RedHill Biopharma Announces Approval of Compassionate Use of Opaganib for COVID-19 in Italy

Authorization of compassionate use granted by the Italian authorities, aided by RedHill’s strategic partner, Cosmo Pharmaceuticals N.V. (SIX: COPN)

Approximately 160 patients with life-threatening clinical manifestations planned to be treated in three major hospitals in northern Italy

A compassionate use program is ongoing in Israel where opaganib has been administered to the first patient at a leading hospital

Discussions ongoing in the U.S. and other countries

RedHill preparing for potential ramp-up of manufacturing of opaganib

TEL-AVIV, Israel and RALEIGH, N.C., April 6, 2020 RedHill Biopharma Ltd. (Nasdaq: RDHL) (“RedHill” or the “Company”), a specialty biopharmaceutical company focused on gastrointestinal diseases, today announced that it has received authorization from the Italian National Institute for Infectious Diseases and Central Italian Ethics Committee (EC) for an expanded access program (EAP) allowing immediate compassionate use of its investigational drug, opaganib (Yeliva®, ABC294640), in Italy for patients with confirmed coronavirus (COVID-19) infection with life-threatening clinical manifestations.

Approximately 160 patients are planned to be treated in three major hospitals in northern Italy, one of the current major epicenters of the pandemic.

“The approved opaganib expanded access program allows physicians in the three major hospitals in Italy to treat patients at high risk of developing pneumonia and those with pneumonia, including acute respiratory distress syndrome, secondary to SARS-CoV-2 infection,” said Mark L. Levitt, MD,
Ph.D., medical director at RedHill. “RedHill is working diligently to evaluate the potential of opaganib as a treatment for COVID-19 to help patients worldwide in urgent need of a treatment option. I would like to thank our partners at Cosmo Pharmaceuticals for their immense assistance supporting the process in Italy.”

A total of 131 subjects have been dosed with opaganib to date in ongoing and completed Phase 1 and Phase 2 clinical studies in oncology indications in the U.S., in pharmacokinetic studies in healthy volunteers in the U.S., and under the existing FDA-approved expanded access requests from physicians for individual oncology patients, establishing safety and tolerability in humans both in the U.S. and ex-U.S.

Opaganib, a new chemical entity, is a proprietary, first-in-class, orally-administered, sphingosine kinase-2 (SK2) selective inhibitor with anticancer, anti-viral and anti-inflammatory activities, targeting multiple oncology, inflammatory and gastrointestinal indications. Pre-clinical data have demonstrated both anti-viral and anti-inflammatory activities of opaganib, with the potential to reduce lung inflammatory disorders, such as pneumonia, and mitigate pulmonary fibrotic damage. Several prior pre-clinical studies support the potential role of SK2 in the replication-transcription complex of positive-strand single-stranded RNA viruses, similar to coronavirus, and its inhibition may potentially inhibit viral replication. Pre-clinical in vivo studies\(^1\) have demonstrated that opaganib decreased fatality rates from influenza-virus infection and ameliorated *Pseudomonas aeruginosa*-induced lung injury.

RedHill and its strategic partner, Cosmo Pharmaceuticals, have agreed that Cosmo will become the exclusive or main commercial supplier in the future, subject to opaganib demonstrating positive clinical results, negotiation of final terms and the necessary regulatory approvals. Accordingly, the parties have initiated the manufacturing tech transfer process.

To find out more about RedHill Biopharma's Expanded Access policy, please look here for additional information: [www.redhillbio.com/expandedaccess](http://www.redhillbio.com/expandedaccess).

Discussions are ongoing in the U.S. and other countries.

Opaganib has undergone a Phase 1 clinical study in patients with advanced solid tumors and is currently being investigated, individually and in combination with hydroxychloroquine, in a Phase 1/2a study in advanced cholangiocarcinoma (bile duct cancer), and in a Phase 2 study in prostate cancer.

The development of opaganib has been supported by grants and contracts from U.S. federal and state government agencies awarded to U.S.-based Apogee Biotechnology Corp., including the U.S. National Cancer Institute (NCI), the U.S. Department of Health and Human Services’ Biomedical Advanced Research and Development Authority (BARDA), the U.S. Department of Defense and the FDA Office of Orphan Products Development.

