UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

Schedule 13D

Under the Securities Exchange Act of 1934

Cellectis S.A.

(Name of Issuer)

Ordinary shares, nominal value of €0.05 per ordinary share

(Title of Class of Securities)

15117K103

(CUSIP Number)

Adrian Kemp
AstraZeneca PLC
1 Francis Crick Avenue
Cambridge Biomedical Campus
Cambridge CB2 0AA
England
Telephone: +44 20 3749 5000

with a copy to:

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Sebastian L. Fain
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(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

November 1, 2023

(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), 13d-1(f) or 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 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).

Schedule 13D

1	NAME OF REPORTING PERSON								
1	I.R.S. IDENTIFICATION NO. OF ABOVE PERSON								
	AstraZeneca Holdings B.V.								
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP								
	(a) 🗆								
	(a) □ (b) □								
3	SEC USE ONI	Y							
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4	SOURCE OF FUNDS (See Instructions)								
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5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)								
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		9	SOLE DISPOSITIVE POWER						
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			16,000,000 Ordinary Shares ¹						
		10	SHARED DISPOSITIVE POWER						
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11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON								
	16,000,000 Ord								
12	CHECK BOX	IF THI	E AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES						
13		CLAS	S REPRESENTED BY AMOUNT IN ROW (11)						
	22.4% ²								
14	TYPE OF REPORTING PERSON								
	CO								
	CU								

¹ Represents Ordinary Shares held directly by AstraZeneca Holdings B.V., a wholly owned subsidiary of AstraZeneca PLC. AstraZeneca PLC and AstraZeneca Holdings B.V. may each be deemed to have sole voting and dispositive power over the Ordinary Shares.

² Based on 71,583,768 outstanding Ordinary Shares (composed of 55,583,768 Ordinary Shares outstanding as of October 31, 2023 according to information received from the Issuer on November 8, 2023, plus 16,000,000 Ordinary Shares issued to AstraZeneca Holdings B.V. on November 6, 2023 pursuant to the Initial Investment Agreement).

1	NAME OF REPORTING PERSON						
	I.R.S. IDENTI	I.R.S. IDENTIFICATION NO. OF ABOVE PERSON					
	AstraZeneca PLC						
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP						
	(a) □ (b) □						
3	SEC USE ONLY						
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4	SOURCE OF FUNDS (See Instructions)						
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		10	16,000,000 Ordinary Shares ³				
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12	16,000,000 Ordinary Shares ³ CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES						
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)						
	22.4% ⁴						
14	TYPE OF REPORTING PERSON						
	CO						

³ Represents Ordinary Shares held directly by AstraZeneca Holdings B.V., a wholly owned subsidiary of AstraZeneca PLC. AstraZeneca PLC and AstraZeneca Holdings B.V. may each be deemed to have sole voting and dispositive power over the Ordinary Shares.

⁴ Based on 71,583,768 outstanding Ordinary Shares (composed of 55,583,768 Ordinary Shares outstanding as of October 31, 2023 according to information received from the Issuer on November 8, 2023, plus 16,000,000 Ordinary Shares issued to AstraZeneca Holdings B.V. on November 6, 2023 pursuant to the Initial Investment Agreement).

SCHEDULE 13D

Item 1. Security and Issuer.

This Schedule 13D relates to the ordinary shares with nominal value of €0.05 per ordinary share (the "Ordinary Shares") of Cellectis S.A. (the "Issuer"). The principal executive offices of the Issuer are located at 8 rue de la Croix Jarry, Paris 75013, France.

Item 2. Identity and Background.

