UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 13D

Under the Securities Exchange Act of 1934 (Amendment No. 5)*

Calyxt, Inc.

(Name of Issuer)

Common Stock, par value \$0.0001 per share (Title of Class of Securities)

13173L107 (CUSIP Number)

Marie-Bleuenn Terrier General Counsel Cellectis S.A. 8, rue de la Croix Jarry 75013 Paris, France +33 1 81 69 16 00

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition which is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box: \Box

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 13d-7 for other parties to whom copies are to be sent.

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

(1)	NAMES OF REPORTING PERSONS			
	Cellectis S.A.			
(2)	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (see instructions)			
. ,	(a) (b) (b) (c)			
(3)	SEC USE ONLY			
(4)	SOURCE OF FUNDS (see instructions)			
	WC			
(5)	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e)			
(3)	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PORSUANT TO ITEM 2(tl) of 2(e)			
(6)	CITIZENSHIP OR PLACE OF ORGANIZATION			
(-)				
	France			
		(7)	SOLE VOTING POWER	
NU	MBER OF		23,963,175	
S	HARES	(8)	SHARED VOTING POWER	
BEN	EFICIALLY	(0)	SHARED VOTING TOWER	
OV	VNED BY		0	
	EACH	(0)		
RE	PORTING	(9)	SOLE DISPOSITIVE POWER	
P	ERSON			
	WITH		23,963,175	
		(10)	SHARED DISPOSITIVE POWER	
(11)	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON			
	23,963,175*			
(12)	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (see instructions)			
(13)	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)			
	49.1%*			
(14)	TYPE OF REPORTING PERSON (see instructions)			

^{*} Based on 48,815,376 shares of common stock, par value \$0.0001 per share ("<u>Common Stock</u>"), of Calyxt, Inc. (the "<u>Company</u>") outstanding as of October 28, 2022.

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Explanatory Note

This Amendment No. 5 (this "<u>Amendment No. 5</u>") amends and supplements the Schedule 13D of Cellectis S.A. (the "<u>Reporting Person</u>") initially filed with the SEC on May 29, 2018, as amended by Amendment No. 1 thereto filed on June 15, 2018, Amendment No. 2 thereto filed on September 23, 2019, Amendment No. 3 thereto filed on July 9, 2020 and Amendment No. 4 thereto ("<u>Amendment No. 4</u>") filed on October 23, 2020 (as so amended, the "<u>Schedule 13D</u>"). Capitalized terms used herein and not defined herein have the meanings ascribed thereto in the Schedule 13D.

This Amendment No. 5 is being filed by the Reporting Person to report: (i) an update of the beneficial ownership percentage of the Reporting Person resulting solely from an increase in the number of outstanding shares of the Company's Common Stock, (ii) changes in disclosure responsive to Items 4 and 6 of the Schedule 13D, as set forth below, and (iii) certain changes to the directors and executive officers of the Reporting Person, as set forth in Schedule A hereto.

Except as specifically provided herein, this Amendment No. 5 does not modify or amend any of the information previously reported in the Schedule 13D. Items that have been supplemented provide additional, supplemental information to the information reported in the Schedule 13D and do not supersede such existing information.

Item 2. Identity and Background

Item 2 (a) – (f) is hereby amended and supplemented with respect to each executive officer and director of the Reporting Person as follows:

The name, business address, present principal occupation or employment (and address of any corporation or other organization in which such employment is conducted) and citizenship of each director and executive officer of the Reporting Person is set forth on Schedule A to this Amendment No. 5.

During the last five years, neither the Reporting Person nor, to the knowledge of the Reporting Person, any of the persons listed on Schedule A to this Amendment No. 5, (i) has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors) or (ii) was a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

Item 4. Purpose of Transaction.

Item 4 is hereby amended and restated in its entirety as follows:

The Reporting Person has acquired and holds Common Stock of the Company for the Reporting Person's investment purposes. The information set forth under Item 6 of this Schedule 13D is incorporated herein by reference.

During the period in which the Reporting Person held more than 50% of the voting power and more than a majority of the outstanding Common Stock of the Company, the Company was a "Controlled Company," as defined in Rule 5615(c)(2) of the rules of the NASDAQ Stock Market LLC (the "NASDAQ"). On October 31, 2022, the Company provided the Reporting Person with the number of outstanding shares of Common Stock (48,815,376 shares) as of October 28, 2022. Based on this number of outstanding shares of Common Stock, the Reporting Person no longer holds a majority of the outstanding Common Stock of the Company and the Company is no longer a "Controlled Company."

