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 August 2021

Commission File Number 001-38810

STEALTH BIOTHERAPEUTICS CORP

(Translation of registrant's name into English)

Stealth BioTherapeutics Corp
c/o Intertrust Corporate Services (Cayman) Limited
One Nexus Way, Camana Bay
Grand Cayman
KY1-9005 Cayman Islands
(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): ☐

INCORPORATION BY REFERENCE

Except as otherwise setforth below, this report on Form 6-K shall be deemed to be incorporated by reference into the registration statements on Form S-8 (Registration Numbers 333-253601, 333-237541 and 333-230452) and Form F-3 (Registration Number 333-237542) of Stealth BioTherapeutics Corp (the "Company") (including any prospectuses forming a part of such registration statements) and to be a part thereof from the date on which this report is filed, to the extent not superseded by documents or reports subsequently filed or furnished.

Entry into a Material Definitive Agreement

On May 17, 2021, Stealth Biotherapeutics Corp (the "Company") entered into an Amendment to the Development Funding Agreement (the "Amendment") with Morningside Venture (I) Investments Limited ("Morningside"). Under the Amendment, Morningside has agreed to pay to the Company additional funding as contemplated by the existing Development Funding Agreement dated as of October 30, 2020 of (i) $8 million within five business days of May 17, 2021, (ii) $11 million on or about October 1, 2021 and (iii) $11 million on or about December 1, 2021. The Company is required to issue a warrant to Morningside under the Development Funding Agreement in connection with each such additional funding. Each warrant has a term of three years and is issuable for the number of ordinary shares of the Company ("Ordinary Shares") equal to the quotient of 30% of the amount of the funding divided by the applicable exercise price, which is equal to 115% of the implied price of the Company's Ordinary Shares on the date of issuance of the warrant based upon the closing price of the Company's American Depository Shares as listed on the Nasdaq Global Market. The Company issued a warrant to Morningside exercisable for 18,461,538 Ordinary Shares at an exercise price of $0.13 in connection with the May 2021 payment to the Company.

The foregoing description of the warrant is qualified in its entirety by reference to the full text of the form of warrant, a copy of which is attached hereto as Exhibit 10.1 which is incorporated herein by reference.

Earnings Release

On August 5, 2021, the Company issued a press release announcing its unaudited financial results for the three months ended June 30, 2021, and operational progress. The press release issued by the Company in connection therewith is attached hereto as Exhibit 99.1. The information in Exhibit 99.1 shall not be deemed "filed" for purposes of Section 18 of the Exchange Act, nor shall be deemed incorporated by reference in any filing under the Securities Act or the Exchange Act, except as expressly set forth by specific reference in such a filing.

EXHIBIT INDEX

Exhibit Number	Description
10.1	Form of Warrant
99.1	Press release issued by the Company on August 5, 2021

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.

STEALTH BIOTHERAPEUTICS CORP

By: /s/ Irene P. McCarthy
Irene P. McCarthy
Chief Executive Officer

Date: August 5, 2021

Exhibit 10.1

THIS WARRANT AND THE ORDINARY SHARES ISSUED UPON ITS EXERCISE ARE SUBJECT TO THE RESTRICTIONS ON TRANSFER SET FORTH IN SECTION 5 OF THIS WARRANT

Warrant No.

Number of Shares:
(subject to adjustment)

Date of Issuance:

STEALTH BIOTHERAPEUTICS CORP

Ordinary Share Purchase Warrant

(Void after)

STEALTH BIOTHERAPEUTICS CORP, an exempted company incorporated in the Cayman Islands with company number 165223 (the "Company"), for value received, hereby certifies that MORNINGSIDE VENTURE (I) INVESTMENTS LIMITED, a company organized and existing under the laws of the British Virgin Islands, or its registered assigns (the "Registered Holder"), is entitled, subject to the terms and conditions set forth below, to purchase from the Company, at any time or from time to time on or after the date of issuance and on or before 5:00 p.m. (Boston time) on . Ordinary Shares, each with a nominal or par value of US$0.0003, of the Company ("Ordinary Shares"), at a purchase price of $ per share. The shares purchasable upon exercise of this Warrant, and the purchase price per share, each as adjusted from time to time pursuant to the provisions of this Warrant, are hereinafter referred to as the "Warrant Shares" and the "Purchase Price," respectively.

1. Exercise.

(a) Exercise for Cash. The Registered Holder may, at its option, elect to exercise this Warrant, in whole or in part and at any time or from time to time, by surrendering this Warrant, with the purchase form appended hereto as Exhibit I duly executed by or on behalf of the Registered Holder, at the principal office of the Company, or at such other office or agency as the Company may designate, accompanied by payment in full, in lawful money of the United States, of the Purchase Price payable in respect of the number of Warrant Shares purchased upon such exercise.

(b) Cashless Exercise.

