expense to us; a Stockholders Agreement, (as defined below), which provides Collectis with certain contractual rights as long as it maintains threshold beneficial ownership levels in our shares; and a license agreement, pursuant to which we hold an exclusive, worldwide license in plants to key intellectual property owned by Collectis.

Corporate Information

Calyxt was incorporated in the State of Delaware in 2010. Our corporate headquarters is located at 2800 Mount Ridge Road, Roseville, Minnesota 55113 and our phone number is (651) 683-2807. Our filings with the SEC are posted on our corporate website at www.calyxt.com. The information contained in, or accessible through, our corporate website does not constitute part of this prospectus.

Our common stock is listed on the Nasdaq Global Market under the symbol “CLXT.”

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated herein contain “forward-looking statements” within the meaning of the federal securities laws, including Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”).

We have made these forward-looking statements in reliance on the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. In some cases, you can identify these statements by forward-looking words such as “may,” “might,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential” or “continue,” the negative of these terms and other comparable terminology. These forward-looking statements, which are based on our current assumptions and expectations, are subject to risks and uncertainties. Forward-looking statements in this report may include statements about our future financial performance, product pipeline and development, commercialization efforts, and growth strategies. These statements are only predictions based on our current expectations and projections about future events. Our actual results could be materially different than those expressed, implied or anticipated by the forward-looking statements.

There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied by the forward-looking statements, including, without limitation, factors relating to:

- Our limited operating history;
- The challenges associated with achieving operating scale following the launch of our initial commercial product;
- Our incurrence of losses since our inception and the likelihood that we will continue to incur losses for the foreseeable future;
- Significant competition from competitors with substantially greater resources than us;
- Evolving regulatory requirements within and outside of the United States;
- Government policies and regulations affecting the agricultural sector and related industries;
- Commodity prices and other market risks facing the agricultural sector;
- Our reliance on gene-editing technologies that may become obsolete in the future;
- Our product development efforts, which use complex integrated technology platforms and require substantial time and resources;
- Our success in obtaining or maintaining necessary rights to product components and processes for our development pipeline through acquisitions and in-licenses;
- Our need to raise additional funding and the availability of additional capital or capital on acceptable terms;
- Our reliance on third parties in connection with our field trials and research services;
- Our growing experience with the commercialization of product candidates;
- The recognition of value in our products by farmers and food processors, and the ability of farmers and food processors to work effectively with our crops;
- Our ability to secure third-party contractors necessary for the development and commercial launch of our products;
- Our reliance on contractual counterparties;

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- Public perceptions of biotechnology; genetically engineered products; and ethical, legal, environmental, health and social concerns;
- Our ability to accurately forecast demand for our products;
- The needs of food manufacturers and the recognition of shifting consumer preferences;
- Adverse natural conditions and the highly seasonal and weather-sensitive nature of our business;
- Our exposure to product liability claims;
- The geographic concentration of our business activities;
- Our ability to use net operating losses to offset future taxable income;
- The adequacy of our patents and patent applications;
- Our licensing of intellectual property from Collectis and reliance on Collectis to prosecute, maintain, defend or enforce such intellectual property;
- Uncertainty relating to our patent positions that involve complex scientific, legal and factual analysis;
- The limited lifespan of our patents and limitations in intellectual property protection in some countries outside the United States;
- Developments in patent and other intellectual property law;
- Our ability to identify relevant third-party patents and to interpret the relevance, scope and expiration of third-party patents;
- Potential assertions of infringement, misappropriation or other violations of intellectual property rights, including licensing agreements;
- Loss or damage to our germplasm libraries and our ability to access and maintain competitive germplasm libraries;
- Our ability to attract and retain senior management and key employees;
- Our relationship with Collectis, our majority stockholder, and its ability to control the direction of our business;
- Our being a “controlled company” and, as a result, qualifying for, and intending to rely on, exemptions from certain corporate governance requirements;
- Our status as an emerging growth company; and
- Those factors discussed under the caption “Risk Factors” in our periodic filings with the SEC.

While the list of factors presented here is considered representative, no such list should be considered to be a complete statement of all potential risks and uncertainties. Unlisted factors may present significant additional obstacles to the realization of forward-looking statements. Any of these factors, in whole or in part, could materially and adversely affect our business, financial condition, results of operations and the price of our common stock.

Any forward-looking statement made by us in this prospectus, any prospectus supplement and the documents incorporated by reference herein or therein is based only on information currently available to us and speaks only as of the date of this prospectus, such prospectus supplement or such incorporated document, as the case may be. We do not assume any obligation to publicly provide revisions or updates to any forward-looking statements after the date of the document in which such statement appears, whether as a result of new information, future developments or otherwise, should circumstances change, except as otherwise required by securities and other applicable laws.

RISK FACTORS

Investing in our securities involves risk. You should carefully consider the risks and uncertainties described in this prospectus, any prospectus supplement and the documents incorporated by reference herein or therein, including the risks and uncertainties described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, as updated by the annual, quarterly and other reports and documents we file with the SEC after the date of this prospectus and that are incorporated by reference herein or in the applicable prospectus supplement. The risks and uncertainties described in this prospectus and the documents incorporated by reference herein are not the only risks we face. Additional risks and uncertainties that we do not presently know about or that we currently believe are not material may also adversely affect our business. For more information, see “Where You Can Find Additional Information.”

USE OF PROCEEDS

Unless otherwise specified in a prospectus supplement prepared in connection with an offering of securities pursuant to this prospectus, the net proceeds from the sale of any securities described in this prospectus will be used for general corporate purposes. General corporate purposes may include financing research and development; funding personnel and infrastructure enhancements; repayment, repurchase or redemption of debt; repurchases of other securities; acquisitions; additions to working capital; capital expenditures and investments. Accordingly, we will have significant discretion over the use of any net proceeds. We may provide additional or updated information on the use of net proceeds from the sale of the offered securities in an applicable prospectus supplement relating to the offered securities.