The Reporting Person is party to a stockholders agreement dated July 25, 2017 with the Company (as amended from time to time, the "Stockholders Agreement"), which provides the Reporting Person with contractual rights to approve specified corporate actions of the Company. As a result of the foregoing, the Reporting Person has the ability to determine the outcome of various matters. In particular, the Reporting Person has certain approval rights for so long as the Reporting Person beneficially owns at least 15% of the then outstanding shares of the Company's Common Stock with respect to several enumerated items.

Among such rights granted under the Stockholders Agreement, the Reporting Person is entitled to nominate the greater of three members of the Company's Board of Directors or a majority of the directors, to designated the Chairman of the Reporting Person's Board of Directors, and to designate one member to each of the audit committee of the board of directors, the compensation committee of the board of directors and the nominating and corporation governance committee of the board of directors of the Company. In accordance with the terms of the Stockholders Agreement, the Reporting Person has previously appointed Laurent Arthaud, a member of the Reporting Person's Board of Directors, as a member of the board of directors of the Company, including as a member of the compensation committee and the nominating and corporate governance committee of the Company's board of

directors. The Reporting Person has reserved, but not exercised, all other board of directors designation rights under the Stockholders Agreement. The Reporting Person acknowledges that, subject to the "phase-in" periods permitted by NASDAQ for companies that cease to be "Controlled Companies," the Company is required to comply with the NASDAQ's independence requirements applicable to the compensation committee and the nominating and corporate governance committee of the Company's board of directors.

In its capacity as a significant stockholder of the Company and beneficiary of certain approval rights pursuant to the Stockholders Agreement, the Reporting Person intends, from time to time, to engage in discussions with the board of directors of the Company and/or members of the Company's management team concerning a broad range of operational, financial and strategic matters, including, without limitation, the Company's business, operations, capital structure, governance, management, and strategy as well as potential financings, business combinations, strategic alternatives (including those which may arise as a result of the Company's previously announced evaluation by the Company's board of directors of a full range of strategic alternatives), and other matters concerning the Company. The Reporting Person may communicate with other stockholders or third parties regarding the foregoing.

On an ongoing basis, the Reporting Person will review the Company's operating, management, business affairs, capital needs and general industry and economic conditions, and, based on such review, the Reporting Person may, from time to time, determine to increase or decrease its ownership of Common Stock, exercise, withhold or waive its required approval pursuant to the Stockholders Agreement, or vote to approve an extraordinary corporate transaction with regard to the Company.

The Reporting Person has in the past approved the Company's capital markets financing activities, including the Company's at-the-market financing program, and intends to evaluate and, where appropriate in respect of the Company's liquidity needs, approve further financing transactions that may be presented for approval.

In addition, the Reporting Person intends to take such actions as may be requested by the Company in connection with the implementation of the reverse stock split approved at the Company's 2022 annual meeting for purposes of curing any deficiency in the Company's compliance with applicable NASDAQ listing requirements.

Except as otherwise described in this Item 4 of Schedule 13D, the Reporting Person does not have any present plans or proposals which relate to or which would result in the types of events described in clauses (a) through (j) under Item 4 of Schedule 13D.

Item 5. Interest in Securities of the Issuer

Item 5(a) - (c) is hereby amended and supplemented as follows:

(a) – (c) The Reporting Person beneficially owns 23,963,175 shares of Common Stock, representing 49.1% of the outstanding Common Stock of the Company. The percentage of beneficial ownership of the Reporting Person is based upon 48,815,376 shares of Common Stock of the Company outstanding as of October 28, 2022.

At the time of the filing of Amendment No. 4 to the Reporting Person's Schedule 13D on October 23, 2020, the shares of Common Stock beneficially owned by the Reporting Person represented 64.7% of the outstanding Common Stock of the Company.

Since the filing of Amendment No. 4, the Reporting Person has not effected any transactions in the Company's Common Stock or other securities.

Following Amendment No. 4, the Reporting Person's beneficial ownership percentage has changed resulting solely from an increase in the number of outstanding shares of the Company's Common Stock. Based on information disclosed in the Company's periodic reports filed with the Securities and Exchange Commission subsequent to the filing of Amendment No. 4:

- As of November 4, 2021, the Company reported 38,505,678 shares of Common Stock outstanding, bringing the Reporting Person's beneficial ownership percentage to 62.2%.
- As of March 3, 2022, the Company reported 42,718,930 shares of Common Stock outstanding, bringing the Reporting Person's beneficial ownership percentage to 56.1%.
- As of May 4, 2022, the Company reported 42,768,163 shares of Common Stock outstanding, bringing the Reporting Person's beneficial ownership percentage to 56.0%.