- (a) This Schedule 13D is being filed on behalf of AstraZeneca PLC, a public limited company incorporated under the laws of England and Wales ("AstraZeneca"), and AstraZeneca Holdings B.V., a company organized under the laws of the Netherlands ("AZ Holdings BV").
- (b) The principal business address of AstraZeneca is 1 Francis Crick Avenue, Cambridge Biomedical Campus, Cambridge, CB2 0A, England, and the principal business address of AZ Holdings BV is Pr. Beatrixlaan 582, 2595 BM Den Haag, Netherlands.
- (c) AstraZeneca and AZ Holdings BV are members of a global, science-led biopharmaceutical business that focuses on the discovery, development, and commercialisation of prescription medicines in Oncology, Rare Diseases, and BioPharmaceuticals, including Cardiovascular, Renal & Metabolism, and Respiratory & Immunology. The name, citizenship, business address and present principal occupation of each executive officer and director of each of AstraZeneca and AZ Holdings BV (who, together with AstraZeneca and AZ Holdings BV, are referred to herein as the "Reporting Persons") are set forth on Schedule I, attached hereto.
- (d)-(e) Neither AstraZeneca nor AZ Holdings BV, nor to the knowledge of AstraZeneca nor AZ Holdings BV, any other Reporting Person, has during the last five years (i) been convicted in a criminal proceeding (excluding traffic violations and similar misdemeanors) or (ii) been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction as a result of which such person 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.
- (f) The jurisdiction of organization of each of AstraZeneca and AZ Holdings BV is set forth in subsection (a) above. The citizenship of each of the individuals referred to in Schedule I is set forth on Schedule I.

Item 3. Source and Amount of Funds or Other Consideration.

On November 1, 2023, AZ Holdings BV and the Issuer entered into an investment agreement (the "Initial Investment Agreement") pursuant to which, on November 6, 2023, the Issuer issued 16,000,000 Ordinary Shares to AZ Holdings BV at a price of \$5.00 per Ordinary Share for a total subscription price of \$80,000,000. The source of the funds for the subscription price was working capital.

Item 4. Purpose of Transaction.

The acquisition by AZ Holdings BV of the Issuer's securities as described herein was effected simultaneously with, and was a condition to the entry into, a joint research and collaboration agreement between AstraZeneca and the Issuer to accelerate the development of next generation therapeutics in areas of high unmet need, including oncology, immunology and rare diseases.

As described in Item 3, AZ Holdings BV acquired 16,000,000 Ordinary Shares on November 6, 2023 for a total subscription price of \$80,000,000 pursuant to the Initial Investment Agreement, for so long as AZ Holdings BV and its affiliates hold, in aggregate, at least 20% of the share capital and voting rights of the Issuer, AstraZeneca shall be entitled to subscribe on the same terms as other investors for its *pro rata* share on a non-diluted basis of any securities issued by the Issuer, subject to certain customary exceptions such as issuances of securities of the Issuer pursuant to incentive equity compensation plans. In addition, AstraZeneca is entitled to nominate an individual as a non-voting observer (*censeur*) on the board of directors of the Issuer. The Issuer has agreed to provide AZ Holdings BV with certain registration rights, including agreeing to register the resale of any Ordinary Shares acquired by AZ Holdings BV pursuant to the Initial Investment Agreement and the Additional Investment (as defined below) contemplated by the MOU (as defined below).

In addition to the Initial Investment Agreement, AstraZeneca Ireland Limited (a wholly owned subsidiary of AstraZeneca) and the Issuer entered into a joint research and collaboration agreement (the "JRCA"), and AZ Holdings BV and the Issuer entered into a non-binding memorandum of understanding (the "MOU") on November 1, 2023.

Pursuant to the JRCA, AstraZeneca Ireland Limited paid to the Issuer \$25,000,000 and AstraZeneca will leverage the Issuer's proprietary gene editing technologies and manufacturing capabilities, to develop novel cell and gene therapy candidate products. Under the terms of the JRCA, the Issuer is also eligible to receive an investigational new drug ("IND") option fee and development, regulatory and sales-related milestone payments, ranging from \$70 million up to \$220 million, per each of the 10 candidate products, plus tiered royalties. Pursuant to the JRCA, AstraZeneca Ireland Limited was also granted an option for a worldwide exclusive license for the candidate products, to be exercised before IND filing.

The MOU contemplates that AZ Holdings BV will, subject to the terms and conditions set forth therein, make a further equity investment in the Issuer of \$140,000,000 (the "Additional Investment") by subscribing for two classes of convertible preferred shares of the Issuer, pursuant to a subsequent investment agreement, the form of which is attached as a schedule to the MOU (the "Subsequent Investment Agreement").

