

FORM 6-K
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Report of Foreign Private Issuer

Pursuant to rule 13a-16 or 15d-16 of the Securities Exchange Act of 1934
for the month of June 2008

Compugen Ltd.
(Translation of registrant's name in English)

72 Pinchas Rosen Street, Tel-Aviv 69512, Israel
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover
Form 20-F or Form 40-F.

Form 20-F X Form 40-F

On June 11, 2008 Compugen Ltd. (the "Registrant") issued a Press Release, filed as Exhibit
1 to this Report on Form 6-K, which is hereby incorporated by reference herein.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly
caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Compugen Ltd.
(Registrant)
By: /s/ Ronit Lerner
Title: Chief Financial Officer
Date: June 11, 2008



For Immediate Release

Compugen Announces Discovery of Novel Drug Targets for Cancer Antibody Therapeutics

Further Experimental Validation of Therapeutic Potential Now Underway

Tel Aviv, Israel – June 11, 2008 – Compugen Ltd. (NASDAQ: CGEN) announced today the discovery of more than ten novel targets of antibody therapy for various types of solid and hematopoietic cancer. The newly identified targets were initially predicted and selected *in silico* utilizing the Company's Monoclonal Antibody Therapeutic Targets Platform and subsequently were experimentally validated. In addition, the Company announced that further experimental validation of the therapeutic potential has been initiated for five of these targets.

This group of novel targets offers the opportunity for advancing the development of antibody biotherapeutics for a wide range of oncologic diseases, such as ovarian cancer, lung cancer, colon cancer, multiple myeloma, acute and chronic leukemia and Non Hodgkin lymphoma. All of the new targets are membrane bound molecules which have been shown to display differential RNA expression in various tumor vs. healthy samples. In addition, a number of them are splice variant molecules, the existence of which had initially been predicted by the Company's LEADS platform. This class of molecules would be particularly difficult to find utilizing traditional discovery methodologies.

Anat Cohen-Dayag, Ph.D., Compugen's Vice President of Diagnostic Biomarkers and Drug Targets stated, "Monoclonal antibody therapeutics is the fastest growing segment of the pharmaceutical industry with the potential for yielding improved therapeutics to treat many life-threatening and debilitating diseases. Furthermore, with a typically faster discovery to development to commercialization process and a higher probability of success in human clinical trials, this segment has become a major focus of the industry. Therefore, we see our unique Monoclonal Antibody Therapeutic Targets Platform as an extremely valuable asset of the company and are very pleased by its continuing and growing success in identifying novel targets of interest. We look forward to continuing use of this platform both in our own discovery activities and in collaboration with partners."

About Monoclonal Antibody (mAb) Therapeutics: Over the past two decades, monoclonal antibodies have emerged as an important and rapidly growing new drug class. Monoclonal antibodies have the ability to target specific cells of interest - such as cancer cells – and can be utilized to stimulate the patient's immune system to attack such cells, to deliver a toxin locally to the cells, or to block specific cell receptors. To date, mAbs have been approved for therapeutic use in oncology, transplantation, chronic inflammatory, infectious and cardiovascular diseases. Although significant progress has been made in recent years, one of the key challenges in the mAb therapeutics field remains the identification and validation of novel targets.

About Compugen's Monoclonal Antibody Therapeutic Targets Platform: This Platform relies on Compugen's LEADS and MED infrastructure platforms, protein domain predictions and other public and proprietary data sources to predict novel membrane proteins that can serve as targets for antibody therapeutics, such as for various cancer and autoimmune diseases. The selection of appropriate candidates from this large body of predicted membrane proteins is accomplished using sub-modules of algorithms and other computational tools developed specifically for the disease state or protein family of interest. The selected candidates are then experimentally validated.

About Compugen

Compugen's mission is to be the world leader in the discovery and licensing of product candidates to the drug and diagnostic industries under milestone and revenue sharing agreements. The Company's increasing inventory of powerful and proprietary discovery platforms is enabling the predictive discovery – field after field – of numerous therapeutic and diagnostic product candidates. These discovery platforms are based on the Company's decade-long focus on the predictive understanding of important biological phenomena at the molecular level. Compugen's current collaborations include Biosite, Medarex, Inc., Merck & Co., Inc., Ortho-Clinical Diagnostics (a Johnson & Johnson company), Roche, Siemens Healthcare Diagnostics, Inc., and Teva Pharmaceutical Industries. In 2002, Compugen established an affiliate – Evogene Ltd. (TASE: EVGN.TA) – to utilize the Company's *in-silico* predictive discovery capabilities in the agricultural biotechnology field. For additional information, please visit Compugen's corporate Website at www.cgen.com and Evogene's corporate Website at www.evogene.com.

This press release may contain "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These statements include words such as "may", "expects", "anticipates", "believes", and "intends", and describe opinions about 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. Some of these risks are: changes in relationships with collaborators; 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 identified and more fully explained under the heading "Risk Factors" in Compugen's annual reports filed with the Securities and Exchange Commission.

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