

FOR IMMEDIATE RELEASE

Compugen Doses First Patient in Phase 1/2 Triple Combination Cohort Expansion of COM701 with Opdivo® and Bristol Myers Squibb's Anti-TIGIT Antibody, BMS-986207

- This study evaluates Compugen's three-pathway hypothesis with the triple blockade of PVRIG, TIGIT and PD1, strengthening Compugen's leadership position in the DNAM axis space and differentiating Compugen in the TIGIT space
- Preliminary data from triple combination dose escalation on-track for Q4 2021

HOLON, ISRAEL July 19 2021— Compugen Ltd. (Nasdaq: CGEN), a clinical-stage cancer immunotherapy company and a leader in predictive target discovery, today announced that the first patient has been dosed in the cohort expansion arm of the Phase 1/2 study evaluating the triple combination of COM701, Compugen's first-in-class anti-PVRIG antibody, with Opdivo® (nivolumab) and Bristol Myers Squibb's investigational anti-TIGIT antibody, BMS-986207.

"We continue to push forward as leaders in the DNAM axis space and as the only company evaluating a potential synergistic triple blockade of PVRIG, TIGIT and PD-1 in the clinic," said Anat Cohen-Dayag, Ph.D., President and CEO of Compugen. "We believe that the future of immuno-oncology will be driven by combination therapy and this study examining our three-pathway hypothesis is an important component of our overall strategy and a key differentiator for Compugen in the TIGIT space. The study is designed to evaluate simultaneous blockade of three immune checkpoint pathways, PVRIG, TIGIT and PD-1 and test the hypothesis that blockade of both PVRIG and TIGIT, parallel DNAM pathways, may be required in certain tumor types in order to generate or enhance an anti-tumor immune response. The initiation of the cohort expansion phase of the study, allowing us to focus with the selected dose for expansion on specific patient populations where we believe the DNAM axis is dominant, is an important step to examine the potential benefit of this unique immunotherapy combination in a broader range of patients. We are on track to report preliminary data

from the triple combination dose escalation arm of the study in the fourth quarter of this year."

Dr. Cohen-Dayag added, "We are delighted to have Bristol Myers Squibb as our partner in this study and are pleased to have their continued support and commitment to the collaboration."

The open-label Phase 1/2 trial is designed to evaluate the safety, tolerability, and preliminary antitumor activity of COM701 in combination with Opdivo® and BMS-986207. Additional information is available at www.clinicaltrials.gov (NCT04570839).

Opdivo® is a trademark of Bristol-Myers Squibb Company.

About COM701

COM701 is a humanized antibody that binds with high affinity to PVRIG, a novel immune checkpoint discovered computationally by Compugen, blocking the interaction with its ligand, PVRL2. Blockade of PVRIG by COM701 has demonstrated in preclinical studies 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. Compugen has identified PVRIG and TIGIT as key parallel and complementary inhibitory pathways in the DNAM axis, which also intersect with the well-established PD-1 pathway. Research from Compugen suggests that these three pathways have different dominance in different tumor types and patients, implying that to induce effective antitumor responses, certain patient populations may require the blockade of different combinations of these three pathways. To test this hypothesis, Compugen has established a science-driven, biomarker informed clinical program, which evaluates different combinations of these axis members across tumor types. Compugen is the only company with clinical assets targeting both PVRIG and TIGIT in its portfolio allowing it to more fully exploit the potential of blocking these parallel and complementary members of the DNAM axis to drive robust immune responses.

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. Compugen's lead product candidate, COM701, a first-in-class anti-PVRIG antibody, for the treatment of solid tumors, is undergoing Phase 1 single, dual and triple combination studies. In addition, COM902, Compugen's antibody targeting TIGIT, is in a Phase 1 clinical study. Compugen's therapeutic pipeline also includes early stage immuno-oncology programs

focused largely on myeloid targets. Compugen is headquartered in Israel, with offices 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 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. 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. Forward-looking statements include, but are not limited to, statements regarding our belief that the future of immunooncology will be driven by combination therapy, statements regarding simultaneous blockade of three immune checkpoint pathways, PVRIG, TIGIT and PD-1 and regarding the possible requirement of blockade of both PVRIG and TIGIT, parallel DNAM-1 pathways, in certain tumor types in order to generate or enhance an anti-tumor immune response, statements regarding our belief that the DNAM-axis is dominant is specific patient populations on which we focus the selected dose for expansion in the cohort expansion phase of the study, and our expectation to report preliminary data from the triple combination dose escalation arm of the study in the fourth quarter of this year 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: the effect of the global COVID-19 pandemic may continue to negatively impact the global economy and may also adversely affect Compugen's business; clinical development involves a lengthy and expensive process, with an uncertain outcome and Compugen may encounter substantial delays or even an inability to begin clinical studies for any specific product, or may not be able to conduct or complete its studies on the timelines it expects; Compugen relies and expects to continue to rely on third parties to conduct its clinical studies and these third parties may not successfully carry out their contractual duties, comply with regulatory requirements or meet expected deadlines, and Compugen may experience significant delays in the conduct of its clinical studies as well as significant increased expenditures; 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; Compugen's approach to the discovery of therapeutic products is based on its proprietary computational target discovery infrastructure, which is unproven clinically; and Compugen does not know whether it will be able to discover and develop additional potential product candidates or products of commercial value. These risks and other risks 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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