DESCRIPTION OF CAPITAL STOCK

Below is a description of the material terms and provisions of our amended and restated certificate of incorporation, which we refer to as our Certificate of Incorporation, and our amended and restated bylaws, as amended, which we refer to as our By-laws, as well as relevant terms and provisions of our indemnification agreements for directors and officers and Delaware law affecting the rights of our stockholders. This summary does not purport to be complete and is qualified in its entirety by the provisions of our Certificate of Incorporation, By-laws and such indemnification agreements. Copies of our Certificate of Incorporation, By-laws and indemnification agreements have been filed with the SEC and are incorporated by reference into the registration statement of which this prospectus forms a part.

General

Our authorized capital stock consists of:

- 275,000,000 shares of common stock, par value \$0.0001 per share; and
- 50,000,000 shares of preferred stock, par value \$0.0001 per share.

As of September 16, 2019, there were 32,867,413 shares of common stock outstanding, of which 22,713,175 were held by Collectis. At that date, there were no shares of preferred stock outstanding.

Common Stock

Voting Rights. The holders of our common stock are entitled to one vote per share on all matters to be voted upon by the stockholders. Holders of our common stock do not have cumulative voting rights in the election of directors. Accordingly, the holders of a majority of the voting power of our common stock could, if they so choose, elect all the directors.

Dividend Rights. Holders of common stock are entitled to receive dividends if, as and when declared by our Board of Directors, out of our legally available assets, in cash, property or shares of our capital stock, after payments of dividends required to be paid on outstanding preferred stock, if any.

Distributions in Connection with Mergers or Other Business Combinations. Upon a merger, consolidation or substantially similar transaction, holders of common stock will be entitled to receive equal per share payments or distributions.

Liquidation Rights. Upon our liquidation, dissolution or winding up, any business combination or a sale or disposition of all or substantially all of our assets, the assets legally available for distribution to our stockholders will be distributable ratably among the holders of the common stock, subject to prior satisfaction of all outstanding debts and other liabilities and the preferential rights and payment of liquidation preferences, if any, on any outstanding preferred stock.

Stockholders Agreement. In connection with our IPO, we entered into a stockholders agreement dated July 25, 2017 with Collectis (as amended from time to time, the “Stockholders Agreement”), pursuant to which Collectis has certain rights so long as it beneficially owns at least 15% of the then-outstanding shares of our common stock, as described in “Certain Relationships and Related Party Transactions, and Director Independence—Relationship with Collectis—Stockholders Agreement” in our definitive proxy statement, incorporated by reference herein.

Other Matters. Our Certificate of Incorporation does not entitle holders of our common stock to preemptive rights. No redemption or sinking fund provisions apply to our common stock. The rights, preferences and privileges of holders of our common stock are subject to, and may be adversely affected by, the rights of holders of any series of preferred stock that we may designate in the future.

Preferred Stock

Our Certificate of Incorporation authorizes our Board of Directors, without further action by the stockholders (unless so required by applicable law or Nasdaq listing standards), to issue preferred stock in one or more series, to increase or decrease the number of shares of any series subsequent to the issuance of that series, but not below the number of shares of such series then outstanding, and to determine the preferences, limitations and rights of any shares of preferred stock that we choose to issue, without vote or action by the stockholders.

We will fix the designations, powers, preferences and relative, participating, optional or other rights, if any, of the preferred stock of each such series, as well as any qualifications, limitations or restrictions thereon, in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of any certificate of designation that sets forth the terms of the series of preferred stock we are offering before the issuance of that series of preferred stock. If we offer preferred stock, the terms of the particular series of preferred stock will be described in the applicable prospectus supplement. This description will include (to the extent applicable):

- the designation of the applicable series number of shares of such series we are offering;
- the purchase price;
- the liquidation preference per share;
- the dividend rate, period and payment date and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- the procedures for any auction and remarketing, if any;
- the provisions for a sinking fund, if any;
- the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;
- any listing of the preferred stock on any securities exchange or market;
- whether the preferred stock will be convertible into our common stock, and, if applicable, the conversion price, or how it will be calculated, and the conversion period;
- whether the preferred stock will be exchangeable into other securities, and, if applicable, the exchange price, or how it will be calculated, and the exchange period;
- voting rights, if any, of the preferred stock;
- preemptive rights, if any;
- restrictions on transfer, sale or other assignment, if any;
- whether interests in the preferred stock will be represented by depositary shares;
- a discussion of any material United States federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;
- any limitations on the issuance of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the preferred stock.

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The Delaware General Corporation Law (the “DGCL”) provides that the holders of preferred stock will have the right to vote separately as a class (or, in some cases, as a series) on an amendment to our Certificate of Incorporation if the amendment would change the par value, the number of authorized shares of the class or the powers, preferences or special rights of the class or series so as to adversely affect the class or series, as the case may be. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

Our Board of Directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock. Additionally, the issuance of preferred stock may have the effect of decreasing the market price of our common stock.

Delaware Anti-Takeover Law and Provisions of our Charter and our Bylaws

The following provisions may make a change in control of our business more difficult and could delay, defer or prevent a tender offer or other takeover attempt that a stockholder might consider to be in its best interest, including takeover attempts that might result in the payment of a premium to stockholders over the market price for their shares. These provisions also may promote the continuity of our management by making it more difficult for a person to remove or change the incumbent members of our Board of Directors.

Authorized but Unissued Shares; Undesignated Preferred Stock. The authorized but unissued shares of our common stock will be available for future issuance without stockholder approval. These additional shares may be used for a variety of corporate purposes, including future public offerings to raise additional capital, acquisitions and employee benefit plans. In addition, our Board of Directors may authorize, without stockholder approval, the issuance of undesignated preferred stock with voting rights or other rights or preferences designated from time to time by our Board of Directors. The existence of authorized but unissued shares of common stock or preferred stock may enable our Board of Directors to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise.