About Opaganib (ABC294640, Yeliva®)
Opaganib, a new chemical entity, is a proprietary, first-in-class, orally-administered, sphingosine kinase-2 (SK2) selective inhibitor with anticancer, anti-viral and anti-inflammatory activities, targeting multiple oncology, inflammatory and gastrointestinal indications. By inhibiting SK2, opaganib blocks the synthesis of sphingosine 1-phosphate (S1P), a lipid-signaling molecule that promotes cancer growth and pathological inflammation. By inhibiting SK2, opaganib potentially blocks viral replication complex and pathological inflammation. Opaganib was originally developed by U.S.-based Apogee Biotechnology Corp. and completed multiple successful pre-clinical studies in oncology, inflammation, GI and radioprotection models, as well as a Phase 1 clinical study in cancer patients with advanced solid tumors. Opaganib received Orphan Drug designation from the U.S. FDA for the treatment of cholangiocarcinoma. The development of opaganib was supported by grants and contracts from U.S. federal and state government agencies awarded to Apogee Biotechnology Corp., including NCI, BARDA, the U.S. Department of Defense and the FDA Office of Orphan Products Development.

About RedHill Biopharma
RedHill Biopharma Ltd. (Nasdaq: RDHL) is a specialty biopharmaceutical company focused on gastrointestinal diseases. RedHill promotes the gastrointestinal drugs Movantik® for opioid-induced constipation in adults, Talicia® for the treatment of Helicobacter pylori (H. pylori) infection in adults and Aemcolo® for the treatment of travelers’ diarrhea in adults. RedHill’s key clinical late-stage development programs include: (i) RHB-104, with positive results from a first Phase 3 study for Crohn’s disease; (ii) RHB-204, with a planned pivotal Phase 3 study for pulmonary nontuberculous mycobacteria (NTM) infections; (iii) RHB-102 (Bekinda®), with positive results from a Phase 3 study for acute gastroenteritis and gastritis and positive results from a Phase 2 study for IBS-D; (iv) Opaganib (Yeliva®), a first-in-class SK2 selective inhibitor, targeting multiple oncology, inflammatory and gastrointestinal indications, with an ongoing Phase 1/2a study for cholangiocarcinoma; (v) RHB-106, an encapsulated bowel preparation, and (vi) RHB-107, a Phase 2-stage first-in-class, serine protease inhibitor, targeting cancer and inflammatory gastrointestinal diseases. More information about the Company is available at www.redhillbio.com.

Footnotes:
2 Full prescribing information for Movantik® (naloxegol) is available at: www.Movantik.com.
3 Full prescribing information for Talicia® (omeprazole magnesium, amoxicillin, and rifabutin) is available at: www.Talicia.com.
4 Full prescribing information for Aemcolo® (rifamycin) is available at: www.Aemcolo.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, the development risks of early-stage discovery efforts for a disease that is still little understood, including difficulty in assessing the efficacy of opaganib for the treatment of COVID-19, if at all; intense competition from other companies developing potential treatments and vaccines for COVID-19; the effect of a potential occurrence of patients suffering serious adverse events using COVID-19 under a compassionate use program as well as risks and uncertainties associated with (i) the initiation, timing, progress and results of the Company’s research, manufacturing, pre-clinical studies, clinical trials, and other therapeutic candidate development efforts, and the timing of the commercial launch of its commercial products and ones it may acquire or develop in the future; (ii) the Company’s ability to advance its therapeutic candidates into clinical trials or to successfully complete its pre-clinical studies or clinical trials or the development of a commercial companion diagnostic for the detection of MAP; (iii) the extent and number and type 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 and Talicia®; (v) the Company’s ability to successfully commercialize and promote Talicia®, Aemcolo® and Movantik®; (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, pre-clinical 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; (xiv) competition from other companies and technologies within the Company’s industry; and (xv) the hiring and employment commencement date of executive managers. 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 March 4, 2020. 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.):
Timothy McCarthy, CFA, MBA
Managing Director, Relationship Manager
LifeSci Advisors, LLC
+1-212-915-2564
tim@lifesciadvisors.com