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

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**SCHEDULE 13G**

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

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**Autolus Therapeutics plc**  
(Name of Issuer)

American Depositary Shares and Ordinary Shares, nominal value £0.000042 per share  
(Title of Class of Securities)

05280R 100\*\*  
(CUSIP Number)

December 31, 2018  
(Date of Event which Requires Filing of this Statement)

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Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

☐ Rule 13d-1(b)

☐ Rule 13d-1(c)

☒ Rule 13d-1(d)

\* 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 the disclosures provided in a prior cover page.

The information required in 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*).

\*\* There is no CUSIP number assigned to the ordinary shares. CUSIP number 05280R 100 has been assigned to the American Depositary Shares of the Issuer, which are quoted on the Nasdaq Global Select Market under the symbol "AUTL." Each American Depositary Share represents the right to receive one ordinary share.

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CUSIP No. 05280R 100

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1	Names of Reporting Person: <b>Syncona Portfolio Limited</b>		
2	Check the appropriate box if a member of a Group (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>		
3	SEC Use Only		
4	Citizenship or Place of Organization Guernsey		
Number of Shares Beneficially Owned by Each Reporting Person With:	5	Sole Voting Power <b>0</b>	
	6	Shared Voting Power <b>13,592,098 (1)</b>	
	7	Sole Dispositive Power <b>0</b>	
	8	Shared Dispositive Power <b>13,592,098 (1)</b>	
9	Aggregate Amount Beneficially Owned by Each Reporting Person <b>13,592,098 (1)</b>		
10	Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)		
11	Percent of class represented by amount in row (9) 33.9% (2)		
12	Type of Reporting Person (See Instructions) CO		

- (1) Consists of 12,180,333 ordinary shares and 1,411,765 American Depositary Share ("ADS") held directly by Syncona Portfolio Limited. Each ADS represents one ordinary share, nominal value 0.000042 GBP per share, of the Issuer. The ordinary shares and the ADS are collectively referred to as the "**Ordinary Shares**".
- (2) Based on 40,146,182 Ordinary Shares outstanding as of September 30, 2018 as reported in the Issuer's Annual Report on Form 20-F, filed with the SEC on November 23, 2018.

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1	Names of Reporting Person:	
	Syncona Holdings Limited	
2	Check the appropriate box if a member of a Group (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC Use Only	
4	Citizenship or Place of Organization Guernsey	
Number of Shares Beneficially Owned by Each Reporting Person With:	5	Sole Voting Power  0
	6	Shared Voting Power  13,592,098 (1)
	7	Sole Dispositive Power  0
	8	Shared Dispositive Power  13,592,098 (1)
9	Aggregate Amount Beneficially Owned by Each Reporting Person  13,592,098 (1)	
10	Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)	
11	Percent of class represented by amount in row (9)  33.9% (2)	
12	Type of Reporting Person (See Instructions)  CO	

- (1) Consists of 12,180,333 ordinary shares and 1,411,765 American Depositary Share ("ADS") held directly by Syncona Portfolio Limited. Each ADS represents one ordinary share, nominal value 0.000042 GBP per share, of the Issuer. The ordinary shares and the ADS are collectively referred to as the "**Ordinary Shares**".
- (2) The percentage of outstanding Ordinary Shares of the Issuer beneficially owned by Syncona Portfolio Limited is set forth on Line 11 above. Such percentage was calculated based on 33,844,103 Ordinary Shares reported to be outstanding as of October 2, 2018 immediately following the Issuer's recent public offering, pursuant to the Issuer's prospectus filed under Rule 424(b)(4), filed with the SEC on September 28, 2018.

