UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of report (Date of earliest event reported): January 11, 2021

Bellerophon Therapeutics, Inc.

(Exact Name of Registrant as Specified in Charter)

(Commission

File Number)

Delaware

(State or Other Jurisdiction of Incorporation)

184 Liberty Corner Road, Suite 302

Warren, New Jersey

(Address of Principal Executive Offices)

(Zip Code)

7059

Registrant's telephone number, including area code: (908) 574-4770

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

□ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Securities registered pursuant to Section 12(b) of the Act:

Title of each class Common Stock, \$0.01 par value per share Trading Symbol(s) BLPH Name of each exchange on which registered The Nasdaq Capital Market

47-3116175

(IRS Employer

Identification No.)

□ Emerging growth company

□ If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 7.01. Regulation FD Disclosure.

Bellerophon Therapeutics, Inc. has prepared an investor presentation to be presented to members of the investment community, a copy which is attached to this Current Report on Form 8-K as Exhibit 99.1.

In accordance with General Instruction B.2 on Form 8-K, the information set forth in this Item 7.01 and the investor presentation attached to this report as Exhibit 99.1 is "furnished" and shall not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that Section, nor shall such information be deemed incorporated by reference in any filing under the Securities Exchange Act of 1934, as amended, or the Securities Act of 1933, as amended.

The investor presentation attached hereto as Exhibit 99.1 contains certain statements that may be deemed to be "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. In some cases, these forward-looking statements can be identified by the use of forward-looking terminology, including the terms "believes," "estimates," "continues," "contemplates," "potential," "predicts," "projects," "targets," "anticipates," "expects," "plans," "intends," "may," "could," "might," "will," "should," "approximately" or, in each case, their negative or other variations thereon or comparable terminology, although not all forward-looking statements contain these words.

By their nature, forward-looking statements involve risks and uncertainties because they relate to events, competitive dynamics, and healthcare, regulatory and scientific developments and depend on the economic circumstances that may or may not occur in the future or may occur on longer or shorter timelines than anticipated. Although we believe that we have a reasonable basis for each forward-looking statement contained in the presentation, we caution you that forward-looking statements are not guarantees of future performance and that our actual results of operations, financial condition and liquidity, and the development of the industry in which we operate may differ materially from the forward-looking statements contained in the presentation as a result of, among other factors, the factors referenced in the "Risk Factors" section of our Annual Report on Form 10-K filed with the Securities and Exchange Commission on April 6. 2020, and the "Risk Factors" sections of our Quarterly Reports on Form 10-Q filed with the Securities and Exchange Commission on May 11, 2020, August 5, 2020 and November 5, 2020, respectively. In addition, even if our results of operations, financial condition and liquidity, and the development of the industry in which we operate are consistent with the forward-looking statements contained in the presentation, they may not be predictive of results or developments in future periods. Any forward-looking statements to reflect events or circumstances after the date of the presentation, except as required by law.

You should read carefully our "Cautionary Note Regarding Forward-Looking Statements" and the factors described in the "Risk Factors" sections of our Annual Report on Form 10-K and Quarterly Reports on Form 10-Q to better understand the risks and uncertainties inherent in our business.

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Item 9.01. Financial Statements and Exhibits.

(d) Exhibits:

Exhibit No.

Investor Presentation

Description

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 hereunto duly authorized.

BELLEROPHON THERAPEUTICS, INC.

Date: January 11, 2021

By:

/s/ Fabian Tenenbaum Name: Fabian Tenenbaum Title: Chief Executive Officer

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Forward Looking Statements

This presentation contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, contained in this presentatio statements regarding our strategy, future operations, future financial position, future revenues, projected costs, prospects, plans and objectives of management, are forward-looking state words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "potential," "will," "would," "could," "should," "continue," and similar expressions are identify forward-looking statements, although not all forward-looking statements contain these identifying words. We may not actually achieve the plans, intentions or expectations discli forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and e disclosed in the forward-looking statements we make due to a number of important factors, including risks and uncertainties relating to: INDpulse® not proving to be an effective treatment fi or approved for marketing by the FDA, the timing and outcomes of our ongoing and expected clinical trials for our product candidates; our ability to obtain, maintain and enforce intellectual property rights; competition; our reliance on third parties; our ability to obtain necessary financing; and those i discussed in the "Risk Factors" section and elsewhere in our most recent Form ID-K and other periodic filings we make with the SEC.