Under the terms of the MOU, the Issuer must inform and consult with its *Comité Social et Economique* (the "Works Council") regarding the Additional Investment prior to entering into the Subsequent Investment Agreement. Upon completion of the consultation process, the parties will then determine whether to enter into the Subsequent Investment Agreement. The MOU provides that if one party fails to execute the Subsequent Investment Agreement within four months after entry into the MOU, such party must pay the other party a break fee as compensation for external costs and expenses.

The Subsequent Investment Agreement contemplates that AZ Holdings BV will subscribe for (i) 10,000,000 series A convertible preferred shares of the Issuer; and (ii) 18,000,000 series B convertible preferred shares of the Issuer, each at a price of \$5.00 per convertible preferred share. The series A convertible preferred shares will have single voting rights, and the series B convertible preferred shares will carry no voting rights. Both the series A and series B convertible preferred shares will be convertible, at AstraZeneca's discretion into Ordinary Shares with all of their associated rights, *provided* that AstraZeneca shall provide 12 months' prior notice of its intention to convert all or part of the series B convertible preferred shares that it holds. The closing of the Additional Investment is subject to (i) the Issuer's shareholders' approval, with such approval requiring two-thirds of the votes cast by voting shareholders, (ii) clearance of such investment from the French Ministry of Economy according to the foreign direct investment French regulations and (iii) other customary closing conditions. Following the closing of the Additional Investment, it is anticipated that AZ Holdings BV would own approximately 44.2% of the Ordinary Shares then outstanding.

Pursuant to the proposed Subsequent Investment Agreement, for so long as AZ Holdings BV and its affiliates would hold, in aggregate, at least 20% of the share capital and voting rights of the Issuer, AstraZeneca would be entitled to subscribe on the same terms as other investors for its *pro rata* share on a non-diluted basis of any securities issued by the Issuer, subject to certain customary exceptions such as issuances of securities of the Issuer pursuant to incentive equity compensation plans. Pursuant to the proposed Subsequent Investment Agreement, the Issuer would agree to provide AZ Holdings BV with certain registration rights, including agreeing to register the resale of any shares acquired by AZ Holdings BV pursuant to the Initial Investment Agreement and the Subsequent Investment Agreement.

If the closing of the Additional Investment occurs, then from such date and for so long as AZ Holdings BV and its affiliates hold, in the aggregate, at least 40% of the share capital and voting rights of the Issuer, AstraZeneca would be entitled to nominate two directors for appointment to the board of directors of the Issuer, which directors would be entitled to be appointed to each committee of the board of directors or, if such committee membership is not permitted under applicable stock exchange rules, to attend any meeting of the committees of the board of directors as non-voting observers. If AZ Holdings BV's ownership were to fall below 40%, then for so long as AZ Holdings BV and its affiliates would own, in the aggregate, at least 20% of the share capital and voting rights of the Issuer, AstraZeneca would retain the foregoing appointment right, but solely with respect to one director.

AstraZeneca intends to continue to review its investment in the Issuer on an ongoing basis and, depending on various factors, including, without limitation, the Issuer's financial position, the price of the Ordinary Shares and the American Depositary Shares representing Ordinary Shares, conditions in the securities markets and general economic and industry conditions, AstraZeneca may, in the future, take such actions with respect to the Ordinary Shares as they deem appropriate, including, without limitation: purchasing additional Ordinary Shares; selling Ordinary Shares; taking any other action with respect to the Issuer or any of its securities in any manner permitted by law or changing their intention with respect to any and all matters referred to in paragraphs (a) through (j) below in this Item 4.