 As of August 3, 2022, the Company reported 46,792,093 shares of Common Stock outstanding bringing the Reporting Person's beneficial ownership percentage to 51.2%.

The Reporting Person possesses sole power to vote and sole power to dispose of all the shares of Common Stock beneficially owned by the Reporting Person.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer

Item 6 is hereby supplemented as follows:

As of the date of this report, the Reporting Person and its affiliates no longer hold a majority of the Company's outstanding shares of Common Stock.

Pursuant to the Stockholders Agreement, certain matters with respect to the Company require the Reporting Person's prior approval for so long as it beneficially owns at least 15% of the then outstanding shares of the Company's Common Stock, including the right to approve:

- any amendments to the Company's Certificate of Incorporation or By-laws that would change the name of the Company, its jurisdiction of
 incorporation, the location of its principal executive offices, the purpose or purposes for which the Company is incorporated or the items
 requiring the Reporting Person's prior approval;
- the payment of any regular or special dividends;
- the commencement of any proceeding for the voluntary dissolution, winding up or bankruptcy of the Company or a material subsidiary;
- any public or private offering, merger, amalgamation or consolidation of us or the spinoff of a business of ours or any sale, conveyance, transfer or other disposition of the Company's assets; and
- any appointment to the Company's board of directors.

Further, pursuant to the Stockholders Agreement, until the first date on which the Reporting Person and its affiliates no longer beneficially own at least 15% of the outstanding shares of the Company's Common Stock, the Reporting Person has the right to designate the greater of three members of the board of directors or a majority of the directors on the board of directors, and to designate the chairman of the board of directors and one member to each committee of the board of directors of the Company.

The description of the Stockholders Agreement contained in the Schedule 13D, as supplemented by this Amendment No. 5, is only a summary and is qualified in its entirety by reference to the full text of the Stockholders Agreement, a copy of which is filed as Exhibits 1 and 2 to Schedule 13D filed by the Reporting Person on May 17, 2018, and incorporated herein by reference.

Signature

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: November 1, 2022

CELLECTIS S.A.

By: /s/ André Choulika
Name: André Choulika

Title: Chief Executive Officer

SCHEDULE A

CERTAIN INFORMATION CONCERNING EXECUTIVE OFFICERS AND DIRECTORS OF CELLECTIS S.A.

The following table sets forth name, business address, present principal occupation or employment (and address of any corporation or other organization in which such employment is conducted) and citizenship of each director and executive officer of the Reporting Person. The current business address for Cellectis S.A. and, except as otherwise noted, for each person identified in this Schedule A is c/o Cellectis S.A., 8, rue de la Croix Jarry 75013 Paris, France and the telephone number is +33 (0)1 81 69 16 00.

Executive Officers

Name(1):	Identity and Background Information
André Choulika, Ph.D.	Dr. Choulika serves as the Chief Executive Officer of Cellectis S.A. Dr. Choulika is a citizen of France.
Steve Doares, Ph.D.	Mr. Doares serves as Senior Vice President, U.S. Manufacturing and Site Head of the Raleigh, North Carolina manufacturing facility of Cellectis S.A. Mr. Doares is a citizen of the United States of America.
Philippe Duchateau, Ph.D.	Dr. Duchateau serves as the Chief Scientific Officer of Cellectis S.A. Dr. Duchateau is a citizen of France.
Mark Frattini, M.D., Ph.D.	Dr. Frattini serves as the Chief Medical Officer of Cellectis S.A. Dr. Frattini is a citizen of the United States of America.
Stephan Reynier	Mr. Reynier serves as the Chief Regulatory and Compliance Officer of Cellectis S.A. Mr. Reynier is a citizen of France.
David Sourdive, Ph.D.	Dr. Sourdive serves as Executive Vice President, CMC and Manufacturing of Cellectis S.A. Dr. Sourdive is a citizen of France.
Arthur Stril	Mr. Stril serves as Chief Business Officer of Cellectis S.A. Mr. Stril is a citizen of France.
Marie-Bleuenn Terrier	Ms. Terrier serves as General Counsel of Cellectis S.A. Ms. Terrier is a citizen of France.
Bing Wang, Ph.D.	Dr. Wang serves as the Chief Financial Officer of Cellectis S.A. Dr. Dutang is a citizen of the United States of America.
Kyung Nam-Wortman	Ms. Nam-Wortman serves as Executive Vice President, Chief Human Resources Officer. Ms. Nam-Wortman is a citizen of the United States of America.