All forward-looking statements contained in this presentation reflect our current views with respect to future events. We assume no obligation, except as required by applicable law, to forward-looking statements publicly, or to update the reasons why actual results could differ materially from those anticipated in the forward-looking statements, even if new informatic available in the future.

Bellerophon Therapeutics (BLPH) Company Profile



Highly Experienced Leadership Team

Jonathan Peacock Chairman	10 years experience as CFO at Amgen and Novartis Pharma	AMGEN	McKinsey&Company 🤾	b NOVARTIS ри
Fabian Tenenbaum Chief Executive Officer	15 years of executive-level experience in finance, 8D and operations	anterios	Unilever	SYNERON CANDELA
Wassim Fares, M.D., MSc Chief Medical Officer	20 years experience in clinical research specializing in cardio-pulmonary diseases	Juf	ACTELION	Yale Uni School o
Peter Fernandes Chief Regulatory & Safety Officer	25 years experience in global regulatory affairs specializing in respiratory products	IKARIA	U NOVARTI	5 Gill Boehrin
Assaf Korner Chief Financial Officer	18 years of financial experience in medical device and life science companies	SYNEROI CANDEL	KPM	G Uniferent
Parag Shah, Ph.D. VP, Business Operations	15 years experience in pharmaceutical product development		IKARIA	Pfizer
Amy Edmonds VP, Clinical Operations & Administration	20 years experience global clinical operations and training	IKARIA	Pfizer	Ceg
Martin Dekker VP, Device Engineering & Manufacturing	17 years experience in new product development and launch		SPACEL HEALTHCAR	Α Η 5 ε
				2021 Company Pres

Development Pipeline

	PRE-CLINICAL	PHASE 1	PHASE 2	PHASE 3	NDA	Key Milestones
						Phase 2 Hemodynamic Trial Completed Positive results in Feb 2020
fILD Fibrotic Interstitial Lung Disease at rick of Pulmonary Hypertansion						Phase 2 Chronic Trial Complete Positive Cohort 1 results in Jan 2019 Positive Cohort 2 results in Dec 2019
riak ur t unnonur y ripper cenaren						Phase 3 REBUILD Trial First patient enrolled in November 2020
PH-COPD/SARC						PH-SARC Phase 2 hemodynamic results expected 2021
Pulmonary Hypertension associated with COPD/SARC						PH-COPD Multiple Phase 2 studies completed Phase 2b trial design finalized
COVID-19 COVID-19 & Infectious Lung Diseases						COVID-19 180 patients treated via EAP Phase 3 COViNOX trial initiated in July 2020; based on interim analysis
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INOpulse Delivery System Overview

Portable Delivery System Allows Chronic iND Therapy



INOpulse Delivery System

Lightweight, Portable and User Friendly



INOpulse Provides a Unique and Differentiating Mechanism of Action

Normoxic Compartment	Hypoxic Compartment	Baseline	Hypoxic pulmonary vasoconstriction prevents oxygen desaturation
		Systemic Vasodilators	Systemic vasodilators can reverse hypoxic vasoconstriction leading to ventilation/perfusion (V/ mismatch and arterial D2 desaturation
	V.	INOpulse	Providing iND early in the inspiratory phase allows for targeted vasodilation of only the well vent alveoli thereby preventing V/Q mismatch and O2 desaturation
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Fibrotic Interstitial Lung Disease (fILD)