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1	Names of Reporting Person:	
	Syncona Investment Management Limited	
2	Check the appropriate box if a member of a Group (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC Use Only	
4	Citizenship or Place of Organization United Kingdom	
Number of Shares Beneficially Owned by Each Reporting Person With:	5	Sole Voting Power  0
	6	Shared Voting Power  13,592,098 (1)
	7	Sole Dispositive Power  0
	8	Shared Dispositive Power  13,592,098 (1)
9	Aggregate Amount Beneficially Owned by Each Reporting Person  13,592,098 (1)	
10	Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)	
11	Percent of class represented by amount in row (9)  33.9% (2)	
12	Type of Reporting Person (See Instructions)  CO	

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- (2) The percentage of outstanding Ordinary Shares of the Issuer beneficially owned by Syncona Portfolio Limited is set forth on Line 11 above. Such percentage was calculated based on 33,844,103 Ordinary Shares reported to be outstanding as of October 2, 2018 immediately following the Issuer's recent public offering, pursuant to the Issuer's prospectus filed under Rule 424(b)(4), filed with the SEC on September 28, 2018.

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1	Names of Reporting Person:	
	Syncona Limited	
2	Check the appropriate box if a member of a Group (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC Use Only	
4	Citizenship or Place of Organization Guernsey	
Number of Shares Beneficially Owned by Each Reporting Person With:	5	Sole Voting Power  0
	6	Shared Voting Power  13,592,098 (1)
	7	Sole Dispositive Power  0
	8	Shared Dispositive Power  13,592,098 (1)
9	Aggregate Amount Beneficially Owned by Each Reporting Person  13,592,098 (1)	
10	Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)	
11	Percent of class represented by amount in row (9)  33.9% (2)	
12	Type of Reporting Person (See Instructions)  CO	

- (1) Consists of 12,180,333 ordinary shares and 1,411,765 American Depositary Share ("ADS") held directly by Syncona Portfolio Limited. Each ADS represents one ordinary share, nominal value 0.000042 GBP per share, of the Issuer. The ordinary shares and the ADS are collectively referred to as the "**Ordinary Shares**".
- (2) The percentage of outstanding Ordinary Shares of the Issuer beneficially owned by Syncona Portfolio Limited is set forth on Line 11 above. Such percentage was calculated based on 33,844,103 Ordinary Shares reported to be outstanding as of October 2, 2018 immediately following the Issuer's recent public offering, pursuant to the Issuer's prospectus filed under Rule 424(b)(4), filed with the SEC on September 28, 2018.

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**Item 1.**

- (a) **Name of Issuer:** Autolus Therapeutics plc
- (b) **Address of Issuer's principal executive offices:** Forest House, 58 Wood Lane, London W12 7RZ, United Kingdom

**Item 2.****(a) Name of reporting persons filing:**

- (i) Syncona Portfolio Limited;
- (ii) Syncona Holdings Limited;
- (iii) Syncona Investment Management Limited; and
- (iv) Syncona Limited

**(b) Address of principal business office or, if none, residence:**

The address of the principal business office of Syncona Portfolio Limited, Syncona Holdings Limited and Syncona Limited is Arnold House, St Julian's Avenue, St Peter Port, Guernsey GY1 3RD, Channel Islands. The address of the principal business office of Syncona Investment Management Limited is 2nd Floor, 8 Bloomsbury Street, London WC1B 3SR, United Kingdom.

**(c) Citizenship:**

Syncona Portfolio Limited, Syncona Holdings Limited and Syncona Limited's citizenship is Guernsey. Syncona Investment Management Limited's citizenship is United Kingdom.

**(d) Title and class of securities:**

Ordinary Shares, nominal value 0.000042 GBP per share, and American Depositary Shares ("ADS"). Each ADS represents one ordinary share, nominal value 0.000042 GBP per share, of the Issuer.

**(e) CUSIP No.:**

There is no CUSIP number assigned to the ordinary shares. CUSIP number 05280R 100 has been assigned to the ADS, which are quoted on the Nasdaq Global Select Market under the symbol "AUTL."

**Item 3. If this statement is filed pursuant to §§ 240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:**

Not applicable.