Directors

Name(1):

Jean-Pierre Garnier, M.D.

André Choulika, Ph.D.

Laurent Arthaud

Pierre Bastid

Identity and Background Information

Dr. Garnier serves as is Chairman of the Board of Directors of Cellectis S.A. Dr. Garnier serves as a member of several other boards of directors, including notably as chairman of the board of directors of Carmat (36, avenue de l'Europe Immeuble l'Etendard 78140 Vélizy-Villacoublay, France), as director of the board of Radius Therapeutics, and lead director of the board of directors of Carrier Global Corp. Dr. Garnier is a citizen of France.

Dr. Choulika serves as the Chief Executive Officer of Cellectis S.A. Dr. Choulika is a citizen of France.

Mr. Arthaud is a non-employee director of Cellectis S.A.
Mr. Arthaud serves as the Managing Director of Life Sciences and
Ecotechnologies for Bpifrance Investissement (6/8 Bld Haussmann,
75009 Paris, France). Mr. Arthaud serves as director of Argobio,
Adocia, Sparingvision, Aledia, Kurma Life Sciences Partners,
Ribogenics, Inc. and Enyo Pharma. Mr. Arthaud is a citizen of
France.

Mr. Bastid is a non-employee director of Cellectis S.A. Mr. Bastid serves as a member of several other boards of directors, including notably Pharnext S.A.S. and Carmat, and is a director/manager of a series of his owned investment and private equity companies. Mr. Bastid is a citizen of France.

Donald Bergstrom, M.D., Ph.D. Dr. Bergstrom is a non-employee director of Cellectis S.A. He serves as Executive Vice President, Head of Research and Development at Relay Therapeutics, Inc. (399 Binney Street, 2nd Floor, Cambridge, MA 02141). Dr. Bergstrom is a citizen of the United States of America. Rainer Boehm, M.D. Dr. Boehm is a non-employee director of Cellectis S.A. Dr. Boehm serves as owner of Rainer Boehm GmbH (Paradiesstrasse 4, CH-4125 Riehen, Switzerland). Mr. Rainer serves as director of Humanigen, Inc., Nordic Nanovector ASA, and BioCopy AG. Dr. Boehm is a citizen of Germany. Mr. Godard is a non-employee director of Cellectis S.A. Mr. Godard Alain Godard serves as Chief Executive Officer of SARL Godard & Co. (8, rue Marcellin Blanc, 69110 Sainte Foy-Les, Lyon, France). Mr. Godard is a citizen of France. Hervé Hoppenot Mr. Hoppenot is a non-employee director of Cellectis S.A. Mr. Hoppenot serves as President and Chief Executive Officer and Chairman of the board of directors of Incyte Corporation (1801 Augustine Cut-off, Wilmington, DE 19803). Mr. Hoppenot is a citizen of both France and the United States of America. Dr. Malkomes is a non-employee director of Cellectis S.A. Axel-Sven Malkomes Dr. Malkomes serves as Chief Financial Officer & Chief Business Officer at Medigene AG (Lochhamer Str. 11, 82152 Planegg/Martinsried, Germany). Dr. Malkomes is a citizen of Germany. Annick Schwebig, M.D. Dr. Schwebig is a non-employee director of Cellectis S.A.

Dr. Schwebig serves as a non-employee director of several other boards of directors, including Inventiva Pharma and B Cell Design. Dr. Schwebig is a citizen of France.

Dr. Sourdive serves as Executive Vice President, CMC and Manufacturing of Cellectis S.A. Dr. Sourdive is a citizen of France.

David Sourdive, Ph.D.

To the knowledge of the Reporting Person, no person identified in Schedule A holds more than 1% of the Company's outstanding shares of Common Stock; each person who holds shares of the Company's Common Stock has, to the knowledge of the Reporting Person, sole voting power and sole dispositive power over the shares of Common Stock. To the knowledge of the Reporting Person, no person identified in this Schedule A has effected a transaction in the Company's Common Stock during the last sixty days.