FOR IMMEDIATE RELEASE

Compugen Presents Update on COM701 Phase 1 Study at 2019 IGCS

HOLON, ISRAEL – September 19, 2019 – Compugen Ltd. (NASDAQ: CGEN), a clinical-stage cancer immunotherapy company and leader in predictive target discovery, today announced progress in its ongoing Phase 1 clinical study evaluating COM701, a first-in-class therapeutic antibody targeting PVRIG, in a trial-in-progress poster at The Annual Global Meeting of the International Gynecologic Cancer Society (IGCS 2019) in Rio de Janeiro, Brazil.

In a poster titled "COM701 (A Novel Immune Checkpoint Inhibitor) in Patients with Advanced Solid Tumors," the Company reported that it has completed enrollment in the seventh dose level in the COM701 monotherapy (Arm A) and second dose level in the combination of COM701 with Opdivo® (Nivolumab) (Arm B) and that no dose-limiting toxicities were observed in these and prior dose level cohorts. COM701 as a monotherapy and in combination with Opdivo has shown an acceptable safety and tolerability profile at all dose levels tested. Study enrollment is advancing on schedule for additional dose levels.

The poster is available on Compugen's website at www.cgen.com.

About the COM701 Phase 1 Study

The Phase 1 open-label clinical trial of COM701 is designed to assess the safety and tolerability of administering escalating doses of COM701 monotherapy as well as of combination administration with Bristol-Myers Squibb's Opdivo® in patients with advanced solid tumors. Additionally, secondary endpoints include preliminary antitumor activity, pharmacokinetics and pharmacodynamics of COM701 monotherapy as well as COM701 in combination with Opdivo in patients with selected tumor types, including non-small cell lung cancer, ovarian cancer, breast cancer and endometrial cancer. The Phase 1 study, which is expected to enroll approximately 140 patients, is currently recruiting in the United States. Additional information is available at www.clinicaltrials.gov (NTC03667716).

About Compugen

Compugen is a clinical-stage, therapeutic discovery and development company utilizing its broadly applicable computational discovery platforms to identify novel drug targets and develop first-in-class therapeutics in the field of cancer immunotherapy. The Company's therapeutic pipeline consists of immuno-oncology programs against novel drug targets it has discovered computationally, including T cell immune checkpoints and other early-stage immuno-oncology programs focused largely on myeloid targets. Compugen's business model is to enter into collaborations for its novel targets and related drug product candidates at various stages of research and development. The Company is headquartered in Israel with facilities in South San Francisco, CA. Compugen's ordinary shares are listed on Nasdaq and the Tel Aviv Stock Exchange under the ticker symbol CGEN. For additional information, please visit Compugen's corporate website at www.cgen.com.

Forward-Looking Statement

This press release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements can be identified by the use of terminology such as "will," "may," "expects," "anticipates," "believes," "potential," "plan," "goal," "estimate," "likely," "should," "confident," and "intends," and describe opinions about possible future events. These forward-looking statements involve known and unknown risks and uncertainties that may cause the actual results, performance or achievements of Compugen to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Among these risks: Compugen's business model is substantially dependent on entering into collaboration agreements with third parties and Compugen may not be successful in generating adequate revenues or commercializing aspects of its business model. Moreover, the development and commercialization of therapeutic candidates involve many inherent risks, including failure to progress to clinical trials or, if they progress to or enter clinical trials, failure to advance through clinical development or receive regulatory approval. These and other factors, including the ability to finance the Company, are more fully discussed in the "Risk Factors" section of Compugen's most recent Annual Report on Form 20-F as filed with the Securities and Exchange Commission (SEC) as well as other documents that may be subsequently filed by Compugen from time to time with the SEC. In addition, any forward-looking statements represent Compugen's views only as of the date of this release and should not be relied upon as representing its views as of any subsequent date. Compugen does not assume any obligation to update any forward-looking statements unless required by law.

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