Except as otherwise described in this Schedule 13D, none of the Reporting Persons currently has any plans or proposals that relate to or would result in: (a) the acquisition by any person of additional securities of the Issuer, or the disposition of securities of the Issuer; (b) an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of its subsidiaries; (c) a sale or transfer of a material amount of assets of the Issuer or any of its subsidiaries; (d) any change in the present board of directors or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board; (e) any material change in the present capitalization or dividend policy of the Issuer; (f) any other material change in the Issuer's business or corporate structure; (g) any changes in the Issuer's charter or bylaws or other actions which may impede the acquisition of control of the Issuer by any person; (h) causing a class of securities of the Issuer to be delisted from a national securities exchange or to cease to be authorized to be quoted in an interdealer quotation system of a registered national securities association; (i) causing a class of equity securities of the Issuer to become eligible for termination of registration pursuant to Section 12(g)(4) of the Securities Exchange Act of 1934, as amended; or (j) any action similar to any of those enumerated above.

Item 5. Interest in Securities of the Issuer.

(a) As at the date of this Schedule 13D, each of AstraZeneca and AZ Holdings BV may be deemed to beneficially own 16,000,000 Ordinary Shares, representing approximately 22.4% of the Ordinary Shares outstanding. This percentage is based on 71,583,768 outstanding Ordinary Shares (composed of 55,583,768 Ordinary Shares outstanding as of October 31, 2023 according to information received from the Issuer on November 8, 2023, plus 16,000,000 Ordinary Shares issued to AZ Holdings BV on November 6, 2023 pursuant to the Initial Investment Agreement).

To the knowledge of AstraZeneca and AZ Holdings BV, no other Reporting Person beneficially owns any Ordinary Shares.

(b) As at the date of this Schedule 13D, each of AstraZeneca and AZ Holdings BV may be deemed to have sole voting and dispositive power over 16,000,000 Ordinary Shares. Neither AstraZeneca nor AZ Holdings BV has shared voting or dispositive power over any Ordinary Shares.

To the knowledge of AstraZeneca and AZ Holdings BV, no other Reporting Person has any voting or dispositive power over any Ordinary Shares.

- (c) Except as set forth in this Schedule 13D, neither AstraZeneca nor AZ Holdings BV, nor, to the knowledge of AstraZeneca and AZ Holdings BV, any other Reporting Person, has effected any transactions with respect to the Ordinary Shares within the last 60 days.
- (d) To the knowledge of AstraZeneca and AZ Holdings BV, no person has the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the securities of the Issuer beneficially owned by AstraZeneca and/or AZ Holdings BV.
- (e) Not applicable.

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

Items 3 and 4 of this Schedule 13D are incorporated by reference herein. Other than as described in Items 3 and 4, there are no contracts, arrangements, understandings or relationships with respect to the securities of the Issuer between the Reporting Persons or the individuals listed on Schedule I and any other person or entity.

The descriptions of the Initial Investment Agreement, the JRCA, the MOU and the Subsequent Investment Agreement are not complete and are qualified in their entirety by reference to the complete text of such agreements, copies of which are filed as exhibits hereto and the terms of which are incorporated herein by reference.

Item 7. Material to Be Filed as Exhibits.

Exhibit no.	<u>Description</u>
<u>1.</u>	Joint Filing Agreement between AstraZeneca PLC and AstraZeneca Holdings B.V., dated November 9, 2023
<u>2.</u>	<u>Initial Investment Agreement between AstraZeneca Holdings B.V. and the Issuer, dated November 1, 2023 (incorporated by reference to Exhibit 99.2 to the report on Form 6-K filed by the Issuer with the Securities and Exchange Commission on November 9, 2023)</u>
<u>3.</u>	Joint Research and Collaboration Agreement between AstraZeneca Ireland Limited and the Issuer, dated November 1, 2023 (incorporated by reference to Exhibit 99.1 to the report on Form 6-K filed by the Issuer with the Securities and Exchange Commission on November 9, 2023)
<u>4.</u>	Memorandum of Understanding between AstraZeneca Holdings B.V. and the Issuer, dated November 1, 2023 (incorporated by reference to Exhibit 99.3 to the report on Form 6-K filed by the Issuer with the Securities and Exchange Commission on November 9, 2023)

SIGNATURE

After reasonable inquiry and to the best of each of the undersigned's knowledge and belief, each of the undersigned certifies that the information set forth in this statement is true, complete and correct.

