FOR IMMEDIATE RELEASE

Compugen Expands Patent Portfolio for COM902 with New Composition of Matter and Use Patent in Europe

Added to previously granted U.S. patent protecting the use of COM902 for T cell activation in cancer patients

HOLON, ISRAEL – November 6, 2019 – Compugen Ltd. (Nasdaq: CGEN), a clinical-stage cancer immunotherapy company and leader in predictive target discovery, announced today that The European Patent Office (EPO) has granted a new patent covering the composition of matter and use of COM902, its immuno-oncology therapeutic antibody targeting TIGIT.

EPO Patent No. EP3347379, titled "Anti-TIGIT antibodies, anti-PVRIG antibodies and combinations thereof," relates to the composition of matter of COM902, alone or in combination with a second antibody targeting an immune checkpoint, including PD-1 and PVRIG (specifically COM701). The patent further relates to COM902 for use in treating cancer by activating T cells, a key driver of immune stimulation and cancer immunotherapy treatments.

The patent is expected to expire in Europe no earlier than August 2037.

This patent further expands the intellectual property portfolio of COM902 for which a patent has been previously issued in November 2018 by the U.S. Patent and Trademark Office relating to the method of use of COM902 for activating T cells in cancer patients, in addition to claims covering the combination of COM902 and COM701, for activating T cells in cancer patients.

About COM902

COM902, a high affinity, fully human antibody targeting TIGIT, was developed for combination treatment with COM701. Preclinical data demonstrate that TIGIT inhibition,

either alone or in combination with other checkpoint inhibitors, can enhance T cell activation and increase anti-tumor immune responses. Parallel inhibition of TIGIT and PVRIG, the two coinhibitory arms of the DNAM-1 axis, results in synergistic effects on effector T cell function and tumor growth inhibition in various model systems that can be further increased with the addition of PD-1 blockade. Based on preclinical data these combinations may be clinically important for enhancing anti-tumor immune response and expanding the patient population responsive to checkpoint inhibition. The Company plans to initiate Phase 1 studies in patients with advanced malignancies in early 2020 pursuant to the FDA's clearance of an investigational new drug application in October 2019.

Compugen discovered TIGIT in 2009 leveraging its immune checkpoint computational discovery platform through which PVRIG was discovered. The TIGT discovery was published by Compugen in October 2009 in the Proceedings of the National Academy of Sciences (PNAS).

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 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 additional early-stage immune-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 facilities in South San Francisco, CA. Compugen's 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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