(i) The Registered Holder may, at its option, elect to exercise this Warrant, in whole or in part and at any time or from time to time, on a cashless basis, by surrendering this Warrant, with the purchase form appended hereto as Exhibit I duly executed by or on behalf of the Registered Holder, at the principal office of the Company, or at such other office or agency as the Company may designate, by canceling a portion of this Warrant in payment of the Purchase Price payable in respect of the number of Warrant Shares purchased upon such exercise. In the event of an exercise pursuant to this subsection 1(b), the number of

Warrant Shares issued to the Registered Holder shall be determined according to the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where: X = the number of Warrant Shares that shall be issued to the Registered Holder;

Y = the number of Warrant Shares for which this Warrant is being exercised (which shall include both the number of Warrant Shares issued to the Registered Holder and the number of Warrant Shares subject to the portion of the Warrant being cancelled in payment of the Purchase Price);

A = the Fair Market Value (as defined below) of one Ordinary Share; and

B = the Purchase Price then in effect.

(ii) The Fair Market Value per Ordinary Share shall be determined as follows:

(1) If the Ordinary Shares are listed on a national securities exchange or another nationally recognized trading system as of the Exercise Date, the Fair Market Value per Ordinary Share shall be deemed to be the average of the high and low reported sale prices per Ordinary Share thereon on the trading day immediately preceding the Exercise Date.

(2) If the Ordinary Shares are not listed on a national securities exchange or another nationally recognized trading system as of the Exercise Date, the Fair Market Value per Ordinary Share shall be deemed to be the amount most recently determined by the Board of Directors of the Company (the "Board") to represent the fair market value per Ordinary Share (including without limitation a determination for purposes of granting Ordinary Shares options or issuing Ordinary Shares under any plan, agreement or arrangement with employees of the Company); and, upon request of the Registered Holder, the Board (or a representative thereof) shall, as promptly as reasonably practicable but in any event not later than 10 days after such request, notify the Registered Holder of the Fair Market Value per Ordinary Share and furnish the Registered Holder with reasonable documentation of the Board's determination of such Fair Market Value. Notwithstanding the foregoing, if the Board has not made such a determination within the three-month period prior to the Exercise Date, then (A) the Board shall make, and shall provide or cause to be provided to the Registered Holder notice of, a determination of the Fair Market Value per Ordinary Share within 15 days of a request by the Registered Holder that it do so, and (B) the exercise of this Warrant pursuant to this subsection 1(b) shall be delayed until such determination is made and notice thereof is provided to the Registered Holder.

(c) Exercise Date. Each exercise of this Warrant shall be deemed to have been effected immediately prior to the close of business on the day on which this Warrant shall have been surrendered to the Company as provided in subsection 1(a) or 1(b) above (the "Exercise Date"). At such time, the person or persons in whose name or names any certificates for Warrant Shares shall be issuable upon such exercise as provided in subsection 1(d) below shall be deemed to have become the holder or holders of record of the Warrant Shares represented by such certificates.

(d) Company Actions Upon Exercise. As soon as practicable after the exercise of this Warrant in whole or in part, and in any event within 10 days thereafter, the Company, at its expense, will:

(i) cause the Register of Members of the Company to be updated to reflect the issuance of the Ordinary Shares so issued to the Registered Holder and provide the Holder a certified copy of an extract of the register of members reflecting the Ordinary Shares so issued;

(ii) pay, in lieu of any fractional share to which the Registered Holder would otherwise be entitled, cash in an amount determined pursuant to Section 3 hereof; and

(iii) in case such exercise is in part only, issue a new warrant or warrants (dated the date hereof) of like tenor, calling in the aggregate on the face or faces thereof for the number of Warrant Shares equal (without giving effect to any adjustment therein) to the number of such shares called for on the face of this Warrant minus the number of Warrant Shares for which this Warrant was so exercised (which, in the case of an exercise pursuant to subsection 1(b), shall include both the number of Warrant Shares issued to the Registered Holder pursuant to such partial exercise and the number of Warrant Shares subject to the portion of the Warrant being cancelled in payment of the Purchase Price).

2. Adjustments.

(a) Adjustment for Share Splits and Combinations. If the Company shall at any time or from time to time after the date on which this Warrant was first issued (or, if this Warrant was issued upon partial exercise of, or in replacement of, another warrant of like tenor, then the date on which such original warrant was first issued) (either such date being referred to as the "Original Issue Date") effect a subdivision of the outstanding Ordinary Shares, the Purchase Price then in effect immediately before that subdivision shall be proportionately decreased. If the Company shall at any time or from time to time after the Original Issue Date combine the outstanding Ordinary Shares, the Purchase Price then in effect immediately before the combination shall be proportionately increased. Any adjustment under this paragraph shall become effective at the close of business on the date the subdivision or combination becomes effective.