Election and Removal of Directors. Our Board of Directors consists of not less than five nor more than eleven directors, excluding any directors elected by holders of preferred stock pursuant to provisions of any applicable series of preferred stock entitling the holders thereof to separately elect directors. The exact number of directors will be fixed from time to time by resolution of our Board of Directors. As of the date of this prospectus, our Board of Directors has seven members.

Pursuant to the Stockholders Agreement, Collectis has the right to nominate the greater of three directors or a majority of directors to our Board of Directors so long as it continues to own at least 15% of our then-outstanding shares of our common stock.

At any time after Collectis beneficially owns less than 50% of our then outstanding common stock, our Certificate of Incorporation provides that directors may be removed only for cause and only by the affirmative vote of holders of a majority of our then outstanding stock. Prior to such time, directors may be removed with or without cause.

Classified Board of Directors. Our Board of Directors currently is not classified. However, our Certificate of Incorporation and our By-laws provide that our Board of Directors will be classified with approximately one-third of the directors elected each year at such time as Collectis no longer holds at least 50% of our then outstanding common stock. The number of directors will be fixed from time to time by a majority of the total number of directors that we would have at the time such number is fixed if there were no vacancies. The directors

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will be divided into three classes, designated class I, class II and class III. Each class will consist, as nearly as may be possible, of one-third of the total number of directors constituting the entire Board of Directors. At each annual meeting of stockholders, successors to the class of directors whose term expires at that annual meeting will be elected for a three-year term and until their successors are duly elected and qualified. In addition, if the number of directors is changed, any increase or decrease will be apportioned by our Board of Directors among the classes so as to maintain the number of directors in each class as nearly equal as possible, and any additional director of any class elected to fill a vacancy resulting from an increase in such class or from the removal from office, death, disability, resignation or disqualification of a director or other cause will hold office for a term that will coincide with the remaining term of that class, but in no case will a decrease in the number of directors have the effect of removing or shortening the term of any incumbent director.

Director Vacancies. Our Certificate of Incorporation authorizes only our Board of Directors to fill vacant directorships.

No Cumulative Voting. Our Certificate of Incorporation provides that stockholders do not have the right to cumulate votes in the election of directors.

Special Meetings of Stockholders. At any time after Collectis beneficially owns less than 50% of our then outstanding common stock, our By-laws and our Certificate of Incorporation provide that special meetings of our stockholders may only be called by the Board of Directors. Prior to such time, a special meeting may also be called by the secretary of the Company at the request of stockholders holding a majority of the outstanding shares entitled to vote.

Advance Notice Procedures for Director Nominations. Our By-laws establish advance notice procedures for stockholders seeking to nominate candidates for election as directors at an annual or special meeting of stockholders. Although our By-laws do not give the Board of Directors the power to approve or disapprove stockholder nominations of candidates to be elected at an annual meeting, our By-laws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of the Company.

Action by Written Consent. At any time after Collectis beneficially owns less than 50% of our then outstanding common stock, our By-laws and our Certificate of Incorporation provide that any action required or permitted to be taken by the stockholders must be effected at a duly called annual or special meeting of stockholders and may not be effected by any consent in writing in lieu of a meeting of such stockholders, subject to the rights of the holders of any series of preferred stock. Prior to such time, such actions may be taken without a meeting by written consent.

Amending Our Certificate of Incorporation and Bylaws. At any time after Collectis beneficially owns less than 50% of our then outstanding common stock, our Certificate of Incorporation and By-laws may be amended by the affirmative vote of the holders of at least two-thirds of our common stock. Prior to such time, our Certificate of Incorporation and By-laws may be amended by the affirmative vote of the holders of a majority of the voting power of our common stock.

Exclusive Jurisdiction. Our Certificate of Incorporation provides that, unless we consent to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a claim of breach of fiduciary duty owed by any of our directors, officers, or other employees to us or to our stockholders, any action asserting a claim arising pursuant to the DGCL, or any action asserting a claim governed by the internal affairs doctrine. Notwithstanding the foregoing, because the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce duties or liabilities created by the Exchange Act or the rules and regulations thereunder, the exclusive forum provision does not apply to any action arising under the Exchange Act. Although the exclusive

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forum provision applies, to the extent permitted by law, to Securities Act claims, the Securities Act creates concurrent federal and state jurisdiction over suits brought to enforce duties or liabilities created by the Securities Act or the rules and regulations thereunder. Accordingly, there is uncertainty as to whether a court would enforce this exclusive forum provision with respect to a Securities Act claim. Neither we nor our stockholders may waive compliance with the federal securities laws or the rules and regulations thereunder.

Business Combinations with Interested Stockholders. Subject to certain exceptions, Section 203 of the DGCL prohibits a public Delaware corporation from engaging in a business combination (as defined in such section) with an “interested stockholder” (defined generally as any person who beneficially owns 15% or more of the outstanding voting stock of such corporation or any person affiliated with such person) for a period of three years following the time that such stockholder became an interested stockholder, unless (i) prior to such time the Board of Directors of such corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder; (ii) upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of such corporation at the time the transaction commenced (excluding for purposes of determining the voting stock of such corporation outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (A) by persons who are directors and also officers of such corporation and (B) by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer); or (iii) at or subsequent to such time the business combination is approved by the Board of Directors of such corporation and authorized at a meeting of stockholders (and not by written consent) by the affirmative vote of at least 66 2/3% of the outstanding voting stock of such corporation not owned by the interested stockholder.

A Delaware corporation may “opt out” of these provisions with an express provision in its original certificate of incorporation or an express provision in its certificate of incorporation or bylaws resulting from a stockholders’ amendment approved by at least a majority of the outstanding voting shares. We have expressly elected not to be governed by the “business combination” provisions of Section 203 of the DGCL, until after such time as Collectis no longer beneficially owns at least 50% of our common stock. At that time, such election shall be automatically withdrawn and we will thereafter be governed by the “business combination” provisions of Section 203 of the DGCL.