A Significant Unmet Medical Need





- Fibrotic Interstitial Lung Disease (fILD) is a bro category of diffuse lung diseases characterized variable amounts of inflammation and fibrosis
- Idiopathic Pulmonary Fibrosis (IPF) is the large most serious of these diseases
- Patients with fILD have thickening and scarring air sacs in the lungs, and often require supplem oxygen to maintain adequate oxygen saturation

Pulmonary Hypertension (PH) associated with fILD Significantly Reduces Survival

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Bellerophon Rivers-Lebron, Advances in Pulmonary Hypertension, 2013

- Approximately 40% of IPF patients exhibit symptoms of pulmonary hypertension at res
- Prognosis and survival are significantly worse for patients with pulmonary hypertensio
 - PH-IPF associated with 3-fold increase in risk of death compared to IPF alone
- No approved therapy for treating PH in these patients
- INDpulse has the potential to provide targeted vasodilation while avoiding concerns of \
 mismatch which have prevented current PAH systemic vasodilators to be approved for
 medical need

fILD Market Opportunity in the US



Phase 2: INOpulse Demonstrates Targeted Vasodilation in fILD

Acute Phase Data Showed Immediate Benefit of INDpulse on Vasodilation and Hemodynamics

- Significant correlation between ventilation and vasodilation, demonstrating selective vasodilation to better ventilated areas of the lung (p=0.009)
- Consistent and clinically meaningful reduction of 14% in systolic pulmonary arterial pressure (sPAP)
- Clinically meaningful improvement oxygen desaturation of 28.5% and SpO2 nadir of 5.5%



Phase 2: INOpulse Demonstrates Acute Hemodynamic Benefit in fILD

Clinically and statistically meaningful cardiopulmonary improvement on iND3D w/ cont. benefit on dose escalation



Pulmonary hemodynamics measured via right heart catheterization at baseline and following each sequential iND dose

Continuous Physical Activity Monitoring (Actigraphy) Allows Objective Assessment of Daily Physi Activity

Continuous Monitoring of Physical Activity	Movement is Categorized into Activity Intensity Levels		Provides Profile of Daily Activity
	Activity Intensity	Example activities	MODERATE
	Sedentary (<iod counts="" min)<br="">(< 1.5 METs)</iod>	 Lying Sitting Computer work 	UGHT
	Light (100 -1951 counts/min) (1.6 - 3.0 METs)	 Getting dressed Bathing/showering Light house cleaning 	Study participants spend 74 minutes per day i moderate physical activity
Study participant wears actigraphy monitor on non- dominant arm	Moderate (1952-5724 counts/min) (3.1 - 6.0 METs)	 Walking Ascending/descending stairs Housework/yardwork 	Study participants are unable to achieve vigo activity levels
Monitor continuously measures movement in acceleration units	Vigorous (>5724 counts/min) (> 6.0 METs)	Slow/fast runningIntense sport	MVPA is the sum of moderate and vigorous ac
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Phase 2 Results Suggest Clinically Meaningful Benefit in MVPA (moderate to vigorous physical ac

Phase 2 was designed as an exploratory study to identify optimal endpoints to progress into pivotal Phase 3 trial. Key findings include:

- Study participants on INOpulse (iNO3D and iNO45) maintain activity levels while study participants on placebo deteriorate across activity parameters
- Study participants on iND45 maintain PRO scores (UCSD & SGRQ) while study participants on placebo deteriorate consistent with changes in act levels
- Physical activity levels maintained during open label extension with study participants transitioning from placebo to active demonstrating revers
 from decline to maintenance
- INOpulse targeted delivery maintains oxygen saturation during exercise
- INOpulse was generally well-tolerated with no serious adverse events