(b) Adjustment for Certain Dividends and Distributions. In the event the Company at any time, or from time to time after the Original Issue Date shall make or issue, or fix a record date for the determination of holders of Ordinary Shares entitled to receive, a dividend or other distribution payable in additional Ordinary Shares, then and in each such event

the Purchase Price then in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the Purchase Price then in effect by a fraction:

(1) the numerator of which shall be the total number of Ordinary Shares issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(2) the denominator of which shall be the total number of Ordinary Shares issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of Ordinary Shares issued in payment of such dividend or distribution;

provided, however, that if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the Purchase Price shall be recomputed accordingly as of the close of business on such record date and thereafter the Purchase Price shall be adjusted pursuant to this paragraph as of the time of actual payment of such dividends or distributions.

(c) Adjustment in Number of Warrant Shares. When any adjustment is required to be made in the Purchase Price pursuant to subsections 2(a) or 2(b), the number of Warrant Shares purchasable upon the exercise of this Warrant shall be changed to the number determined by dividing (i) an amount equal to the number of shares issuable upon the exercise of this Warrant immediately prior to such adjustment, multiplied by the Purchase Price in effect immediately prior to such adjustment, by (ii) the Purchase Price in effect immediately after such adjustment.

(d) Adjustments for Other Dividends and Distributions. In the event the Company at any time or from time to time after the Original Issue Date shall make or issue, or fix a record date for the determination of holders of Ordinary Shares entitled to receive, a dividend or other distribution payable in securities of the Company (other than Ordinary Shares) or in cash or other property (other than regular cash dividends paid out of earnings or earned surplus, determined in accordance with generally accepted accounting principles), then and in each such event provision shall be made so that the Registered Holder shall receive upon exercise hereof, in addition to the number of Ordinary Shares issued hereunder, the kind and amount of securities of the Company, cash or other property which the Registered Holder would have been entitled to receive had this Warrant been exercised on the date of such event and had the Registered Holder thereafter, during the period from the date of such event to and including the Exercise Date, retained any such securities receivable during such period, giving application to all adjustments called for during such period under this Section 2 with respect to the rights of the Registered Holder.

(e) Adjustment for Reorganization. If there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Company in which the Ordinary Shares are converted into or exchanged for securities, cash or other property (other than a transaction covered by subsections 2(a), 2(b) or 2(d)) (collectively, a "Reorganization"), then, following such Reorganization, the Registered Holder shall receive upon exercise hereof the kind

and amount of securities, cash or other property which the Registered Holder would have been entitled to receive pursuant to such Reorganization if such exercise had taken place immediately prior to such Reorganization. In any such case, appropriate adjustment (as determined in good faith by the Board) shall be made in the application of the provisions set forth herein with respect to the rights and interests thereafter of the Registered Holder, to the end that the provisions set forth in this Section 2 (including provisions with respect to changes in and other adjustments of the Purchase Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities, cash or other property thereafter deliverable upon the exercise of this Warrant.

(f) Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Purchase Price pursuant to this Section 2, the Company at its expense shall, as promptly as reasonably practicable but in any event not later than 10 days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to the Registered Holder a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property for which this Warrant shall be exercisable and the Purchase Price) and showing in detail the facts upon which such adjustment or readjustment is based. The Company shall, as promptly as reasonably practicable after the written request at any time of the Registered Holder (but in any event not later than 10 days thereafter), furnish or cause to be furnished to the Registered Holder a certificate setting forth (i) the Purchase Price then in effect and (ii) the number of Ordinary Shares and the amount, if any, of other securities, cash or property which then would be received upon the exercise of this Warrant.

3. Fractional Shares. The Company shall not be required upon the exercise of this Warrant to issue any fractional shares, but shall pay the value thereof to the Registered Holder in cash on the basis of the Fair Market Value per Ordinary Share, as determined pursuant to subsection 1(b)(ii) above.

4. Investment Representations. The initial Registered Holder represents and warrants to the Company as follows:

(a) Investment. It is acquiring the Warrant, and (if and when it exercises this Warrant) it will acquire the Warrant Shares, for its own account for investment and not with a view to, or for sale in connection with, any distribution thereof, nor with any present intention of distributing or selling the same; and the Registered Holder has no present or contemplated agreement, undertaking, arrangement, obligation, indebtedness or commitment providing for the disposition thereof.

(b) Accredited Investor. The Registered Holder is an "accredited investor" as defined in Rule 501(a) under the Securities Act of 1933, as amended (the “Act”).

(c) Experience. The Registered Holder has made such inquiry concerning the Company and its business and personnel as it has deemed appropriate; and the Registered Holder has sufficient knowledge and experience in finance and business that it is capable of evaluating the risks and merits of its investment in the Company.

