RedHill Biopharma Announces Poster Presentation on New Potential Therapeutic Applications of RHB-107 at the AACR 2018 Annual Meeting

March 19, 2018

- **Data from non-clinical studies indicated that WX-UK1, the active metabolite of RHB-107 (formerly MESUPRON), is a potent and specific inhibitor of five human serine proteases, suggesting new potential therapeutic applications in oncology and inflammatory digestive diseases**

TEL-AVIV, Israel and RALEIGH, N.C., March 19, 2018 (GLOBE NEWSWIRE) -- 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 diseases and cancer, today announced the presentation of a poster at the American Association for Cancer Research (AACR) 2018 Annual Meeting. The abstract (number 4200) will be presented by Mark L. Levitt, MD, Ph.D., Medical Director, Oncology at RedHill, on Tuesday, April 17, 2018 from 1:00 PM to 5:00 PM CDT, at McCormick Place, Chicago, IL.

The abstract[1] presentation, entitled 'New potential therapeutic applications of WX-UK1, as a specific and potent inhibitor of human trypsin-like proteases', describes data from non-clinical studies concluding that WX-UK1, the active metabolite of RHB-107 (formerly MESUPRON) (INN: upamostat), is a potent and specific inhibitor of five human serine proteases (trypsin-3, trypsin-2, trypsin-1, matriptase-1 and trypsin-6). Several of these serine proteases are associated with cancer progression and metastasis. The non-clinical studies suggest new potential therapeutic applications of WX-UK1 in oncology and inflammatory gastrointestinal diseases. The abstract was authored by scientists from the Department of Molecular Biology and Genetics of Aarhus University in collaboration with RedHill[2].

RHB-107 is a proprietary, first-in-class, orally-administered potent serine protease inhibitor, presenting a new non-cytotoxic approach to cancer therapy, as well as other indications of high unmet need, such as inflammatory digestive diseases and inflammatory lung diseases. RHB-107 has undergone several Phase I studies and two Phase II proof-of-concept studies in cancer patients.

With the recent identification of several serine proteases as high-affinity molecular targets, RedHill is evaluating utilization of RHB-107 in both cancer and inflammatory digestive diseases.

About RHB-107 (upamostat):
RHB-107 (formerly MESUPRON) (INN: upamostat) is a proprietary, first-in-class, orally-administered potent inhibitor of several serine proteases targeting cancer and inflammatory gastrointestinal diseases. Protease inhibitors have been shown to play key roles in tumor invasion and the metastasis process. High levels of certain proteases are associated with poor prognosis in various solid tumor cancers, such as pancreatic, gastric, breast and prostate cancers. RHB-107 was previously granted FDA Orphan Drug designation for the treatment of pancreatic cancer. RHB-107 presents a new non-cytotoxic approach to cancer therapy with several potential mechanisms of action to inhibit tumor invasion and metastasis. RHB-107 has undergone several Phase I studies and two Phase II proof-of-concept studies. The first Phase II study was in locally-advanced, non-metastatic pancreatic cancer and the second study in metastatic breast cancer in combination with first-line chemotherapeutic agents. RedHill was granted a new patent from the United States Patent and Trademark Office (USPTO) directed to a combination of RHB-107, YELIVA®, RedHill's two Phase II-stage investigational compounds, and a known antibiotic. RedHill acquired the exclusive worldwide rights to RHB-107, excluding China, Hong Kong, Taiwan and Macao, from Germany's Heidelberg Pharmaceuticals (formerly WILEX AG) for all indications.

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 and cancer. RedHill commercializes and promotes three gastrointestinal products in the U.S.: **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 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 an ongoing first Phase III study for Crohn's disease and a planned pivotal Phase III study for nontuberculous mycobacteria (NTM) infections; (iii) **BEKINDA® (RHB-102)** with positive results from a Phase III study in acute gastroenteritis and gastritis and positive results from a Phase II study in IBS-D; (iv) **YELIVA® (ABC294640),** a first-in-class SK2 selective inhibitor, targeting multiple oncology, inflammatory and gastrointestinal indications, with an ongoing Phase IIa study for cholangiocarcinoma; (v) **RHB-106,** an encapsulated bowel preparation licensed to Salix Pharmaceuticals, Ltd. and (vi) **RHB-107 (upamostat),** a Phase II-stage first-in-class, serine protease inhibitor, targeting cancer and inflammatory gastrointestinal diseases. More information about the Company is available at: www.redhillbio.com.

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 promote Donnatal® 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 SECon 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.

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[1] Please click here to see the abstract and the complete session information on the AACR Annual Meeting 2018 Online Itinerary Planner.

[2] The abstract was authored by Emil Oldenburg, Christine R. Schar, Eva Lange and Jan K. Jensen from the Institute of Molecular Biology and Genetics, Aarhus University and Terry F. Plasse, Danielle T. Abramson, Reza Fathi, Eric M. Towler and Mark Levitt from RedHill Biopharma.

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