Conflicts of Interest

Delaware law permits corporations to adopt provisions renouncing any interest or expectancy in certain opportunities that are presented to the corporation or its officers, directors or stockholders. Our Certificate of Incorporation renounces, to the maximum extent permitted from time to time by Delaware law, any interest or expectancy that we have in, or right to be offered an opportunity to participate in, specified business opportunities that are from time to time presented to our officers, directors or stockholders or their respective affiliates, other than those officers, directors, stockholders or affiliates who are our or our subsidiaries’ employees. Our Certificate of Incorporation provides that, to the fullest extent permitted by law, none of Collectis or any of its affiliates or any director who is not employed by us, or his or her affiliates has any duty to refrain from (i) engaging in a corporate opportunity in the same or similar lines of business in which we or our subsidiaries now engage or propose to engage or (ii) otherwise competing with us or our subsidiaries. In addition, to the fullest extent permitted by law, in the event that Collectis or any non-employee director acquires knowledge of a potential transaction or other business opportunity which may be a corporate opportunity for itself or himself or its or his affiliates or for us or our affiliates, such person has no duty to communicate or offer such transaction or business opportunity to us or any of our affiliates and they may take any such opportunity for themselves or offer it to another person or entity. Our Certificate of Incorporation does not renounce our interest in any business opportunity that is expressly offered to a non-employee director solely in his or her capacity as a director of Calyxt. To the fullest extent permitted by law, no business opportunity will be deemed to be a potential corporate opportunity for us unless we would be permitted to undertake the opportunity under our Certificate of Incorporation, we have sufficient financial resources to undertake the opportunity and the opportunity would be in line with our business.

Registration Rights

The Stockholders Agreement provides Collectis with registration rights relating to shares of our common stock held by Collectis. See “Certain Relationships and Related Party Transactions, and Director Independence—Relationship with Collectis—Stockholders Agreement” in our definitive proxy statement, incorporated by reference herein.

Indemnification and Limitations on Directors’ Liability

Section 145 of the DGCL grants each Delaware corporation the power to indemnify any person who is or was a director, officer, employee or agent of a corporation, against expenses, including attorneys’ fees, judgments, fines and amounts paid in settlement actually and reasonably incurred by him or her in connection with any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, other than an action by or in the right of the corporation, by reason of serving or having served in any such capacity, if he or she acted in good faith in a manner reasonably believed to be in, or not opposed to, the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. A Delaware corporation may similarly indemnify any such person in actions by or in the right of the corporation if he or she acted in good faith in a manner reasonably believed to be in, or not opposed to, the best interests of the corporation, except that no indemnification may be made in respect of any claim, issue or matter as to which the person shall have been adjudged to be liable to the corporation unless and only to the extent that the Delaware Court of Chancery or the court in which the action was brought determines that, despite adjudication of liability, but in view of all of the circumstances of the case, the person is fairly and reasonably entitled to indemnity for expenses which the Delaware Court of Chancery or other court shall deem proper.

Section 102(b)(7) of the DGCL enables a corporation in its certificate of incorporation, or an amendment thereto, to eliminate or limit the personal liability of a director to the corporation or its stockholders for monetary damages for violations of the director’s fiduciary duty as a director, except (i) for any breach of the director’s duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) pursuant to Section 174 of the DGCL (providing for director liability with respect to unlawful payment of dividends or unlawful stock purchases or redemptions) or (iv) for any transaction from which a director derived an improper personal benefit.

Our Certificate of Incorporation indemnifies our directors and principal officers to the fullest extent permitted by Delaware law and our Certificate of Incorporation also allows our Board of Directors to indemnify other employees. This indemnification extends to the payment of judgments in actions against officers and directors and to reimbursement of amounts paid in settlement of such claims or actions and may apply to judgments in favor of the corporation or amounts paid in settlement to the corporation. This indemnification also extends to the payment of attorneys’ fees and expenses of principal officers and directors in suits against them where the officer or director acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. This right of indemnification is not exclusive of any right to which the officer or director may be entitled as a matter of law.

Our directors and officers are insured pursuant to a “directors and officers” insurance policy, which provides protection against un-indemnified losses arising from certain wrongful acts in their capacities as directors and officers and reimburses us for losses incurred by us in response to securities claims involving directors and officers. The policy contains various customary exclusions for policies of this type.

In addition, our board of directors has adopted a policy to enter into an indemnification agreement with each of our directors and officers, which provide for certain advancement and indemnification rights. Each indemnification agreement, provides, subject to certain exceptions, to indemnify and hold harmless the director or officer to the fullest extent permitted by Delaware law.

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With respect to any indemnification available to directors affiliated with Collectis, we have agreed (i) that we are the indemnitor of first resort with respect to any amounts incurred or sustained in connection with such person's role as a director of Calyxt, (ii) that we will be responsible for, and required to advance, the full amount of such amounts without regard to any rights such person may have, or be pursuing, against Collectis, and (iii) to irrevocably waive, relinquish and release Collectis from any and all claims for contribution, subrogation or any other recovery in respect of such amounts.

We believe that the limitation of liability and indemnification provisions in our Certificate of Incorporation, By-laws, indemnification agreements and insurance policies are necessary to attract and retain qualified directors and officers. However, these provisions may discourage derivative litigation against directors and officers, even though an action, if successful, might benefit us and other stockholders. Furthermore, a stockholder's investment may be adversely affected to the extent we pay the costs of settlement and damage awards against directors and officers as required or allowed by these limitations of liability and indemnification provisions.

At present, there is no pending litigation or proceeding involving any of our directors, officers, employees or agents as to which indemnification is sought from us, nor are we aware of any threatened litigation or proceeding that may result in an indemnification claim.

Listing

Our shares of common stock are listed on the Nasdaq under the symbol "CLXT."