5. Transfers, etc.

(a) This Warrant and the Warrant Shares shall not be sold or transferred unless either (i) they first shall have been registered under the Act, or (ii) the Company first shall have been furnished with an opinion of legal counsel, reasonably satisfactory to the Company, to the effect that such sale or transfer is exempt from the registration requirements of the Act. Notwithstanding the foregoing, no registration or opinion of counsel shall be required for (i) a transfer by a Registered Holder which is an entity to a wholly owned subsidiary of such entity, a transfer by a Registered Holder which is a partnership to a partner of such partnership or a retired partner of such partnership or to the estate of any such partner or retired partner, or a transfer by a Registered Holder which is a limited liability company to a member of such limited liability company or a retired member or to the estate of any such member or retired member, provided that the transferee in each case agrees in writing to be subject to the terms of this Section 5, or (ii) a transfer made in accordance with Rule 144 under the Act.

(b) Each certificate representing Warrant Shares shall bear a legend substantially in the following form:

> "The securities represented by this certificate have not been registered under the Securities Act of 1933, as amended, and may not be offered, sold or otherwise transferred, pledged or hypothecated unless and until such securities are registered under such Act or an opinion of counsel satisfactory to the Company is obtained to the effect that such registration is not required."

The foregoing legend shall be removed from the certificates representing any Warrant Shares, at the request of the holder thereof, at such time as (i) a period of at least one year, as determined in accordance with paragraph (d) of Rule 144 under the Act, has elapsed since the later of the date the Warrant Shares were acquired from the Company or an affiliate of the Company, or (ii) the Warrant Shares become eligible for resale pursuant to Rule 144(b)(1)(i) under the Act.

(c) The Company will maintain a register containing the name and address of the Registered Holder of this Warrant. The Registered Holder may change its address as shown on the warrant register by written notice to the Company requesting such change.

(d) Subject to the provisions of Section 5 hereof, this Warrant and all rights hereunder are transferable, in whole or in part, upon surrender of this Warrant with a properly executed assignment (in the form of Exhibit II hereto) at the principal office of the Company (or, if another office or agency has been designated by the Company for such purpose, then at such other office or agency).

6. Notices of Record Date, etc. In the event:

(a) the Company shall take a record of the holders of its Ordinary Shares (or other shares or securities at the time deliverable upon the exercise of this Warrant) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of any class or any other securities, or to receive any other right; or

(b) of any capital reorganization of the Company, any reclassification of the Ordinary Shares of the Company, any consolidation or merger of the Company with or into another corporation (other than a consolidation or merger in which the Company is the surviving entity and its Ordinary Shares are not converted into or exchanged for any other securities or property), or any transfer of all or substantially all of the assets of the Company; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Company, then, and in each such case, the Company will send or cause to be sent to the Registered Holder a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is to take place, and the time, if any is to be fixed, as of which the holders of record of Ordinary Shares (or such other shares or securities at the time deliverable upon the exercise of this Warrant) shall be entitled to exchange their Ordinary Shares (or such other shares or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up. Such notice shall be sent at least 10 days prior to the record date or effective date for the event specified in such notice.

7. Reservation of Shares. The Company will at all times reserve and keep available, solely for issuance and delivery upon the exercise of this Warrant, such number of Warrant Shares and other securities, cash and/or property, as from time to time shall be issuable upon the exercise of this Warrant.

8. Exchange or Replacement of Warrants.

(a) Upon the surrender by the Registered Holder, properly endorsed, to the Company at the principal office of the Company, the Company will, subject to the provisions of Section 5 hereof, issue and deliver to or upon the order of the Registered Holder, at the Company's expense, a new Warrant or Warrants of like tenor, in the name of the Registered Holder or as the Registered Holder (upon payment by the Registered Holder of any applicable transfer taxes) may direct, calling in the aggregate on the face or faces thereof for the number of Ordinary Shares (or other securities, cash and/or property) then issuable upon exercise of this Warrant.

(b) Upon receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and (in the case of loss, theft or destruction) upon delivery of an indemnity agreement (with surety if reasonably required) in an amount reasonably satisfactory to the Company, or (in the case of mutilation) upon surrender and cancellation of this Warrant, the Company will issue, in lieu thereof, a new Warrant of like tenor.

9. Notices. All notices and other communications from the Company to the Registered Holder in connection herewith shall be mailed by certified or registered mail, postage prepaid, or sent via a reputable nationwide overnight courier service guaranteeing next business day delivery, to the address last furnished to the Company in writing by the Registered Holder. All notices and other communications from the Registered Holder to the Company in connection herewith shall be mailed by certified or registered mail, postage prepaid, or sent via a reputable

nationwide overnight courier service guaranteeing next business day delivery, to the Company at its principal office set forth below. If the Company should at any time change the location of its principal office to a place other than as set forth below, it shall give prompt written notice to the Registered Holder and thereafter all references in this Warrant to the location of its principal office at the particular time shall be as so specified in such notice. All such notices and communications shall be deemed delivered (i) two business days after being sent by certified or registered mail, return receipt requested, postage prepaid, or (ii) one business day after being sent via a reputable nationwide overnight courier service guaranteeing next business day delivery.

