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

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER
PURSUANT TO RULE 13a-16 OR 15d-16
UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the Month of January 2020

Commission File Number: 001-38547

Autolus Therapeutics plc
(Translation of registrant's name into English)

Forest House
58 Wood Lane
White City
London W12 7RZ
United Kingdom
(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F:

☒ Form 20-F ☐ Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): ☐

On January 30, 2020, Autolus Therapeutics plc (the "Company") issued a press release titled "Autolus Therapeutics Presents Encouraging Additional Data Showcasing Clinical Progress of Programmed T Cell Therapy Pipeline in Blood Cancers." The press release is attached as Exhibit 99.1 hereto and is incorporated by reference herein.

Information in the attached Exhibit 99.1 is being furnished and this exhibit shall not be deemed "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that Section, nor shall they be deemed incorporated by reference in any filing made by the Company under the Securities Act of 1933, as amended, or the Exchange Act, except as otherwise set forth herein or as shall be expressly set forth by specific reference in such a filing.

EXHIBIT LIST

Exhibit	Description
99.1	Press Release dated January 30, 2019, “Autolus Therapeutics Presents Encouraging Additional Data Showcasing Clinical Progress of Programmed T Cell Therapy Pipeline in Blood Cancers.”

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Autolus Therapeutics plc

Date: January 31, 2020

By: /s/ Christian Itin
Name: Christian Itin, Ph.D.
Title: Chief Executive Officer

Exhibit 99.1

Autolus Therapeutics Presents Encouraging Additional Data Showcasing Clinical Progress of Programmed T Cell Therapy Pipeline in Blood Cancers

- Initial data show encouraging clinical activity with manageable safety profile
- No neurotoxicity observed to date in patients treated with AUTO3 + pembrolizumab

Data presented at EHA-EBMT 2nd European CAR T Cell Meeting points to potential differentiated profile for AUTO3

LONDON, January 30, 2020 – Autolus Therapeutics plc (Nasdaq: AUTL) today announced additional data regarding its ongoing Phase 1/2 clinical trial of its next-generation programmed T cell therapy, AUTO3, to treat adults with relapsed/refractory diffuse large B cell lymphoma (DLBCL). The data is to be presented in a keynote lecture titled "Improved CAR T cell approaches for lymphoid malignancies," by Dr. Martin Pulé, clinical senior lecturer in the Dept. of Hematology at UCL Cancer Institute and chief scientific officer of Autolus Therapeutics at the EHA-EBMT 2nd European CAR T Cell Meeting to be held on January 30, 2020 at 17:15 P.M. CET in Stiges (Barcelona), Spain.

"The incremental update in the AUTO3 trial presented at this year's European CAR T Cell Meeting continue to support the encouraging early indications of durability and high level of activity previously reported. Together with the encouraging signs of a manageable safety profile in adult patients with DLBCL, these early data for AUTO3 show the potential for a differentiated product profile," said Dr. Christian Itin, chairman and chief executive officer of Autolus.

"I'm pleased to be presenting today an encouraging data update from our ALEXANDER Trial of AUTO3, our CD19/CD22 dual-targeting CAR-T product candidate in DLBCL," said Dr Martin Pulé, founder and chief scientific officer of Autolus. "Together with the data we have generated to date for AUTO1 in acute lymphoblastic leukemia (ALL) patients, we now have two programs specifically designed for the development of respective hematological malignancy."

As of the date cut-off date of January 21, 2020 (data availability as of January 28, 2020), 18 patients in the ALEXANDER Phase 1/2 clinical trial of AUTO3 were evaluable for safety and efficacy with minimum 28-day follow-up. In the cohorts dosed at 450 x 10^6 AUTO3 cells plus pembrolizumab, five out of seven patients (ORR=71%) achieved a response (complete response + partial response) and four out of seven patients (CRR=57%) achieved a complete response. Across all dose levels, seven out of eight complete responders (87%) had ongoing complete responses at a median follow up of six months (range of 1 month - 18 months). All seven out of seven complete responders (100%) treated with AUTO3 and pembrolizumab have ongoing complete responses as of January 21, 2020 at a median follow up of three months (range of one month - 18 months). AUTO3 was generally well tolerated, with no patients experiencing dose limiting toxicity, and there were no treatment-related deaths. One patient experienced Grade 4 lung infection due to para-influenza virus that was possibly considered to be related to treatment and the patient is recovering. Such infections are a common event in late stage DLBCL patients. No patients experiencing Grade 3 or

higher Cytokine Release Syndrome (CRS) were reported with primary treatment (one patient experienced Grade 3 CRS on retreatment), and one of 18 patients experienced a Grade 3 neurotoxicity that resolved swiftly with administration of steroids. As of the data cut-off, no patient has experienced neurotoxicity of any grade in cohorts treated with AUTO3 and pembrolizumab.

About Autolus Therapeutics plc

Autolus is a clinical-stage biopharmaceutical company developing next-generation, programmed T cell therapies for the treatment of cancer. Using a broad suite of proprietary and modular T cell programming technologies, the company is engineering precisely targeted, controlled and highly active T cell therapies that are designed to better recognize cancer cells, break down their defense mechanisms and eliminate these cells. Autolus has a pipeline of product candidates in development for the treatment of hematological malignancies and solid tumors.

About AUTO3

AUTO3 is the first investigational CAR T cell therapy containing two independent chimeric antigen receptors targeting CD19 and CD22 that have each been independently designed for single target activity. By simultaneously targeting two B cell antigens, AUTO3 is designed to minimize relapse due to single antigen loss in patients with B cell malignancies. AUTO3 is currently being tested in adult diffuse large B cell lymphoma in the ALEXANDER clinical trial and in pediatric ALL in the AMELIA clinical trial.

About AUTO1

AUTO1 is a novel investigational CD19-targeting CAR T cell therapy designed to overcome the limitations in safety—while maintaining similar levels of efficacy—compared to current CD19 CAR T cell therapies. AUTO1 has a fast target binding off-rate designed to minimize excessive activation and associated cytokine release, which may reduce toxicity. In addition, the fast off-rate may reduce T cell exhaustion, enhance persistence and improve the programmed T cells' ability to engage in serial killing of target cancer cells. AUTO1 is currently being evaluated in two Phase 1 studies, one in pediatric ALL and one in adult ALL.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are statements that are not historical facts, and in some cases can be identified by terms such as "may," "will," "could," "expects," "plans," "anticipates," and "believes." These statements include, but are not limited to, statements regarding the anticipated development plans for Autolus' product candidates, including statements regarding the potential indications and benefits of AUTO3 and AUTO1 and the potential of AUTO3 to treat adult DLBCL. Any forward-looking statements are based on management's current views and assumptions and involve risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in such

statements. For a discussion of other risks and uncertainties, and other important factors, any of which could cause our actual results to differ from those contained in the forward-looking statements, see the section titled “Risk Factors” in Autolus’ Annual Report on Form 20-F filed on November 23, 2018 as well as discussions of potential risks, uncertainties, and other important factors in Autolus’ future filings with the Securities and Exchange Commission from time to time. All information in this press release is as of the date of the release, and Autolus undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events, or otherwise, except as required by law.

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