Transfer Agent and Registrar

The transfer agent and registrar for the common stock is Computershare Trust Company, N.A.

DESCRIPTION OF WARRANTS

We may issue warrants to purchase our common stock, preferred stock, debt securities or any combination thereof. Each warrant will entitle the holder to purchase for cash the amount of common stock, preferred stock, debt securities or units at the exercise price stated or determinable in a prospectus supplement for the warrants. Warrants may be issued independently or together with any other securities and may be attached to, or separate from, such securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a warrant agent.

Unless otherwise specified in the applicable prospectus supplement, holders of warrants will not be entitled to any rights with respect to the securities for which warrants are exercisable prior to the issuance of securities. The terms of any warrants to be issued and a description of the material provisions of the applicable warrant agreement will be set forth in the applicable prospectus supplement. These terms will include some or all of the following:

- the title of the warrants;
- the price or prices at which the warrants will be issued;
- the designation, amount and terms of the securities for which the warrants are exercisable;
- the designation and terms of the other securities, if any, with which the warrants are to be issued and the number of warrants issued with each other security;
- the aggregate number of warrants;
- any provisions for adjustment of the number or amount of securities receivable upon exercise of the warrants or the exercise price of the warrants;
- the price or prices at which the securities purchasable upon exercise of the warrants will be separately transferable, if applicable;
- if applicable, a discussion of material U.S. federal income tax considerations;
- the date on which the right to exercise the warrants will commence, and the date on which the right will expire;
- the maximum or minimum number of warrants that may be exercised at any time;
- information with respect to book-entry procedures, if any; and
- any other terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

DESCRIPTION OF SUBSCRIPTION RIGHTS

We may issue subscription rights to purchase our common stock, preferred stock, debt securities or any combination thereof. These subscription rights may be offered independently or together with any other security offered hereby and may or may not be transferable by the stockholder receiving the subscription rights in such offering. In connection with any offering of subscription rights, we may enter into a standby arrangement with one or more underwriters or other purchasers pursuant to which the underwriters or other purchasers may be required to purchase any securities remaining unsubscribed for after such offering.

The prospectus supplement relating to any subscription rights we offer, if any, will, to the extent applicable, include specific terms relating to the offering, including some or all of the following:

- the price, if any, for the subscription rights;
- the exercise price payable for our common stock, preferred stock or debt securities upon the exercise of the subscription rights;
- the number of subscription rights to be issued to each stockholder;
- the number of shares and terms of our common stock, preferred stock or debt securities which may be purchased per each subscription right;
- the extent to which the subscription rights are transferable;
- any other terms of the subscription rights, including the terms, procedures and limitations relating to the exchange and exercise of the subscription rights;
- the date on which the right to exercise the subscription rights shall commence, and the date on which the subscription rights shall expire;
- the extent to which the subscription rights may include an over-subscription privilege with respect to unsubscribed securities or an over-allotment privilege to the extent the securities are fully subscribed; and
- if applicable, the material terms of any standby underwriting or purchase arrangement into which we may enter in connection with the offering of subscription rights.

The description in the applicable prospectus supplement of any subscription rights we offer will not necessarily be complete and will be qualified in its entirety by reference to the applicable subscription rights certificate, which will be filed with the SEC if we offer subscription rights. We urge you to read the applicable subscription rights certificate and any applicable prospectus supplement in their entirety.

DESCRIPTION OF UNITS

We may issue units comprising one or more securities described in this prospectus in any combination (but not securities of third parties) as specified in a related prospectus supplement or a free writing prospectus. Units will be issued pursuant to the terms of a unit agreement, which may provide that the securities included in the unit may not be held or transferred separately at any time or at any time before a specified date. A copy of the forms of the unit agreement and the unit certificate relating to any particular issue of units will be filed with the SEC each time we issue units, and you should read those documents for provisions that may be important to you. For more information on how you can obtain copies of the forms of the unit agreement and the related unit certificate, see “Where You Can Find Additional Information.”

DESCRIPTION OF DEBT SECURITIES

We may issue debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. While the terms we have summarized below will apply generally to any debt securities that we may offer under this prospectus, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. The terms of any debt securities offered under a prospectus supplement may differ from the terms described below. Unless the context requires otherwise, whenever we refer to the indenture, we also are referring to any supplemental indentures that specify the terms of a particular series of debt securities.

We will issue the debt securities under the indenture that we will enter into with the trustee named in the indenture. The indenture will be qualified under the Trust Indenture Act of 1939, as amended, or the Trust Indenture Act. We have filed the form of indenture as an exhibit to the registration statement of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

The following summary of material provisions of the debt securities and the indenture is subject to, and qualified in its entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplements and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete indenture that contains the terms of the debt securities.

General

The indenture does not limit the amount of debt securities that we may issue. It provides that we may issue debt securities up to the principal amount that we may authorize and may be in any currency or currency unit that we may designate. Except for the limitations on consolidation, merger and sale of all or substantially all of our assets contained in the indenture, the terms of the indenture do not contain any covenants or other provisions designed to give holders of any debt securities protection against changes in our operations, financial condition or transactions involving us.

We may issue the debt securities issued under the indenture as “discount securities,” which means they may be sold at a discount below their stated principal amount. These debt securities, as well as other debt securities that are not issued at a discount, may be issued with “original issue discount,” or OID, for U.S. federal income tax purposes because of interest payment and other characteristics or terms of the debt securities. Material U.S. federal income tax considerations applicable to debt securities issued with OID will be described in more detail in any applicable prospectus supplement.