Phase 2 Patient Demographics

	Cohort I (n=41)		Cohort 2 (n=44)		
	iND 30 n=23	Placebo n=18	iNO 45 n=30	Placebo n=14	
Age – years (mean, SD)	68.6 (6.45)	65.8 (13.73)	68.9 (9.95)	71.4 (5.14)	
Male (n, %)	16 (69.6%)	13 (72.2%)	15 (50.0%)	10 (71.4%)	
Intermediate to High Probability of PH (n. %)	15 (65.2%)	14 (77.8%)	18 (60.0%)	9 (64.3%)	
Baseline DLCD – % predicted (mean, SD)	30.7 (11.4)	30.4 (10.2)	35.7 (14.2)	35.3 (7.9)	
Baseline FVC – % predicted (mean, SD)	56.3 (10.2)	59.9 (18.4)	59.7 (15.9)	60.5 (15.1)	



Longitudinal Analysis Benefit on iNO in MVPA and Overall Activity

Analysis based on MMRM model to estimate therapeutic benefit through treatment period based on all available data as planned for pivo Phase 3 study



Benefit Observed in MVPA at Month 4 on iNO45

Study participants on INDpulse maintain activity levels while study participants on placebo deteriorate



Continued Benefit for Study Participants on Open Label Extension (OLE)

Study participants transitioning from placebo to active demonstrate trend reversal from deterioration to maintenance



iNO45: UCSD Shortness of Breath Questionnaire (SOBQ) Indicates Benefit in Dyspnea

Increased score indicative of worsening



iNO45: St. George's Respiratory Questionnaire (SGRQ) Indicates QOL Benefit in Multiple Measure Increased score indicative of worsening



Phase 2 Safety Summary

INOpulse was well-tolerated in Cohort 1 and Cohort 2

- Incidence of SAEs was low in both active and placebo groups and all reported as unrelated to study drug
- AEs were balanced and generally non-serious with no observable trends

	Cohort 1 ((8 weeks)	Cohort 2 (16 weeks)		
	iND 30 n=23	Placebo n=18	iND 45 n=30	Placebo n=14	
Study participants with Adverse Events	19 (82.6%)	15 (83.3%)	26 (86.7%)	9 (64.3%)	
Study participants with Serious Adverse Events	2 (8.7%)	2 (11.1%)	3 (10.0%)	3 (21.4%)	
Total Serious Adverse Events Reported	3 (D.13/study participant)	4 (D.22/study participant)	4 (0.14/study participant)	7 (D.5/study particip	
Deaths	1 (4.3%)	D	0	0	



Phase 2 Results Allow Immediate Transition into Pivotal Phase 3 Trial

FDA agreement on pivotal Phase 3 REBUILD study with MVPA as primary endpoint

Double-blind placebo-controlled study will assess study participants with fibrotic interstitial lung disease at risk of associated pulmonary hypertension

- Phase 2 Complete: Cohorts I and 2 suggest improvement in MVPA supported by other activity parameters and patient reported outcomes (Cohort 2)
- Phase 3: Pivotal REBUILD initiated with first patient enrolled in November 2020



Pulmonary Hypertension associated with Sarcoidosis (PH-Sarc)

An Orphan Unmet Medical Need

Sarcoidosis is characterized by the growth of inflammatory cells (granulomas) most commonly in the lungs or lymphatic tissues

Prevalence of sarcoidosis is estimated at 200,000 in the US with up to 30% with associated pulmonary hypertension



 have significantly reduced survival

 I-year survival
 3-year survival
 5-year survival

 PH-Sarc
 84%
 74%
 599

 Sarc
 100%
 96%
 969

Patients with associated PH

INOpulse MoA has the Potential to Provide Benefit to PH-Sarc Patients

Inhaled nitric oxide has been shown to improve hemodynamics and exercise capacity in PH-Sarc

Acute Hemodynamic Benefit on iNO			
Parameter	% Change		
mPAP	-18 ± 4		
PVR	-31 ± 5		
CO	12 ± 4		



Systemic vasodilators exacerbate hypoxic vasoconstriction and cause hypoxer

No approved therapy for treating PH in these patients

Phase 2 study designed to verify hemodynamic effect of INOpulse in PH-Sarc

- Acute dose escalation study with right heart catheterization
- Primary endpoint: change in mean PAP, PCWP, cardiac output and PVR
- Study results expected in 2021

