



Press Release

RedHill Biopharma Announces Last Patient Enrolled in the Phase III Study with RHB-104 for Crohn's Disease

- **Top-line results are expected to be announced in mid-2018**
- **The Phase III study evaluating RHB-104 for Crohn's disease (MAP US study) is a randomized, double-blind, placebo-controlled study that is evaluating the safety and efficacy of RHB-104 in 331 subjects with moderately to severely active Crohn's disease**
- **Worldwide sales of Crohn's disease therapies exceeded \$7.6 billion in 2016**
- **A pivotal Phase III study with RHB-104 for Nontuberculous Mycobacteria (NTM) infections, with Fast-Track development status, is planned to be initiated in H1/2018**

TEL-AVIV, Israel / RALEIGH, NC, November 9, 2017 RedHill Biopharma Ltd. (NASDAQ: RDHL) (Tel-Aviv Stock Exchange: RDHL) ("RedHill" or the "Company"), a specialty biopharmaceutical company primarily focused on late clinical-stage development and commercialization of proprietary drugs for gastrointestinal and inflammatory diseases and cancer, today announced that the last patient has been enrolled in the Phase III study with RHB-104 for Crohn's disease (MAP US study). Top-line results are expected to be announced in mid-2018.

The MAP US study is a randomized, double-blind, placebo-controlled first Phase III study evaluating the safety and efficacy of RHB-104 in subjects with moderately to severely active Crohn's disease (defined as Crohn's Disease Active Index (CDAI) between 220 and 450). The primary endpoint of the MAP US study is disease remission, defined as a reduction in CDAI to less than 150 at week 26. The study enrolled 331 patients across approximately 150 clinical sites in the U.S., Canada, Europe, Israel, Australia and New Zealand.

Two pre-planned independent Data and Safety Monitoring Board (DSMB) meetings have been held to review data from the MAP US study, in which unanimous recommendations were given to continue the study without any changes to the protocol, investigator's brochure, study

conduct or informed consent form. At the first DSMB meeting, held in December 2016, safety data from the study was reviewed. At the second DSMB meeting, held in July 2017, safety and efficacy data from the first 222 subjects who had completed week 26 assessments of the study was reviewed.

In addition, an open-label extension Phase III study (the MAP US2 study) continues to evaluate the safety and efficacy of RHB-104 in subjects who remain with active Crohn's disease (CDAI \geq 150) after 26 weeks of blinded study therapy in the ongoing Phase III MAP US study. These subjects have the opportunity to receive treatment with RHB-104 for a 52-week period in the open-label MAP US2 extension study. The data collected in the MAP US2 study will be supplemental to the MAP US study data. The MAP US2 study's primary endpoint is disease remission at week 16, defined as CDAI of less than 150. The MAP US2 study is planned to enroll approximately 50-70 subjects in the U.S., Canada, Europe, Israel and New Zealand. Additional open-label studies with RHB-104 for Crohn's disease are being planned to generate further supportive clinical data for potential future marketing applications.

Additional clinical studies are likely to be required to support a U.S. New Drug Application (NDA) for RHB-104. If the MAP US study results are positive, RedHill will meet with the U.S. Food and Drug Administration (FDA) and key opinion leaders to present the data package and discuss the preferred development path.

The worldwide sales of Crohn's disease therapies exceeded \$7.6 billion in 2016¹.

In addition to the ongoing Phase III studies with RHB-104 for Crohn's disease, RedHill plans, subject to regulatory approvals, to initiate a pivotal Phase III study with RHB-104 for the treatment of nontuberculous mycobacteria (NTM) infections in the U.S. in the first half of 2018. RHB-104 was granted Qualified Infectious Disease Product (QIDP) status by the FDA for the treatment of NTM infections. QIDP designation allows for Fast-Track development status, Priority Review of an NDA, if filed, and an additional five years of U.S. market exclusivity on top of the standard exclusivity period or Orphan Designation exclusivity period, as applicable, for a total U.S. market exclusivity of 8-12 years.

The clinical studies with RHB-104 are registered on www.ClinicalTrials.gov, a web-based service of the U.S. National Institute of Health, which provides access to information on publicly and privately-supported clinical studies.