We will describe in the applicable prospectus supplement the terms of the series of debt securities being offered, including:

- the title of the series of debt securities;
- any limit upon the aggregate principal amount that may be issued;
- the maturity date or dates;
- the form of the debt securities of the series;
- the applicability of any guarantees;
- whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
- whether the debt securities rank as senior debt, senior subordinated debt, subordinated debt or any combination thereof, and the terms of any subordination;

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- if the price (expressed as a percentage of the aggregate principal amount thereof) at which such debt securities will be issued is a price other than the principal amount thereof, the portion of the principal amount thereof payable upon declaration of acceleration of the maturity thereof, or if applicable, the portion of the principal amount of such debt securities that is convertible into another security or the method by which any such portion shall be determined;
- the interest rate or rates, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;
- our right, if any, to defer payment of interest and the maximum length of any such deferral period;
- if applicable, the date or dates after which, or the period or periods during which, and the price or prices at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;
- the date or dates, if any, on which, and the price or prices at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;
- the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof;
- any and all terms, if applicable, relating to any auction or remarketing of the debt securities of that series and any security for our obligations with respect to such debt securities and any other terms which may be advisable in connection with the marketing of debt securities of that series;
- whether the debt securities of the series shall be issued in whole or in part in the form of a global security or securities; the terms and conditions, if any, upon which such global security or securities may be exchanged in whole or in part for other individual securities; and the depositary for such global security or securities;
- if applicable, the provisions relating to conversion or exchange of any debt securities of the series and the terms and conditions upon which such debt securities will be so convertible or exchangeable, including the conversion or exchange price, as applicable, or how it will be calculated and may be adjusted, any mandatory or optional (at our option or the holders' option) conversion or exchange features, the applicable conversion or exchange period and the manner of settlement for any conversion or exchange;
- if other than the full principal amount thereof, the portion of the principal amount of debt securities of the series which shall be payable upon declaration of acceleration of the maturity thereof;
- additions to or changes in the covenants applicable to the particular debt securities being issued, including, among others, the consolidation, merger or sale covenant;
- additions to or changes in the events of default with respect to the securities and any change in the right of the trustee or the holders to declare the principal, premium, if any, and interest, if any, with respect to such securities to be due and payable;
- additions to or changes in or deletions of the provisions relating to covenant defeasance and legal defeasance;
- additions to or changes in the provisions relating to satisfaction and discharge of the indenture;
- additions to or changes in the provisions relating to the modification of the indenture both with and without the consent of holders of debt securities issued under the indenture;
- the currency of payment of debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars;

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- whether interest will be payable in cash or additional debt securities at our or the holders' option and the terms and conditions upon which the election may be made;
- the terms and conditions, if any, upon which we will pay amounts in addition to the stated interest, premium, if any, and principal amounts of the debt securities of the series to any holder that is not a "United States person" for federal tax purposes;
- any restrictions on transfer, sale or assignment of the debt securities of the series; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, any other additions or changes in the provisions of the indenture, and any terms that may be required by us or advisable under applicable laws or regulations.

Conversion or Exchange Rights

We will set forth in the applicable prospectus supplement the terms on which a series of debt securities may be convertible into or exchangeable for our common stock or our other securities. We will include provisions as to settlement upon conversion or exchange and whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our common stock or our other securities that the holders of the series of debt securities receive would be subject to adjustment.

Consolidation, Merger or Sale

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the indenture will not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of our assets as an entirety or substantially as an entirety. However, any successor to or acquirer of such assets (other than a subsidiary of ours) must assume all of our obligations under the indenture or the debt securities, as appropriate.

Events of Default under the Indenture

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the following are events of default under the indenture with respect to any series of debt securities that we may issue:

- if we fail to pay any installment of interest on such series of debt securities, as and when the same shall become due and payable, and such default continues for a period of 90 days; provided, however, that a valid extension of an interest payment period by us in accordance with the terms of any indenture supplemental thereto shall not constitute a default in the payment of interest for this purpose;
- if we fail to pay the principal of, or premium, if any, on such series of debt securities as and when the same shall become due and payable whether at maturity, upon redemption, by declaration or otherwise, or in any payment required by any sinking or analogous fund established with respect to such series; provided, however, that a valid extension of the maturity of such debt securities in accordance with the terms of any indenture supplemental thereto shall not constitute a default in the payment of principal or premium, if any;
- if we fail to observe or perform any other covenant or agreement contained in the debt securities of such series or the indenture, other than a covenant specifically relating to another series of debt securities, and our failure continues for 90 days after we receive written notice of such failure, requiring the same to be remedied and stating that such is a notice of default thereunder, from the trustee or holders of at least 25% in aggregate principal amount of the outstanding debt securities of the applicable series; and
- if specified events of bankruptcy, insolvency or reorganization occur.

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If an event of default with respect to debt securities of any series occurs and is continuing, other than an event of default specified in the last bullet point above, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the trustee if notice is given by such holders, may declare the unpaid principal of, premium, if any, and accrued interest, if any, of such series of debt securities due and payable immediately. If an event of default specified in the last bullet point above occurs with respect to us, the principal amount of and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the trustee or any holder.

The holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences (including acceleration described in the preceding paragraph), except that such waivers of defaults or events of default regarding payment of principal, premium, if any, or interest, require that we shall have paid or set aside with the trustee sufficient funds to pay all amounts then due and payable otherwise then due and payable otherwise then by acceleration. Any waiver shall cure the default or event of default.

Subject to the terms of the indenture, if an event of default under an indenture shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the trustee reasonable indemnity. The holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or exercising any trust or power conferred on the trustee, with respect to the debt securities of that series, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act, the trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

No holder of the debt securities of any series will have the right to institute a proceeding under the indenture or to appoint a receiver or trustee, or to seek other remedies unless:

- the holder has given written notice to the trustee of a continuing event of default with respect to that series;
- the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made written request for the trustee to initiate such action or proceeding;
- such holders have offered to the trustee indemnity satisfactory to it against the costs, expenses and liabilities to be incurred by the trustee in compliance with the request; and
- the trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, the debt securities.

On an annual basis, we will provide statements to the trustee regarding our compliance with specified covenants in the indenture.