10. No Rights as Shareholder. Until the exercise of this Warrant, the Registered Holder shall not have or exercise any rights by virtue hereof as a shareholder of the Company. Notwithstanding the foregoing, in the event (i) the Company effects a split of the Ordinary Shares by means of a share dividend and the Purchase Price of and the number of Warrant Shares are adjusted as of the date of the distribution of the dividend (rather than as of the record date for such dividend), and (ii) the Registered Holder exercises this Warrant between the record date and the distribution date for such share dividend, the Registered Holder shall be entitled to receive, on the distribution date, the share dividend with respect to the Ordinary Shares acquired upon such exercise, notwithstanding the fact that such shares were not outstanding as of the close of business on the record date for such share dividend.

11. Amendment or Waiver. Any term of this Warrant may be amended or waived only by an instrument in writing signed by the Company and the Registered Holder. No waivers of any term, condition or provision of this Warrant, in any one or more instances, shall be deemed to be, or construed as, a further or continuing waiver of any such term, condition or provision.

12. Section Headings. The section headings in this Warrant are for the convenience of the parties and in no way alter, modify, amend, limit or restrict the contractual obligations of the parties.

13. Governing Law. This Warrant will be governed by and construed in accordance with the internal laws of the Commonwealth of Massachusetts (without reference to the conflicts of law provisions thereof).

14. Facsimile Signatures. This Warrant may be executed by facsimile signature.

EXECUTED as of the Date of Issuance indicated above.

STEALTH BIOTHERAPEUTICS CORP

By: _____

Name:

Title:

AGREED AND ACKNOWLEDGED:

MORNINGSIDE VENTURE (I) INVESTMENTS LIMITED

By: _____

Name:

Title:

By: _____

Name:

Title:

EXHIBIT I

PURCHASE FORM

To:_____ Dated:_____

The undersigned, pursuant to the provisions set forth in the attached Warrant (No. ___), hereby elects to purchase *(check applicable box)*:

☐ ____ shares of the Ordinary Shares of **STEALTH BIOTHERAPEUTICS CORP** covered by such Warrant; or

☐ the maximum number of Ordinary Shares covered by such Warrant pursuant to the cashless exercise procedure set forth in subsection 1(b).

The undersigned herewith makes payment of the full purchase price for such shares at the price per share provided for in such Warrant. Such payment takes the form of *(check applicable box or boxes)*:

☐ $_____ in lawful money of the United States; and/or

☐ the cancellation of such portion of the attached Warrant as is exercisable for a total of _____ Warrant Shares (using a Fair Market Value of $_____ per share for purposes of this calculation) ; and/or

☐ the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 1(b), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 1(b).

Signature: _____

Address: _____

_____

EXHIBIT II

ASSIGNMENT FORM

FOR VALUE RECEIVED, _____ hereby sells, assigns and transfers all of the rights of the undersigned under the attached Warrant (No. ____) with respect to the number of Ordinary Shares of STEALTH BIOTHERAPEUTICS CORP covered thereby set forth below, unto:

Name of Assignee	Address	No. of Shares

Dated: _____ Signature: _____

STEALTH BIOTHERAPEUTICS REPORTS SECOND QUARTER 2021 FINANCIAL RESULTS AND RECENT BUSINESS HIGHLIGHTS

Barth NDA submission expected by month-end

Alignment reached with the Division of Rare Disease and Medical Genetics (DRDMG) on design of Phase 3 trial in patients with mitochondrial disease caused by nuclear DNA mutations (nPMD); year-end trial initiation expected

Phase 2 geographic atrophy data on track for first half of 2022;
intravitreal (IVT) formulation development progressing

Clinical expansion efforts underway for elamipretide in Duchenne and Friedreich's ataxia; pipeline development ongoing with SBT-272, SBT-550, and other early-stage compounds

Management to host conference call today at 8:30am ET

BOSTON –August 5, 2021 – Stealth BioTherapeutics Corp (Nasdaq:MITO), a clinical-stage biotechnology company focused on the discovery, development, and commercialization of novel therapies for diseases involving mitochondrial dysfunction, today reported financial results for the three months ended June 30, 2021 and announced recent business highlights.

"We continue to make important progress on developing elamipretide and our deep pipeline of novel mitochondrial-targeted compounds to address rare and devastating diseases of mitochondrial dysfunction," said Reenie McCarthy, Chief Executive Officer at Stealth. "On the regulatory front, we have decided to submit our NDA for Barth syndrome this month, in keeping with our commitment to the Barth syndrome community, members of which recently met with the FDA to educate the Agency about the community's willingness to accept some degree of uncertainty of clinical benefit in considering treatment options for their ultra-rare and serious disease. We are also pleased to have reached alignment with DRDMG regarding our Phase 3 trial for patients with nPMD who responded to therapy in our previous primary mitochondrial myopathy trial. We are continuing to progress work on an intravitreal formulation for geographic atrophy ahead of Phase 2 data read-out early next year and to expand our clinical and preclinical development efforts in Friedreich's ataxia, cardiomyopathy associated with Duchenne muscular dystrophy, and our burgeoning neurology franchise."