Pulmonary Hypertension associated with Chronic Obstructive Pulmonary Disease (PH-COPD) Represents Large Unmet Medical Need



INOpulse Provides Targeted Delivery and Improves Hemodynamics and Exercise Capacity in PH-I Patients



INOpulse for the Treatment of COVID-19

FDA granted emergency expanded access for pulsatile inhaled nitric oxide for treating COVID-19

- 18D patients treated at 18 hospitals across the US under emergency expanded access
- Preliminary data demonstrated recovery rate of 73.0% and mortality rate of 6.3% at day 14 from treatment initiation
- INOpulse was well-tolerated with no safety concerns related to the therapy

COViNOX: Phase 3 randomized, placebo-controlled study initiated in July 2020

Independent data monitoring committee has completed pre-specified interim analysis based on first 100 patients

- Interim Analysis: Study halted based on assessment of a single endpoint of respiratory failure or mortality; low event rate (ID total events) resulted in limited sample size for analysis
- Next Steps: Completion of study procedures for remaining subjects and evaluation of full data set for all randomized subjects (close to 200); full data set includes multiple additional clinically important endpoints (e.g. change in clinical status, duration of hospitalization, etc.)



INOpulse Intellectual Property Protection

Patent	Status	Expiration	Description
Method of ND administration	US/EU: Issued Other Territories: Issued/Pending	Jan 2027	Covers consistent delivery of prescribed dose independent of respirato
Breath Skipping & Pulse Volume Variation	US: Issued	Sept 2025	Covers skipping breaths or modifying pulse volume to ensure consisten independent of respiratory rate
Method of Administering High Concentration NO	US/EU: Pending Other Territories: Pending	Mar 2033	Limits delivery rate of high concentration iNO to prevent safety concerr
Optimized Pulse Shape	US: Pending	Oct 2035	Covers key parameters of pulse shape
INDpulse Design	US: Issued	Apr 2028	Covers design of the INOpulse device
Tip Purge	US: Issued EU/Other Territories: Pending	Apr 2033	Covers the use tip purge to ensure purity of iND within the cannula
Triple-Lumen Cannula	US/EU: Issued Other Territories: Pending	Dec 2033	Covers accurate dose delivery and reduced $\ensuremath{NO}\xspace_2$ formation
Index valve	US/EU: Issued Other Territories: Issued/Pending	May 2029	Ensures other cartridges cannot be used with INOpulse
Orphan Drug designation for IPF provides exclusivity for years (EU)	7 years (US) and up to 10	Multiple provis coverage int	sional patent applications filed from 2017-2019 that can extend p o 2039
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Financial Summary

Amount (in millions)

Cash and Cash Equivalents	\$54.0 ^(I)
Restricted Cash	\$D .4 ⁽¹⁾
Debt	\$ Π ⁽¹⁾
Fully Diluted Shares Outstanding	12.2



Investment Highlights

Established iND Therapeutic Benefit

- Approved for acute treatment of persistent pulmonary hypertension in neonates
- Positive results from multiple Phase 2 studies support INOpulse MoA and benefit

Advanced Clinical Stage Product

INDpulse technology focused on several large unmet orphan indications

filD	PH-SARC / PH-COPD	CDVID-19 / Infectious Lung Diseases
Successful Phase 2 Proof of Concept studies in fILD	PH-Sarc: Phase 2 results expected in 2021	180 patients treated with INOpulse under expanded acces
Positive Phase 2 results for Cohorts I and 2	PH-COPD: Successful Phase 2 study completed	FDA cleared Phase 3 placebo-controlled registrational st
Pivotal Phase 3 REBUILD study initiated in 40 2020 with FDA agreement on primary endpoint	PH-COPD: Phase 2b study design finalized in agreement w/FDA	Phase 3 COViNOX study initiated in July 2020; trial halted interim analysis

Proprietary INOpulse Technology

Strong IP protection on core programs through 2033 and ability to extend coverage into 2039



