
**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
of the Securities Exchange Act of 1934**

For the month of September 2018
Commission File No.: 001-35773

REDHILL BIOPHARMA LTD.
(Translation of registrant's name into English)

21 Ha'arba'a Street, Tel Aviv, 64739, Israel
(Address of principal executive offices)

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): ___

Attached hereto and incorporated by reference herein is a press release issued by the Registrant entitled: *"RedHill Biopharma Announces Completion of Enrollment for Confirmatory Phase III Study with TALICIA® for H. pylori Infection."*

This Form 6-K is incorporated by reference into the Company's Registration Statements on Form S-8 filed with the Securities and Exchange Commission on May 2, 2013 (Registration No. 333-188286), on October 29, 2015 (Registration No. 333-207654), on July 25, 2017 (Registration No. 333-219441) and on May 23, 2018 (Registration No. 333-225122) and its Registration Statements on Form F-3 filed with the Securities and Exchange Commission on February 25, 2016 (Registration No. 333-209702) and on July 23, 2018 (Registration No. 333-226278).

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.

REDHILL BIOPHARMA LTD.
(Registrant)

Date: September 4, 2018

By: /s/ Dror Ben-Asher
Dror Ben-Asher
Chief Executive Officer

RedHill Biopharma Announces Completion of Enrollment for Confirmatory Phase III Study with TALICIA® for *H. pylori* Infection

- **Top-line results from the randomized, double-blind confirmatory Phase III study (ERADICATE Hp2 study) with TALICIA® are expected before year's end**
- **The ERADICATE Hp2 study enrolled 455 patients with confirmed *H. pylori* infection in 55 clinical sites across the U.S.**
- **If successful, and subject to additional regulatory feedback, the ERADICATE Hp2 study is expected to complete the package required to file a U.S. NDA for TALICIA® in early 2019**
- **The first Phase III study with TALICIA® (ERADICATE Hp study) successfully met its primary endpoint ($p < 0.001$), demonstrating 89.4% efficacy in eradicating *H. pylori* infection**
- **TALICIA® is intended to be the first product to be indicated for the treatment of *H. pylori* infection, regardless of ulcer status**
- **TALICIA® was granted QIDP designation by the FDA, providing Fast-Track Development, six months priority NDA review and eight years of U.S. market exclusivity**

TEL-AVIV, Israel and RALEIGH, N.C., Sept. 04, 2018 (GLOBE NEWSWIRE) – RedHill Biopharma Ltd. (Nasdaq: RDHL) (Tel-Aviv Stock Exchange: RDHL) (“RedHill” or the “Company”), a specialty biopharmaceutical company primarily focused on proprietary drugs for gastrointestinal diseases, today announced that the last patient was enrolled in the confirmatory Phase III study with TALICIA® (RHB-105)¹ for *H. pylori* infection (ERADICATE Hp2 study).

Top-line results from the study are expected to be announced before year's end.

If successful, and subject to additional regulatory feedback, the ERADICATE Hp2 study is expected to complete the package required to file a New Drug Application (NDA) with the U.S. Food and Drug Administration (FDA) for TALICIA® in early 2019.

TALICIA® was granted Qualified Infectious Disease Product (QIDP) designation by the FDA, providing Fast-Track Development, six months priority NDA review and eight years of U.S. market exclusivity. TALICIA® is intended to be the first product to be indicated for the treatment of *H. pylori* infection, regardless of ulcer status.

The two-arm, randomized, double-blind, active comparator confirmatory Phase III study compares TALICIA® against a dual therapy amoxicillin and omeprazole regimen at equivalent doses. The study enrolled 455 non-investigated dyspepsia patients with confirmed *H. pylori* infection in 55 clinical sites across the U.S. Subjects were randomized in a 1:1 ratio to receive four capsules, three times daily, of either TALICIA® or the active comparator, for a period of 14 days. Subjects are being assessed for the study's primary endpoint of eradication of *H. pylori* infection at 43 through 71 days after initiation of treatment.