About RHB-104:

Currently in a first Phase III study for the treatment of Crohn's disease (the MAP US study), with top-line results expected in mid-2018, RHB-104 is a proprietary, orally-administered, potentially ground-breaking oral antibiotic combination therapy, with potent intracellular, antimycobacterial and anti-inflammatory properties. RHB-104 is based on increasing evidence supporting the hypothesis that Crohn's disease is related to *Mycobacterium avium subspecies paratuberculosis* (MAP) infection in susceptible patients. The development of RHB-104 is consistent with the growing awareness of the possibility that a bacterially-induced dysregulated

¹ EvaluatePharma, estimated market for diagnosis and drug treatment of Crohn's disease, January 2017.

immune system may contribute to the pathogenesis of various autoimmune diseases of unknown etiology. Clinical trials conducted with earlier formulations of RHB-104 include an Australian Phase III study conducted by Pharmacia/Pfizer. RedHill has conducted several supportive studies with the current formulation of RHB-104 and a long-term population pharmacokinetic (pop-PK) study is ongoing as part of the Phase III MAP US study. Additionally, an open-label extension Phase III study (the MAP US2 study) is ongoing to assess the safety and efficacy of RHB-104 in subjects who have completed week 26 assessments in the ongoing Phase III MAP US study and remain with active Crohn's disease (CDAI \geq 150) at week 26. RHB-104 is covered by several issued and pending patents. RHB-104 was granted Qualified Infectious Disease Product (QIDP) designation by the U.S. FDA for the treatment of nontuberculous mycobacteria (NTM) infections, providing a Fast-Track development pathway, as well as NDA Priority Review and an additional five years of U.S. market exclusivity, if approved. A pivotal Phase III study with RHB-104 for NTM infections is planned to be initiated. RedHill also completed a Phase IIa, proof-of-concept clinical study, evaluating RHB-104 as an add-on therapy to interferon beta-1a in subjects treated for relapsing-remitting multiple sclerosis (the CEASE MS study), supporting additional 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, orally-administered, small molecule drugs for the treatment of gastrointestinal and inflammatory diseases and cancer. RedHill promotes three gastrointestinal products in the U.S., and its clinical-stage pipeline includes treatments for gastrointestinal indications, pancreatic cancer and acute migraines: **Donnatal[®]** - a prescription oral adjunctive drug used in the treatment of IBS and acute enterocolitis; **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 clinical-stage pipeline includes: (i) **TALICIA[™] (RHB-105)** - an oral combination therapy for the treatment of *Helicobacter pylori* infection with successful results from a first Phase III study and an ongoing confirmatory Phase III study; (ii) **RHB-104** - an oral combination therapy for the treatment of Crohn's disease with an ongoing first Phase III study, a completed proof-of-concept Phase IIa study for multiple sclerosis, and a planned pivotal Phase III study for nontuberculous mycobacteria (NTM) infections; (iii) **BEKINDA[®] (RHB-102)** - a once-daily oral pill formulation of ondansetron with successful top-line results from a Phase III study in acute gastroenteritis and gastritis and successful top-line results from a Phase II study in IBS-D; (iv) **RHB-106** - an encapsulated bowel preparation licensed to Salix Pharmaceuticals, Ltd.; (v) **YELIVA[®] (ABC294640)** - a Phase II-stage, orally-administered, first-in-class SK2 selective inhibitor targeting multiple oncology, inflammatory and gastrointestinal indications; (vi) **MESUPRON** - a Phase II-stage first-in-class, orally-administered protease inhibitor, targeting pancreatic cancer and inflammatory gastrointestinal diseases and (vii) **RIZAPORT[®] (RHB-103)** - an oral thin-film formulation of rizatriptan for acute migraines, with a U.S. NDA resubmitted to the FDA and marketing authorization received in two EU member states under the European Decentralized Procedure (DCP).

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, 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 market Donnatal[®] and 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 23, 2017. 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.

Company contact:

Adi Frish

Senior VP Business Development & Licensing

RedHill Biopharma

+972-54-6543-112

adi@redhillbio.com

IR contact (U.S.):

Marcy Nanus

Senior Vice President

The Trout Group

+1-646-378-2927

Mnanus@troutgroup.com