Date: November 9, 2023 ASTRAZENECA PLC

By: /s/ Adrian Kemp Name: Adrian Kemp Title: Company Secretary

Date: November 9, 2023 ASTRAZENECA HOLDINGS B.V.

By: /s/ Kamila Kozikowska Name: Kamila Kozikowska

Title: Director

Schedule I

The name and present principal occupation of each of the executive officers and directors of AstraZeneca PLC are set forth below. Unless otherwise noted, each of these persons have as their business address 1 Francis Crick Avenue, Cambridge Biomedical Campus, Cambridge CB2 0AA, England.

Principal Occupation and, if not employed by AstraZeneca PLC, Name, Principal Business and

Name	Position with AstraZeneca PLC	AstraZeneca PLC, Name, Principal Business and Address of Employer	Citizenship
Michel Demaré	Non-Executive Chair of the Board		Belgian and Swiss
Pascal Soriot	Executive Director and Chief Executive Officer		French and Australian
Aradhana Sarin	Executive Director and Chief Financial Officer		American
Philip Broadley	Senior Independent Non- Executive Director		British
Euan Ashley	Non-Executive Director	Stanford University Department: Medicine - Med/Cardiovascular Medicine Position: Professor-Univ Med Line Falk Building CV267 870 Quarry Road Stanford, California 94305 United States	British
Deborah DiSanzo	Non-Executive Director	President, Best Buy Health Best Buy Co., Inc. 7601 Penn Avenue S. Richfield, MN 55423 United States	American
Diana Layfield	Non-Executive Director	General Manager, International Search, Google Alphabet Inc. 600 Amphitheatre Parkway Mountain View, CA 94043 United States	British
Anna Manz	Non-Executive Director	Chief Financial Officer London Stock Exchange Group 10 Paternoster Square London EC4M 7LS United Kingdom	British
Sheri McCoy	Non-Executive Director		American
Tony Mok	Non-Executive Director	Professor and Chair Department of Clinical Oncology The Chinese University of Hong Kong Hong Kong China	Canadian
Nazneen Rahman	Non-Executive Director	Chief Executive Officer YewMaker Medicines Ltd Unit 3 Upp Hall Farm Salmons Lane Colchester CO6 1RY United Kingdom	British
Andreas Rummelt	Non-Executive Director	Chairman and Managing Partner InterpharmaLink AG Münchensteinerstrasse 41 4052 Basel Switzerland	German
Marcus Wallenberg	Non-Executive Director	Chairman of Skandinaviska Enskilda Banken, Kungsträdgårdsgatan 8, 106 40 Stockholm Sweden	Swedish
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The name and present principal occupation of each of the executive officers and directors of AstraZeneca Holdings B.V. are set forth below. Unless otherwise noted, each of these persons have as their business address Prinses Beatrixlaan 582, 2595 BM, The Hague, the Netherlands.

Principal Occupation and, if not employed by AstraZeneca Holdings B.V., Name,

	Asu azeneca Holdings D. v., Name,	
Position with AstraZeneca	Principal Business and	
Holdings B.V.	Address of Employer	Citizenship
Director	Director	Netherlands
Director	Director	Netherlands
Director	Director	Poland
	Holdings B.V. Director Director	Holdings B.V. Address of Employer Director Director Director Director

JOINT FILING AGREEMENT

The undersigned acknowledge and agree that the foregoing statement on Schedule 13D is filed on behalf of each of the undersigned and that all subsequent amendments to this statement on Schedule 13D shall be filed on behalf of each of the undersigned without the necessity of filing additional joint filing statements. The undersigned acknowledge that each shall be responsible for the timely filing of such amendments, and for the completeness and accuracy of the information concerning him, her or it contained herein, but shall not be responsible for the completeness and accuracy of the information concerning the other entities or persons, except to the extent that he, she or it knows or has reason to believe that such information is inaccurate.

Date: November 9, 2023 ASTRAZENECA PLC

By: <u>/s/ Adrian Kemp</u>

Name: Adrian Kemp
Title: Company Secretary

Date: November 9, 2023 ASTRAZENECA HOLDINGS B.V.

By: /s/ Kamila Kozikowska

Name: Kamila Kozikowska

Title: Director