The first Phase III study with TALICIA® (ERADICATE Hp study) successfully met its primary endpoint of superiority over historical standard-of-care (SoC) eradication rate of 70%, with high statistical significance ($p < 0.001$). The study results demonstrated 89.4% efficacy in eradicating *H. pylori* infection with TALICIA®. Notably, these results were also superior to subsequent open-label treatment with SoC therapies of patients in the placebo arm of the ERADICATE Hp study, which demonstrated 63% eradication rate ($p = 0.006$), further supporting the potential efficacy of TALICIA®. Treatment with TALICIA® was shown to be safe and well tolerated.

About *H. pylori*:

H. pylori bacterial infection is a major cause of chronic gastritis, peptic ulcer disease, gastric cancer and mucosa-associated lymphoid tissue (MALT) lymphoma and is estimated to affect over half of the adult population worldwide².

2015 worldwide and U.S. markets for *H. pylori* eradication therapies were estimated at approximately \$4.83 billion and \$1.45 billion, respectively³.

About TALICIA® (RHB-105):

TALICIA® (RHB-105) is a new and proprietary fixed-dose oral combination therapy of two antibiotics and a proton pump inhibitor (PPI) in an all-in-one oral capsule with a planned indication for the treatment of *H. pylori* infection. *H. pylori* bacterial infection is a major cause of chronic gastritis, peptic ulcer disease, gastric cancer and mucosa-associated lymphoid tissue (MALT) lymphoma. A first Phase III study with TALICIA® (ERADICATE Hp study) was completed in the U.S. with positive results. A confirmatory Phase III study (ERADICATE Hp2 study) is ongoing in the U.S. Additional studies may be required, subject to FDA review. TALICIA® is intended to be the first product indicated for the treatment of *H. pylori* infection in adults, regardless of ulcer status.

The ERADICATE Hp2 confirmatory Phase III study with TALICIA® (RHB-105) is registered on www.ClinicalTrials.gov, a web-based service of the U.S. National Institutes of Health (NIH), which provides access to information on publicly and privately supported clinical studies.

About RedHill Biopharma Ltd.:

RedHill Biopharma Ltd. (Nasdaq: RDHL) (Tel-Aviv Stock Exchange: RDHL) is a specialty biopharmaceutical company, primarily focused on the development and commercialization of late clinical-stage, proprietary drugs for the treatment of gastrointestinal diseases. RedHill commercializes and promotes four gastrointestinal products in the U.S.: **Donnatal®** - a prescription oral adjunctive drug used in the treatment of IBS and acute enterocolitis; **Mytesi®** - an anti-diarrheal drug indicated for the symptomatic relief of non-infectious diarrhea in adult patients with HIV/AIDS on anti-retroviral therapy; **Esomeprazole Strontium Delayed-Release Capsules 49.3 mg** - a prescription proton pump inhibitor indicated for adults for the treatment of gastroesophageal reflux disease (GERD) and other gastrointestinal conditions, and **EnteraGam®** - a medical food intended for the dietary management, under medical supervision, of chronic diarrhea and loose stools. RedHill's key clinical-stage development programs include:

(i) **TALICIA® (RHB-105)** for the treatment of *Helicobacter pylori* infection with an ongoing confirmatory Phase III study and positive results from a

first Phase III study; (ii) **RHB-104**, with positive top-line results from a first Phase III study for Crohn's disease; (iii) **RHB-204**, with a planned pivotal Phase III study for nontuberculous mycobacteria (NTM) infections; (iv) **BEKINDA**[®] (**RHB-102**), with positive results from a Phase III study for acute gastroenteritis and gastritis and positive results from a Phase II study for IBS-D; (v) **YELIVA**[®] (**ABC294640**), a first-in-class SK2 selective inhibitor, targeting multiple oncology, inflammatory and gastrointestinal indications, with an ongoing Phase IIa study for cholangiocarcinoma; (vi) **RHB-106**, an encapsulated bowel preparation licensed to Salix Pharmaceuticals, Ltd. and (vii) **RHB-107 (formerly MESUPRON)**, a Phase II-stage first-in-class, serine protease inhibitor, targeting cancer and inflammatory gastrointestinal diseases.

