FOR IMMEDIATE RELEASE:

Compugen's Computational Discovery Leverages Single Cell Spatial Transcriptomics to Gain In-Depth Understanding of the Tumor Microenvironment

- Combining computational expertise with cutting-edge single cell technology Compugen showed PVRIG at the sites of T cell priming in the tumor microenvironment
- Preliminary findings further support the rationale for blocking PVRIG to address immunotherapy resistance in inflamed and less inflamed tumors
- Approach provides additional armamentarium to discover novel targets and gain biological insights for development of novel immunotherapies
- Oral presentation today at the Keystone Symposium: Cancer Immunotherapy: Decoding the Cancer Immunity Interactome

HOLON, ISRAEL – March 21, 2022 – Compugen Ltd. (Nasdaq: CGEN), ("Compugen", the "Company"), a clinical-stage cancer immunotherapy company and a pioneer in computational target discovery, today announced that it will give a presentation today on exploring the immune-tumor microenvironment (TME) using high resolution single-cell spatial transcriptomics at the Keystone Symposium: Cancer Immunotherapy: Decoding the Cancer Immunity Interactome, March 20-24 at Whistler, British Columbia, Canada.

"Compugen's predictive computational platform is the cornerstone of our drug discovery and development capabilities. The biology of the TME is complex, and an in-depth understanding is required to develop novel cancer immunotherapies," said Anat Cohen-Dayag, Ph.D., President and CEO of Compugen. "At the Keystone Symposium, we will share how we are successfully employing high resolution single cell spatial mapping of immune cells to decipher this complexity. Leveraging our long-term expertise in computational immuno-oncology biology we have used a cutting-edge technology to provide an unprecedented view into the composition and spatial localization of individual cells in the TME. Initial findings further suggest the presence of the DNAM-1 pathway including PVRIG, an immune checkpoint discovered by Compugen, at the sites of T cell priming, including the tertiary lymphoid structures. This is exciting as it confirms what we have seen previously and further supports the rationale to block PVRIG to address immunotherapy resistance in both inflamed and less inflamed tumors. Our ability to study cancer at the spatially resolved single-cell level is expanding our understanding of the complex interactions in the TME and opens the door to new therapeutic approaches."

Compugen's cloud-based computational platform integrates proprietary omics data, such as proteomics and spatial single-cell transcriptomics with public domain genomics and clinical metadata towards a machine learning based discovery of novel immuno-oncology specific targets, biomarkers, and mechanism of action. The computational-driven hypotheses are then rapidly tested and validated by an internal wet-lab experimental group. The validated information is integrated back into the discovery cycle, providing an additional layer of proprietary data which is being utilized to further optimize the computational predictive models. This tight in-house integration of computational prediction with experimental validation is one of Compugen's strengths and has proved to be essential in its immuno-oncology discoveries, clinical-stage programs, and pipeline progression.

Presentation & poster details

Meeting title:	Cancer Immunotherapy: Decoding the Cancer Immunity Interactome
Session title:	Imaging Cancer Immunity
Presentation & poster title:	Exploring the immune-tumor microenvironment using high resolution single-cell spatial transcriptomics
Lead author	Roy Granit
Oral presentation date:	Monday, March 21, 2022
Poster date:	Tuesday, March 22, 2022
Poster number:	Poster #2041

The presentation is available on the publication section of Compugen's website www.cgen.com

About Compugen

Compugen is a clinical-stage therapeutic discovery and development company utilizing its broadly applicable predictive computational discovery capabilities to identify new drug targets and biological pathways for developing cancer immunotherapies. Compugen has developed two proprietary product candidates: COM701, a potential first-in-class anti-PVRIG antibody, for the treatment of solid tumors, in Phase 1 as a single agent and in dual, and triple combinations; COM902, a potential best-in-class monoclonal antibody targeting TIGIT for the treatment of solid and hematological tumors, undergoing Phase 1 studies as a single agent and in dual combination with COM701. Partnered programs include an antibody targeting ILDR2 in Phase 1 development, licensed to Bayer under a research and discovery collaboration and license agreement, and a TIGIT/PD-1 bispecific derived from COM902 (AZD2939) in Phase 1/2 development by AstraZeneca through a license agreement for the development of bispecific and multi-specific antibodies. In addition, the Company's therapeutic pipeline of early-stage immuno-oncology programs consists of programs aiming to address various mechanisms of immune resistance, including 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.

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 using 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 use of cutting-edge technology to provide an unprecedented view into the composition and spatial localization of individual cells in the TME, that initial findings further suggest the presence of the DNAM-1 pathway including PVRIG, an immune checkpoint discovered by Compugen, is located at the sites of T cell priming, including the tertiary lymphoid structures and that it confirms what we have seen previously and further supports the rationale to block PVRIG to address immunotherapy resistance in both inflamed and less inflamed tumors and statement that our ability to study cancer at the spatially resolved single-cell level is expanding our understanding of the complex interactions in the TME and opens the door to new therapeutic approaches. 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: In the near term, Compugen is highly dependent on the success of COM701 and of COM902; Compugen may not be able to advance its internal clinical stage programs through clinical development or manufacturing or successfully partner or commercialize them, or obtain marketing approval, either alone or with a collaborator, or may experience significant delays in doing so; 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 trials for any specific product or may not be able to conduct or complete its trials on the timelines it expects; Compugen has limited experience in the development of therapeutic product candidates, and it may be unable to implement its business strategy. 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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