Second Quarter 2021 and Recent Highlights

Barth syndrome. The Company has had multiple recent communications with senior Food and Drug Administration (FDA) officials at the Office of Cardiology, Hematology, Endocrinology and Nephrology and at the Division of Cardiology and Nephrology (DCN) regarding its Barth syndrome program following the April 2021 meeting during which DCN recommended another Phase 3 trial in which eligible patients remaining in open label extension (OLE) and additional patients would be randomized to elamipretide or placebo until a minimum number of clinical events occur (i.e., events leading to treatment failure). After further considering this recommendation, FDA advised that additional clinical trial data from the patients remaining on OLE is unlikely to add meaningfully to the evidence to support an NDA. Due to the ultra-rare nature of Barth syndrome, neither the Company nor the FDA to date has been able to identify a feasible trial design to generate additional data, and the Company has accordingly decided to submit its NDA. The NDA will include data from the SPIBA-001 Phase 3 Retrospective Natural History Control Trial, which met its primary and most secondary endpoints. The NDA will also include data from the TAZPOWER Phase 2/3 Clinical Trial, in which short-term therapy during the double-blind placebo-controlled crossover portion of the trial, despite not meeting the

primary endpoints, resulted in improvements in metabolites that have been associated with clinical outcomes in chronic heart failure, and in which long-term therapy during OLE showed significant improvements in echocardiographic measures of cardiac function. The Company considers these data reasonably likely to predict improvements in morbidity or mortality. Long term therapy also improved clinical endpoints including exercise tolerance, strength, and physician- and patient- reported outcomes, as well as biomarker endpoints diagnostic of the disease. FDA has advised the Company that it does not believe the existing clinical data would support NDA review. The Company believes the data could support NDA review and approval on either an accelerated or full basis, although there can be no assurance that the FDA will file the NDA. Under the Development Funding Agreement announced in November 2020, the Company is entitled to receive an additional $5 million milestone payment upon Barth NDA submission.

- In May 2021, the Company announced that the European Medicines Agency (EMA) has granted orphan drug designation (ODD) for elamipretide for the treatment of Barth syndrome. The Company is continuing to advance toward an anticipated Marketing Authorization Application (MAA) to the EMA's Committee for Medicinal Products for Human Use (CHMP). These efforts are supportive of the Company's plans to partner European rights to Barth to a partner best suited to ensure that European patients affected by this disease will have timely access to therapy, if approved.

- In May 2021, a moderated poster presentation showing that long-term treatment with elamipretide improved cardiac function in Barth syndrome was presented at the American College of Cardiology's 2021 Scientific Session and Expo.

- **Geographic atrophy.** Data presented at the Association for Research in Vision and Ophthalmology (ARVO) in May 2021 demonstrated that in the Company's Phase 1 ReCLAIM clinical trial, the relative health of the ellipsoid zone, a mitochondria-rich portion of the retina, was associated with patients whose vision improved after 6 months of elamipretide therapy. Data from ReCLAIM-2, the Company's fully-enrolled Phase 2 clinical trial in patients with geographic atrophy, is expected during the first half of 2022.

- **nPMD**. In July 2021, the Company reached alignment with DRDMG on the design of its planned Phase 3 clinical trial in patients with mitochondrial disease associated with pathogenic nDNA mutations (nPMD), which is the prespecified subgroup in which a favorable response was observed in MMPOWER-3. The Company plans to initiate this Phase 3 global trial by year-end.

- **Cardiomyopathy franchise expansion**. Based on feedback received from the FDA, the investigator has modified the design of the planned Phase 2a clinical trial in patients with Friedreich's ataxia from an open-label to a high dose versus low dose trial, and enrollment has been increased from a proposed 10 to 16 subjects. Trial initiation is on track for the second half of this year. The Company is also continuing to plan its Phase 2/3 trial in subjects with cardiomyopathy associated with Duchenne muscular dystrophy, and has been invited to participate in the Cardiac Working Group working collaboratively with the Duchenne/Becker community to update Guidance for Industry. The Company plans to request a pre-IND meeting for this development initiative to be held by year-end.

Financial updates. In April 2021, the Company amended its Term Loan Facility with Hercules Capital, Inc. to defer ongoing amortization payments and extend the maturity until January 2022. In May 2021, the Company announced additional commitments of $30.0 million under the

Development Funding Agreement with Morningside Venture (I) Investments Limited ("Morningside"). .