This press release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements may be preceded by the words "intends," "may," "will," "plans," "expects," "anticipates," "projects," "predicts," "estimates," "aims," "believes," "hopes," "potential" or similar words. Forward-looking statements are based on certain assumptions and are subject to various known and unknown risks and uncertainties, many of which are beyond the Company's control, and cannot be predicted or quantified and consequently, actual results may differ materially from those expressed or implied by such forward-looking statements. Such risks and uncertainties include, without limitation, the risk that top-line results of the confirmatory Phase III study with TALICIA[®] for H. pylori infection will be later than expected, the risk that the potential filing of a U.S. NDA for TALICIA[®] and potential FDA approval of TALICIA[®] will be later than expected or will not occur at all or that worldwide or U.S. markets for H. pylori eradication therapies will not reach the amounts currently estimated and other risks and uncertainties associated with (i) the initiation, timing, progress and results of the Company's research, manufacturing, preclinical studies, clinical trials, and other therapeutic candidate development efforts; (ii) the Company's ability to advance its therapeutic candidates into clinical trials or to successfully complete its preclinical studies or clinical trials; (iii) the extent and number of additional studies that the Company may be required to conduct and the Company's receipt of regulatory approvals for its therapeutic candidates, and the timing of other regulatory filings, approvals and feedback; (iv) the manufacturing, clinical development, commercialization, and market acceptance of the Company's therapeutic candidates; (v) the Company's ability to successfully promote Donnata[®], Mytesi[®] and Esomeprazole Strontium Delayed-Release Capsules 49.3 mg and commercialize EnteraGam[®]; (vi) the Company's ability to establish and maintain corporate collaborations; (vii) the Company's ability to acquire products approved for marketing in the U.S. that achieve commercial success and build its own marketing and commercialization capabilities; (viii) the interpretation of the properties and characteristics of the Company's therapeutic candidates and the results obtained with its therapeutic candidates in research, preclinical studies or clinical trials; (ix) the implementation of the Company's business model, strategic plans for its business and therapeutic candidates; (x) the scope of protection the Company is able to establish and maintain for intellectual property rights covering its therapeutic candidates and its ability to operate its business without infringing the intellectual property rights of others; (xi) parties from whom the Company licenses its intellectual property defaulting in their obligations to the Company; (xii) estimates of the Company's expenses, future revenues, capital requirements and needs for additional financing; (xiii) the effect of patients suffering adverse experiences using investigative drugs under the Company's Expanded Access Program; and (xiv) competition from other companies and technologies within the Company's industry. More detailed information about the Company and the risk factors that may affect the realization of forward-looking statements is set forth in the Company's filings with the Securities and Exchange Commission (SEC), including the Company's Annual Report on Form 20-F filed with the SEC on February 22, 2018. All forward-looking statements included in this press release are made only as of the date of this press release. The Company assumes no obligation to update any written or oral forward-looking statement, whether as a result of new information, future events or otherwise, unless required by law.

¹ TALICIA[®] (RHB-105) is an investigational new drug, not available for commercial distribution.

² Hunt, R. H., et al. "Helicobacter pylori in developing countries." World Gastroenterology Organisation Global Guidelines (2010): 1-15.

³ Jerry Rosenblatt, Ph.D., member of RedHill's Advisory Board and Partner at Foster Rosenblatt, RedHill Biopharma press release: *RedHill Biopharma's Investor Webcast Forum Provides Update on the RHB-105 Phase III Program and Potential H. Pylori Eradication Market*, May 18, 2015.

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