Filed pursuant to Rule 433 of the Securities Act of 1933, as amended Registration No. 333-232569 Issuer Free Writing Prospectus dated February 3, 2021 Relating to Preliminary Prospectus Supplement dated February 3, 2021



Free Writing Prospectus

Iterum Therapeutics plc (the "Company") has filed a registration statement (including a prospectus) with the SEC for the offering to which this communication relates. Before you invest, you should read the prospectus in that registration statement, the preliminary prospectus supplement dated February 3, 2021 and other documents the issuer has filed with the SEC for more complete information about the issuer and this offering.

The information in this free writing prospectus supplements the preliminary prospectus supplement dated February 3, 2021, as follows:

Iterum Therapeutics plc Increases Previously Announced Bought Deal Public Offering of Ordinary Shares to \$40.0 Million

DUBLIN, Ireland and CHICAGO, Feb. 3, 2021 — Iterum Therapeutics plc (Nasdaq: ITRM) (the Company), a clinical-stage pharmaceutical company focused on developing next generation oral and IV antibiotics to treat infections caused by multi-drug resistant pathogens in both community and hospital settings, today announced that, due to demand, the underwriter has agreed to increase the size of the previously announced offering and purchase on a firm commitment basis 34,782,609 ordinary shares (or pre-funded warrants in lieu thereof) at a public offering price of \$1.15 per share, less underwriting discounts and commissions. In addition, the Company has granted the underwriter an option for a period of 30 days to purchase up to an additional 5,217,391 ordinary shares on the same terms and conditions. All of the shares (or pre-funded warrants) are being offered by the Company. The offering is expected to close on or about February 8, 2021, subject to the satisfaction of customary closing conditions.

H.C. Wainwright & Co. is acting as the sole book-running manager of the offering.

The gross proceeds to the Company from the offering are expected to be approximately \$40.0 million, before deducting underwriting discounts and commissions and other offering expenses payable by the Company. The Company intends to use the net proceeds from the offering to support the ongoing review of its New Drug Application (NDA) for the treatment of uncomplicated urinary tract infections (uUTI) in patients with a quinolone non-susceptible pathogen, for pre-commercialization and potential launch activities for oral sulopenem, and for working capital and general corporate purposes. Based on the Company's current operating plan, the Company estimates that upon the closing of the offering its existing cash and cash equivalents, together with the net proceeds from this offering, should be sufficient to fund its operating

expenses and capital expenditure requirements into the third quarter of 2022, including through the PDUFA goal date of July 25, 2021 for completion of the FDA's review of the NDA for oral sulopenem and the potential commercial launch of oral sulopenem. However, this estimate is based on assumptions that may prove to be wrong, and the Company's operating plans may change as a result of many factors and various risks and uncertainties.

The securities described above are being offered and sold in this offering pursuant to a shelf registration statement on Form S-3 (File No. 333-232569) that was filed with the Securities and Exchange Commission (the "SEC") and was declared effective on July 16, 2019. A preliminary prospectus supplement and accompanying base prospectus relating to the offering was filed with the SEC on February 3, 2021 and is available on the SEC's website at www.sec.gov. A final prospectus supplement related to the offering will be filed with the SEC and will be available on the SEC's website at www.sec.gov. Copies of the final prospectus supplement and the accompanying prospectus relating to the offering may also be obtained, when available, by contacting: H.C. Wainwright & Co., LLC, 430 Park Avenue, 3rd Floor, New York, NY 10022, or by telephone at (646) 975-6996, or email at placements@hcwco.com.

This press release does not constitute an offer to sell, or a solicitation of an offer to buy any of the securities described herein, nor shall there be any sale of these securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

About Iterum Therapeutics plc

Iterum Therapeutics plc is a clinical-stage pharmaceutical company dedicated to developing differentiated anti-infectives aimed at combatting the global crisis of multi-drug resistant pathogens to significantly improve the lives of people affected by serious and life-threatening diseases around the world. Iterum Therapeutics is advancing its first compound, sulopenem, a novel penem anti-infective compound, in Phase 3 clinical development with an oral formulation and IV formulation. Sulopenem has demonstrated potent *in vitro* activity against a wide variety of gram-negative, gram-positive and anaerobic bacteria resistant to other antibiotics. Iterum Therapeutics has received Qualified Infectious Disease Product (QIDP) and Fast Track designations for its oral and IV formulations of sulopenem in seven indications.

Forward-Looking Statements

This press release contains forward-looking statements. These forward-looking statements include, without limitation, statements regarding, the anticipated closing of the offering, the use of proceeds from the offering, and the Company's plans, strategies and prospects for its business. In some cases, forward-looking statements can be identified by words such as "may," "believes," "intends," "seeks," "anticipates," "plans," "estimates," "expects," "should," "assumes," "continues," "could," "would," "will," "future," "potential" or the negative of these or similar terms and phrases. Forward-looking statements involve known

and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Forward-looking statements include all matters that are not historical facts. Actual future results may be materially different from what is expected due to factors largely outside the Company's control, including the uncertainties inherent in the initiation and conduct of clinical trials, availability and timing of data from clinical trials, changes in regulatory requirements or decisions of regulatory authorities, the timing of approval of any submission, changes in public policy or legislation, commercialization plans and timelines, if oral sulopenem is approved, the actions of third-party clinical research organizations, suppliers and manufacturers, the accuracy of the Company's expectations regarding how far into the future the Company's cash on hand will fund the Company's ongoing operations, the sufficiency of the Company's cash resources and the Company's ability to continue as a going concern, the impact of COVID-19 and related responsive measures thereto, the Company's ability to maintain listing on the Nasdaq Capital Market, risks and uncertainties concerning the outcome, impact, effects and results of the Company's evaluation of corporate, organizational, strategic, financial and financing alternatives, including the terms, timing, structure, value, benefits and costs of any corporate, organizational, strategic, financial or financing alternative and the Company's ability to complete one at all, the price of the Company's securities, the expected use of proceeds from the offering and other factors discussed in the "Risk Factors" section contained in the preliminary prospectus supplement related to the proposed underwritten public offering and in the Company's most recently filed Quarterly Report on Form 10-Q, and other documents filed with the SEC from time to time. Forward-looking statements represent the Company's beliefs and assumptions only as of the date of this press release. Except as required by law, the Company assumes no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future.

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