Modification of Indenture; Waiver

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, we and the trustee may change an indenture without the consent of any holders with respect to specific matters:

- to cure any ambiguity, defect or inconsistency in the indenture or in the debt securities of any series;
- to comply with the provisions described above under “Description of Debt Securities—Consolidation, Merger or Sale”;
- to provide for uncertificated debt securities in addition to or in place of certificated debt securities;
- to add to our covenants, restrictions, conditions for the benefit of the holders of all or any series of debt securities, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default or to surrender any right or power conferred upon us in the indenture;
- to add to, delete from or revise the conditions, limitations, and restrictions on the authorized amount, terms, or purposes of issue, authentication and delivery of debt securities, as set forth in the indenture;
- to make any change that does not adversely affect the interests of any holder of debt securities of any series in any material respect;
- to provide for the issuance of and establish the form and terms and conditions of the debt securities of any series as provided above under “Description of Debt Securities—General” to establish the form of any certifications required to be furnished pursuant to the terms of the indenture or any series of debt securities, or to add to the rights of the holders of any series of debt securities;
- to evidence and provide for the acceptance of appointment under any indenture by a successor trustee; or
- to comply with any requirements of the SEC in connection with the qualification of any indenture under the Trust Indenture Act.

In addition, under the indenture, the rights of holders of a series of debt securities may be changed by us and the trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, we and the trustee may make the following changes only with the consent of each holder of any outstanding debt securities affected:

- extending the fixed maturity of any debt securities of any series;
- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption of any series of any debt securities; or
- reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver.

Discharge

The indenture provides that we can elect to be discharged from our obligations with respect to one or more series of debt securities that shall become due and payable within one year or are to be called for redemption within one year, including obligations to:

- provide for payment;
- register the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
- pay principal of and premium and interest on any debt securities of the series;

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- maintain paying agencies;
- hold monies for payment in trust;
- recover excess money held by the trustee;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

In order to exercise our rights to be discharged, we must irrevocably deposit with the trustee money or government obligations sufficient to pay all the principal of, any premium, if any, and interest on, the debt securities of the series when payments are due on the date of maturity or the date fixed for redemption.

Form, Exchange and Transfer

We will issue the debt securities of each series only in fully registered form without coupons and, unless we provide otherwise in the applicable prospectus supplement, in denominations of \$1,000 and any integral multiple in excess thereof. The indenture provides that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company, or DTC, or another depository named by us and identified in the applicable prospectus supplement with respect to that series. To the extent the debt securities of a series are issued in global form and as book-entry, a description of terms relating to any book-entry securities will be set forth in the applicable prospectus supplement.

At the option of the holder, subject to the terms of the indenture and the limitations applicable to global securities described in the applicable prospectus supplement, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indenture and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange, we will impose no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

If we elect to redeem the debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or
- register the transfer of or exchange of any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

Information Concerning the Trustee

The trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs. Subject to this provision, the trustee is under no obligation to exercise any of the powers given it by the indenture at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

Payment and Paying Agents

Unless we otherwise indicate in the applicable prospectus supplement, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that unless we otherwise indicate in the applicable prospectus supplement, we will make interest payments by check that we will mail to the holder or by wire transfer to certain holders. Unless we otherwise indicate in the applicable prospectus supplement, we will designate the corporate trust office of the trustee as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the trustee for the payment of the principal of or any premium or interest on any debt securities that remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the debt security thereafter may look only to us for payment thereof.

Governing Law

The indenture and the debt securities, and any claim, controversy or dispute arising under or related to the indenture or the debt securities, will be governed by and construed in accordance with the laws of the State of New York, except to the extent that the Trust Indenture Act is applicable.

PLAN OF DISTRIBUTION

We may sell our securities in any one or more of the following ways from time to time:

- through agents;
- to or through underwriters;
- through brokers or dealers;
- in “at the market offerings” within the meaning of Rule 415(a)(4) under the Securities Act, to or through market maker or into an existing trading market, on an exchange or otherwise;
- directly by us to purchasers, including through a specific bidding, auction or other process;
- through a combination of any of these methods of sale; or
- we may issue the securities as a dividend or distribution or in a subscription rights offering to our existing security holders.

The applicable prospectus supplement will contain the terms of the transaction, including the method of distribution of the securities offered, the proceeds we will receive from the sale, the name or names of any underwriters, dealers, agents and the respective amounts of securities underwritten or purchased by them, the initial public offering price of the securities, and the applicable agent’s commission, dealer’s purchase price or underwriter’s discount. Any dealers and agents participating in the distribution of the securities may be deemed to be underwriters, and compensation received by them on resale of the securities may be deemed to be underwriting discounts.

Any initial offering price, dealer purchase price, discount or commission may be changed from time to time.

The securities may be distributed from time to time in one or more transactions, at negotiated prices, at a fixed price or fixed prices (that may be subject to change), at market prices prevailing at the time of sale, or at various prices determined at the time of sale.

Offers to purchase securities may be solicited directly by us or by agents designated by us from time to time. Unless otherwise indicated in the prospectus supplement, any such agent will use its commercially reasonable efforts to solicit purchases for the period of its appointment or to sell securities on a continuing basis. Agents may receive compensation in the form of commissions, discounts or concessions from us. Agents may also receive compensation from the purchasers of the securities to whom they sell as principals. Each particular agent will receive compensation in amounts negotiated in connection with the sale, which might be in excess of customary commissions. Any such agent may be deemed to be an underwriter, as that term is defined in the Securities Act, of the securities so offered and sold. Accordingly, any commission, discount or concession received by them and any profit on the resale of the securities purchased by them may be deemed to be underwriting discounts or commissions under the Securities Act. We have not entered into any agreements, understandings or arrangements with any underwriters or broker-dealers regarding the sale of their securities. As of the date of this prospectus, there are no special selling arrangements between any broker-dealer or other person and us. No period of time has been fixed within which the securities will be offered and sold.

