



For Immediate Release

Compugen Discloses Successful Validation Results for Novel B7/CD28-like Cancer Immunotherapy Target Candidate

CGEN-15027 is the sixth Compugen-discovered novel immune checkpoint candidate with promising validation data for involvement in tumor immunology

Compugen-discovered immune checkpoint candidates show potential for development of multiple cancer immunotherapies

Tel Aviv, Israel - October 27, 2014 --- Compugen Ltd. (NASDAQ: [CGEN](#)) today disclosed successful experimental data for CGEN-15027, a Compugen-discovered immune checkpoint target candidate. The experimental results include its expression in the cancer microenvironment, both on cancer cells derived from lung, breast, and liver cancer patients, and on tumor infiltrating immune cells. In addition, the disclosed data demonstrate CGEN-15027's inhibitory effect on cancer-specific immune cells. These results suggest that CGEN-15027 has strong potential to serve as a target for monoclonal antibody (mAb) cancer therapy with a mechanism of action that is potentially distinct from previously-disclosed Compugen checkpoint target candidates.

CGEN-15027 is one of eleven novel B7/CD28-like immune checkpoints candidates discovered to date through the use of Compugen's broadly applicable predictive discovery infrastructure, and is the sixth of these eleven for which experimental data has been disclosed demonstrating their potential to serve as targets for cancer immunotherapy. The different characteristics of each of Compugen's immune checkpoint candidates suggest that these drug target candidates may give rise to different first-in-class cancer therapeutics.

Dr. Anat Cohen-Dayag, Compugen president and CEO, stated, "Six of our eleven computer-predicted novel immune checkpoint candidates have demonstrated initial successful biological validation supporting their involvement in tumor immunology. To our knowledge, this hit rate is unprecedented. Furthermore, the remaining five are undergoing further validation studies. These results not only support the strength and breadth of our Pipeline Program, but also attest to the impressive power and accuracy of our unique predictive discovery infrastructure."

Dr. Cohen-Dayag continued, "With respect to CGEN-15027, we are very pleased with the experimental data now being disclosed, based on which we have initiated a therapeutic antibody discovery program against this promising immune checkpoint candidate."

Initial experiments with CGEN-15027 have demonstrated inhibitory activity in melanoma-specific human CD8 cytotoxic T cells, which are immune cells that

recognize and destroy cancer cells. Overexpression of CGEN-15027 on these cells dampened their cancer specific reactivity consistent with a role of an immune checkpoint. These findings, indicating that CGEN-15027 exerts its inhibitory effect upon its expression on T cells, support a mechanism of action that is potentially different from previously disclosed Compugen checkpoint target candidates. CGEN-15027 was found to be expressed on effector immune cells within the tumor microenvironment. Expression of CGEN-15027 was also detected on human effector immune cells, such as NK and T cells, which play important roles in anti-tumor immunity, further substantiating a role for CGEN-15027 in tumor immunology. In addition, CGEN-15027 was shown to be expressed on cancer cells derived from patients with lung, breast, and liver cancer.

About Immune Checkpoints

Immune checkpoints are inhibitory receptors and their ligands, which are crucial for the maintenance of self-tolerance (that is, the prevention of autoimmunity) and for the protection of tissues from damage when the immune system is responding to pathogenic infection or other injuries. These immune checkpoints, which are "hijacked" by tumors to block the ability of the immune system to destroy the tumor (immune resistance), have lately emerged as "game changers" and promising targets for cancer immunotherapy. Therapeutic blockade of immune checkpoints can boost anti-tumor immunity, enabling the patient's immune system to recognize and attack the tumor cells, and mount durable anti-tumor responses and tumor destruction.

The blockade of immune checkpoints unleashes the potential of the anti-tumor immune response in a fashion that is transforming cancer therapeutics. Checkpoint-blocking antibodies have lately demonstrated impressive clinical benefits and long-term survival, even for end-stage patients, raising hopes that this novel approach will lead to effective therapeutic strategies and valuable additions in the fight against cancer.

About Compugen

Compugen is a leading drug discovery company focused on therapeutic proteins and monoclonal antibodies to address important unmet needs in the fields of oncology and immunology. The Company utilizes a broad and continuously growing integrated infrastructure of proprietary scientific understandings and predictive platforms, algorithms, machine learning systems and other computational biology capabilities for the *in silico* (by computer) prediction and selection of product candidates, which are then advanced in its Pipeline Program. The Company's business model includes collaborations covering the further development and commercialization of product candidates at various stages from its Pipeline Program and various forms of research and discovery agreements, in both cases providing Compugen with potential milestone payments and royalties on product sales or other forms of revenue sharing. Compugen's wholly-owned U.S. subsidiary located in South San Francisco is developing oncology and immunology monoclonal antibody therapeutic candidates against its drug targets. 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,” and “intends,” and describe opinions about future events and include statements related to CGEN-15027’s potential involvement in tumor immunology and potential ability to serve as a target for monoclonal antibody therapy that possesses characteristics offering new therapeutic uses in cancer immunotherapy; CGEN 15027’s unique mechanism of action; the potential of Compugen-discovered target candidates to serve as targets for cancer immunotherapy for different first-in-class cancer therapeutics; the unprecedented hit rate of Compugen’s computer-predicted novel immune checkpoint candidates which have demonstrated initial successful biological validation supporting their involvement in tumor immunology; and the power and accuracy of Compugen’s unique predictive discovery infrastructure. 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. Some of these risks are: changes in relationships with collaborators; the inability to reach mutually agreeable terms and conditions with respect to potential new collaborations; the impact of competitive products and technological changes; risks relating to the development of new products; and the ability to implement technological improvements. These and other factors are 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 as well as other documents that may be subsequently filed by Compugen from time to time with the Securities and Exchange Commission. 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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