Key Upcoming Milestones

- **Barth:** NDA submission is planned during August 2021.
- **Geographic atrophy:** Data from ReCLAIM-2 is expected during the second quarter of 2022. The Company also expects to have further data regarding feasibility of its ongoing intravitreal formulation development efforts commensurate with Phase 2 data read-out.
- **nPMD:** Initiation of a Phase 3 clinical trial in the enriched population of patients with nPMD who responded to elamipretide therapy in the Company's MMPOWER-3 trial is expected by year end.
- **Expansion of cardiomyopathy franchise:** A Phase 2a investigator-initiated open-label clinical trial assessing elamipretide in a cohort of patients affected by visual decline and/or cardiomyopathy associated with Friedreich's ataxia is expected to commence by year-end. The Company anticipates that data from this trial will help inform pivotal trial design. A pre-IND meeting with the FDA to discuss protocol design for a trial to evaluate elamipretide in patients with cardiomyopathy associated with Duchenne muscular dystrophy is expected during the second half of 2021.
- **Expansion of neurology franchise:** The Company is continuing to advance its neurology pipeline expansion efforts with SBT-272 and a group of compounds from its SBT-550 series.

Financial Results for the three months ended June 30, 2021

Cash Position: Cash and cash equivalents were $30.8 million at June 30, 2021, compared to $32.8 million at December 31, 2020. In May 2021, the Company received $8.0 million under the Development Funding Agreement with Morningside and will receive an additional $22.0 million during the fourth quarter of 2021. The Company is also eligible to receive an additional $5.0 million upon submission of its Barth NDA, which is currently anticipated to be in August 2021. The Company expects that its cash, cash equivalents and investments as of June 30, 2021, together with the $27.0 million in expected proceeds to be received under the Development Funding Agreement, will be sufficient to enable it to fund its planned operations into the second quarter of 2022.

Research and Development (R&D) Expenses: R&D expenses were $5.9 million for the three months ended June 30, 2021, compared to $7.4 million for the same period in 2020. The decrease was due to a net decrease of $2.2 million in clinical costs primarily driven by the closeout of our Primary Mitochondrial Myopathy development efforts offset in part by a $0.5 million increase in preclinical costs, an increase of $0.1 million in employee related costs and an increase of $0.1 million in manufacturing costs.

General and Administrative (G&A) Expenses: G&A expenses were $5.1 million for the three months ended June 30, 2021, compared to $4.5 million for the same period in 2020. The increase was due to a $0.4 million increase in professional services, $0.3 million increase in precommercial costs and $0.1 million increase in costs of insurance, offset by $0.2 million decrease in facility related costs.

Other Income (Expense): Other expense was $7.4 million for the three months ended June 30, 2021, compared to other expense of $0.4 million for the same period in 2020. Other expense in 2021 consisted of a $7.2 million loss due to the change in fair value of the derivative liability and $0.2 million in interest expense. Other expense in 2020 consisted of $0.4 million in interest expense.

Net Loss: Net loss was $18.4 million, or $0.03 basic and diluted net loss per ordinary share, for the three months ended June 30, 2021, as compared to $12.4 million, or $0.02 basic and diluted net loss per ordinary share, for the same period in 2020.

Conference Call

Management will host a conference call today at 8:30 am ET to discuss the financial results and provide a general business update. The call can be accessed by dialing (877)-407-0989 (domestic) or (201)-389-0921 (international) and referencing conference ID 13717131. A live audio webcast of the event can be accessed by visiting the Investors & News section of Stealth's Investor website, https://investor.stealthbt.com/. A replay of the webcast will be archived on Stealth's website for 30 days following the event.

About Stealth

We are a clinical-stage biotechnology company focused on the discovery, development, and commercialization of novel therapies for diseases involving mitochondrial dysfunction. Mitochondria, found in nearly every cell in the body, are the body's main source of energy production and are critical for normal organ function. Dysfunctional mitochondria characterize a number of rare genetic diseases and are involved in many common age-related diseases, typically involving organ systems with high energy demands such as the heart, the eye, and the brain. We believe our lead product candidate, elamipretide, has the potential to treat both rare metabolic cardiomyopathies, such as Barth, Duchenne muscular dystrophy and Friedreich's ataxia, rare mitochondrial diseases entailing nuclear DNA mutations, as well as ophthalmic diseases entailing mitochondrial dysfunction, such as dry age-related macular degeneration and Leber's hereditary optic neuropathy. We are evaluating our second-generation clinical-stage candidate, SBT-272, and our new series of small molecules, SBT-550, for rare neurological disease indications following promising preclinical data. We have optimized our discovery platform to identify novel mitochondria-targeted compounds which may be nominated as therapeutic product candidates or utilized as mitochondria-targeted vectors to deliver other compounds to mitochondria.