If underwriters are utilized in the sale of any securities in respect of which this prospectus is being delivered, such securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions, including negotiated transactions, at fixed public offering prices or at varying prices determined by the underwriters at the time of sale. Securities may be offered to the public either through underwriting syndicates represented by managing underwriters or directly by one or more underwriters. If any underwriter or underwriters are utilized in the sale of securities, unless otherwise indicated in the applicable prospectus supplement, the obligations of the underwriters are subject to certain conditions precedent, and the underwriters will be obligated to purchase all such securities if they purchase any of them.

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If a dealer is utilized in the sale of the securities in respect of which this prospectus is delivered, we will sell such securities to the dealer as principal. The dealer may then resell such securities to the public at varying prices to be determined by such dealer at the time of resale. Transactions through brokers or dealers may include block trades in which brokers or dealers will attempt to sell shares as agent but may position and resell as principal to facilitate the transaction or in cross trades, in which the same broker or dealer acts as agent on both sides of the trade. Any such dealer may be deemed to be an underwriter, as such term is defined in the Securities Act, of the securities so offered and sold.

Offers to purchase securities may be solicited directly by us, and the sale thereof may be made by us, directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any resale thereof.

Agents, underwriters and dealers may be entitled under relevant agreements with us to indemnification by us against certain liabilities, including liabilities under the Securities Act, or to contribution with respect to payments which such agents, underwriters and dealers may be required to make in respect thereof. The terms and conditions of any indemnification or contribution will be described in the applicable prospectus supplement.

Underwriters, broker-dealers or agents may receive compensation in the form of commissions, discounts or concessions from us. Underwriters, broker-dealers or agents may also receive compensation from the purchasers of shares for whom they act as agents or to whom they sell as principals, or both. Compensation as to a particular underwriter, broker-dealer or agent will be in amounts to be negotiated in connection with transactions involving shares and might be in excess of customary commissions. In effecting sales, broker-dealers engaged by us may arrange for other broker-dealers to participate in the resales.

Any securities offered other than common stock and preferred stock will be a new issue and, other than the common stock, which is listed on Nasdaq, will have no established trading market. We may elect to list any series of securities on an exchange, and in the case of the common stock, on any additional exchange, but, unless otherwise specified in the applicable prospectus supplement and/or other offering material, we shall not be obligated to do so. It is possible that one or more underwriters may make a market in a class or series of securities, but the underwriters will not be obligated to do so and may discontinue any market making at any time without notice. No assurance can be given as to the liquidity of, or the trading market for, any of the securities.

Agents, underwriters and dealers may engage in transactions with, or perform services for, us or our subsidiaries in the ordinary course of business.

Any underwriter may engage in overallotment, stabilizing transactions, short covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Overallotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time. An underwriter may carry out these transactions on Nasdaq, in the over-the-counter market or otherwise. The underwriters or agents, as the case may be, are not required to engage in these activities and, if they engage in any of these activities, may end any of these activities at any time without notice.

The place and time of delivery for securities will be set forth in the accompanying prospectus supplement. To comply with applicable state securities laws, the securities offered by this prospectus will be sold, if necessary, in such jurisdictions only through registered or licensed brokers or dealers. In addition, securities may not be sold in some states absent registration or pursuant to an exemption from applicable state securities laws.

VALIDITY OF THE SECURITIES

Unless otherwise indicated in the applicable prospectus supplement, the validity of the securities offered by this prospectus will be passed upon by Jones Day, New York, New York.

EXPERTS

The financial statements of Calyxt, Inc. appearing in Calyxt, Inc.'s Annual Report (Form 10-K) for the year ended December 31, 2018, have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon included therein, and incorporated herein by reference. Such financial statements are, and audited financial statements to be included in subsequently filed documents will be, incorporated herein in reliance upon the report of Ernst & Young LLP pertaining to such financial statements (to the extent covered by consents filed with the Securities and Exchange Commission) given on the authority of such firm as experts in accounting and auditing.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference much of the information we file with them. This allows us to disclose important information to you by referring those publicly filed documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus incorporates by reference the documents listed below (File No. 001-38161) and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed) until the offering of the securities under the registration statement is terminated or completed:

- Annual Report on [Form 10-K](#) for the year ended December 31, 2018 (including the information in Part III incorporated therein by reference from our Definitive Proxy Statement on [Schedule 14A](#));
- Quarterly Report on [Form 10-Q](#) for the quarter ended March 31, 2019 and Quarterly Report on [Form 10-Q](#), and the amendment thereto on [Form 10-Q/A](#), for the quarter ended June 30, 2019;
- Current Reports on Form 8-K filed on [January 3, 2019](#), [January 24, 2019](#), [February 20, 2019](#), [February 26, 2019](#) and [May 21, 2019](#); and
- the description of our common stock contained in the Registration Statement on [Form 8-A](#) filed on July 20, 2017, including any amendment or report filed for the purpose of updating such description.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We make periodic filings and other filings required to be filed by us as a reporting company under Sections 13 and 15(d) of the Exchange Act. The SEC maintains an Internet site at www.sec.gov that contains the reports, proxy and information statements, and other information that we file with the SEC.

We will provide without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon his or her written or oral request, a copy of any or all of the information that has been incorporated by reference into this prospectus but not delivered with this prospectus, excluding exhibits to those documents unless they are specifically incorporated by reference into those documents. You may obtain copies of this prospectus and the documents incorporated by reference without charge by writing to our investor relations team at 2800 Mount Ridge Road, Roseville, Minnesota 55113, by telephone at (651)-683-2807 or on our website at www.calyxt.com. Information contained on our website is not incorporated into this prospectus and you should not consider information contained on our website to be part of this prospectus.



Shares of Common Stock
Pre-Funded Warrants to Purchase **Shares of Common Stock**
Warrants to Purchase **Shares of Common Stock**

PROSPECTUS SUPPLEMENT

Canaccord Genuity

, 2022
