FOR IMMEDIATE RELEASE

Compugen Presents Update on COM701 Phase 1 Trial at ASCO-SITC Clinical Immuno-Oncology Symposium

HOLON, ISRAEL – February 7, 2020 – Compugen Ltd. (NASDAQ: CGEN), a clinical-stage cancer immunotherapy company and leader in predictive target discovery, today announced that its ongoing Phase 1 clinical trial evaluating COM701, a first-in-class therapeutic antibody targeting PVRIG, was featured in a trial-in-progress poster at the The ASCO-SITC Clinical Immuno-Oncology Symposium in Orlando, FL.

In a poster (Abstract #TPS23) titled "A Phase 1 Study Evaluating COM701 Monotherapy and in Combination with Nivolumab in Patients With Advanced Solid Malignancies," the Company reported the following:

- Enrollment in the eighth dose level patient cohort of 20mg/kg at Q4 weekly dosing schedule is ongoing in the monotherapy dose escalation study.
- Enrollment in the fourth dose level patient cohort at Q4 weekly dosing schedule in the combination dose escalation study of COM701 with Opdivo® (nivolumab) has been completed with no dose-limiting toxicities reported.
- No dose limiting toxicities have been reported in lower dose level patient cohorts in the monotherapy and combination dose escalation arms.

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

About COM701

COM701 is a humanized antibody that binds with high affinity to PVRIG, a novel immune checkpoint target candidate discovered by Compugen, blocking the interaction with its ligand, PVRL2. Blockade of PVRIG by COM701 has demonstrated potent, reproducible enhancement of T cell activation, consistent with the desired mechanism of action of activating T cells in the tumor microenvironment to generate anti-tumor immune responses. In addition, COM701 combined with antagonist anti-PD-1 antibodies has demonstrated synergistic effects in enhancing human T cell stimulation and inhibiting tumor growth in murine models, indicating an intersection of the PVRIG and PD-1 inhibitory pathways and the potential of these combinations to further enhance immune response against tumors.

PVRIG and TIGIT constitute parallel immune checkpoint pathways that counteract DNAM, a costimulatory molecule on T cells and NK cells. Preclinical data for COM701 suggest that PVRIG may be a dominant checkpoint pathway in diverse patient populations with tumors that express elevated PVRL2, the ligand of PVRIG, as compared to expression of PVR, the ligand of TIGIT. This includes patients with breast, endometrial, and ovarian cancers. In addition, expression studies show that PVRIG, TIGIT, and their respective ligands, are expressed in a broad variety of tumor types, such as those noted above, as well as lung, kidney, and head & neck cancers. In these tumors the blockade of both TIGIT and PVRIG may be required to sufficiently stimulate an anti-tumor immune response, with or without additional PD-1 pathway blockade.

COM701 is in a Phase 1 clinical trial in patients with advanced solid tumors, to evaluate monotherapy and combination therapy with a PD-1 inhibitor. The primary end points of the Phase 1 open-label trial are to assess the safety and tolerability of COM701 monotherapy as well as COM701 with Bristol-Myers Squibb's Opdivo® (nivolumab) in patients with advanced solid tumors. Secondary endpoints include preliminary anti-tumor 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. The Phase 1 dose escalation study showed that COM701 is well-tolerated through 10 mg/kg with no dose-limiting toxicities observed. Furthermore, data showed preliminary signs of anti-tumor activity in heavily pretreated patient population (with a median of seven prior anticancer therapies (range of 2-15)), with best timepoint response of stable disease (SD)/disease control rate reported in 9 of 13 patients (69%). Additional information is available at www.clinicaltrials.gov (NCT03667716).

About Compugen

Compugen is a clinical-stage therapeutic discovery and development company utilizing its broadly applicable, predictive computational discovery platforms to identify novel drug targets and develop therapeutics in the field of cancer immunotherapy. The Company's lead product candidate, COM701, a first-in-class anti-PVRIG antibody, for the treatment of solid tumors, is undergoing a Phase 1 clinical study. In addition, COM902, Compugen's antibody targeting TIGIT, is expected to enter the clinic in early 2020. The Company's therapeutic pipeline also includes early stage immuno-oncology programs focused largely on myeloid targets. Compugen's business model is to selectively 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 offices in South San Francisco, CA. Compugen's shares are listed on the 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 Securities Act of 1933 and the Securities Exchange Act of 1934, as amended, and the safe-harbor provisions of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements are based on the current beliefs, expectations and assumptions of Compugen's management. 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 similar expressions that are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. 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. This risks and other risks are more fully described in the "Risk Factors" section of Compugen's most recent Annual Report on Form 20-F 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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