Forward-looking Statements

This press release contains forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Such forward-looking statements include those regarding Stealth BioTherapeutics' plans, strategies and expectations for its preclinical and clinical advancement of its drug development programs, including its ongoing clinical trials of elamipretide and planned clinical trial of SBT-272; its plans for the potential submission of an NDA; its expectations regarding regulatory interactions, including its belief that the existing data and the data from the withdrawal protocol may provide sufficient evidence to support NDA review; the potential benefits of Stealth BioTherapeutics' product candidates; its key milestones for 2021 and 2022; and its plans regarding future data presentations. Statements that are not historical facts, including statements about Stealth BioTherapeutics' beliefs, plans and expectations, are forward-looking statements. The words "anticipate," "expect," "hope," "plan," "potential," "possible," "will," "believe," "estimate," "intend," "may," "predict," "project," "would" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Stealth BioTherapeutics may not actually achieve the plans, intentions or expectations disclosed in these forward-looking statements, and you should not place undue reliance on these forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements as a result of known and unknown risks, uncertainties and other important factors, including: Stealth BioTherapeutics' ability to obtain additional funding and to continue as a going concern; the impact of the COVID-19 pandemic; the ability to successfully demonstrate the efficacy and safety of Stealth BioTherapeutics' product candidates and future product candidates; the preclinical and clinical results for Stealth BioTherapeutics' product

candidates, which may not support further development and marketing approval; the potential advantages of Stealth BioTherapeutics' product candidates; the content and timing of decisions made by the FDA, the EMA or other regulatory authorities, investigational review boards at clinical trial sites and publication review bodies, which may affect the initiation, timing and progress of preclinical studies and clinical trials of Stealth BioTherapeutics product candidates; the possibility that the FDA will not file the planned Barth NDA following the Company's anticipated submission of it; Stealth BioTherapeutics' ability to obtain and maintain requisite regulatory approvals and to enroll patients in its planned clinical trials; unplanned cash requirements and expenditures; competitive factors; Stealth BioTherapeutics' ability to obtain, maintain and enforce patent and other intellectual property protection for any product candidates it is developing; and general economic and market conditions. These and other risks are described in greater detail under the caption "Risk Factors" included in the Stealth BioTherapeutics' most recent Annual Report on Form 20-F filed with the Securities and Exchange Commission ("SEC"), as well as in any future filings with the SEC. Forward-looking statements represent management's current expectations and are inherently uncertain. Except as required by law, Stealth BioTherapeutics does not undertake any obligation to update forward-looking statements made by us to reflect subsequent events or circumstances.

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STEALTH BIOTHERAPEUTICS CORP

Condensed Consolidated Statements of Operations

(in thousands, except share and per share data)
(unaudited)

	Three months ending June 30,		Six months ending June 30,	
	2021	2020	2021	2020
Operating expenses:				
Research and development	$ 5,913	$ 7,405	$ 12,012	$ 17,252
General and administrative	5,083	4,523	10,062	9,703
Total operating expenses	10,996	11,928	22,074	26,955
Loss from operations	(10,996)	(11,928)	(22,074)	(26,955)
Other income (expense):				
Gain (Loss) from remeasurement of derivative liability	(7,223)	—	(3,535)	—
Interest income	1	14	2	137
Interest expense and other	(188)	(455)	(488)	(1,091)
Total other income (expense)	(7,410)	(441)	(4,021)	(954)
Net loss attributable to ordinary shareholders	$ (18,406)	$ (12,369)	$ (26,095)	$ (27,909)
Net loss per share attributable to ordinary shareholders — basic and diluted	$ (0.03)	$ (0.02)	$ (0.04)	$ (0.06)
Weighted average ordinary shares used in net loss per share attributable to ordinary shareholders — basic and diluted	674,737,590	575,390,241	663,833,037	506,055,526

STEALTH BIOTHERAPEUTICS CORP

Condensed Consolidated Balance Sheets
(in thousands)
(unaudited)

	June 30, 2021	December 31, 2020
Assets		
Current assets:		
Cash and cash equivalents	$ 30,766	$ 32,787
Prepaid expenses and other current assets	844	2,253
Total current assets	31,610	35,040
Property and equipment, net	72	106
Deferred financing costs and other non-current assets	576	702
Total assets	$ 32,258	$ 35,848
Liabilities and shareholders' deficit		
Current liabilities:		
Accounts payable	$ 2,566	$ 3,526
Accrued expenses and other current liabilities	5,134	7,024
Accrued interest payable	263	1,499
Current portion of debt	5,452	9,000
Total current liabilities	13,415	21,049
Long-term deferred rent, less current portion	6	16
Development derivative liability - related party	45,152	25,155
Total liabilities	58,573	46,220
Total shareholders' deficit	(26,315)	(10,372)
Total liabilities and shareholders' deficit	$ 32,258	$ 35,848