**Item 4.**

The following information with respect to the ownership of Ordinary Shares of the Issuer by the Reporting Persons filing this statement on Schedule 13G is provided as of December 31, 2018:

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Reporting Persons	Ordinary Shares Held Directly (1)	Sole Power to Vote or Direct the Vote (1)	Shared Power to Vote or Direct the Vote (1)	Sole Power to Dispose or Direct the Disposition (1)	Shared Power to Dispose or Direct the Disposition (1)	Amount Beneficially Owned (1)	Percentage of Class (2)
Syncona Portfolio Limited	13,592,098	0	13,592,098	0	13,592,098	13,592,098	33.9%
Syncona Holdings Limited	0	0	13,592,098	0	13,592,098	13,592,098	33.9%
Syncona Investment Management Limited	0	0	13,592,098	0	13,592,098	13,592,098	33.9%
Syncona Limited	0	0	13,592,098	0	13,592,098	13,592,098	33.9%

- (1) Consists of 12,180,333 ordinary shares and 1,411,765 American Depositary Share (“ADS”) held directly by Syncona Portfolio Limited. Each ADS represents one ordinary share, nominal value 0.000042 GBP per share, of the Issuer. The ordinary shares and the ADS are collectively referred to as the “**Ordinary Shares**”.
- (2) The percentage of outstanding Ordinary Shares of the Issuer beneficially owned was calculated based on 33,844,103 Ordinary Shares reported to be outstanding as of October 2, 2018 immediately following the Issuer’s recent public offering, pursuant to the Issuer’s prospectus filed under Rule 424(b)(4), filed with the SEC on September 28, 2018.

Syncona Portfolio Limited is a wholly owned subsidiary of Syncona Holdings Limited, and Syncona Holdings Limited is a wholly controlled subsidiary of Syncona Limited, a publicly-listed company. Investment and voting decisions with respect to these shares are made by Syncona Portfolio Limited, acting upon the recommendation of an investment committee of Syncona Investment Management Limited, also a subsidiary of Syncona Holdings Limited. Each of these entities disclaims beneficial ownership except to the extent of its pecuniary interest therein, if any.

**Item 5. Ownership of Five Percent or Less of a Class.**

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following ☐.

**Item 6. Ownership of more than Five Percent on Behalf of Another Person.**

Not applicable.

**Item 7. Identification and classification of the subsidiary which acquired the security being reported on by the parent holding company or control person.**

Not applicable.

**Item 8. Identification and classification of members of the group.**

Not applicable.

**Item 9. Notice of Dissolution of Group.**

Not applicable.

**Item 10. Certifications.**

Not applicable.

SCHEDULE 13G

CUSIP No.	05280R 100
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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: February 13, 2019

SYNCONA PORTFOLIO LIMITED

By: /s/ Nick Moss  
Name: Nick Moss  
Title: Director

SYNCONA HOLDINGS LIMITED

By: /s/ Nick Moss  
Name: Nick Moss  
Title: Director

SYNCONA INVESTMENT MANAGEMENT LIMITED

By: /s/ Martin Murphy  
Name: Martin Murphy  
Title: Director

SYNCONA LIMITED

By: /s/ Nick Moss  
Name: Nick Moss  
Title: Director

Exhibit(s):

Exhibit 99.1: Joint Filing Statement



**AGREEMENT**

In accordance with Rule 13d-1(k) under the Securities Exchange Act of 1934, as amended, the persons named below agree to the joint filing on behalf of each of them of a statement on Schedule 13G (including amendments thereto) with respect to the Ordinary Shares (including ADS, each of which represents one Ordinary Share) of Autolus Therapeutics plc and further agree that this Joint Filing Agreement be included as an Exhibit to such joint filings. It is understood and agreed that the joint filing of the Schedule 13G shall not be construed as an admission that the persons named herein constitute a group for purposes of Regulation 13D-G of the Securities Exchange Act of 1934, as amended.

Dated: February 13, 2019

**SYNCONA PORTFOLIO LIMITED**

By: /s/ Nick Moss

Name: Nick Moss

Title: Director

**SYNCONA HOLDINGS LIMITED**

By: /s/ Nick Moss

Name: Nick Moss

Title: Director

**SYNCONA INVESTMENT MANAGEMENT LIMITED**

By: /s/ Martin Murphy

Name: Martin Murphy

Title: Director

**SYNCONA LIMITED**

By: /s/ Nick Moss

Name: Nick Moss

Title: Director