

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 March 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 March 18, 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: March 18, 2008



Compugen Announces New Drug Discovery Platform to Predict Peptides that Block Disease-Associated Conformations of Proteins

Biological efficacy demonstrated for two drug candidates from pilot run

Tel Aviv, Israel – March 18, 2008 – Compugen Ltd. (NASDAQ: [CGEN](#)) announced today the development and validation of its Blockers of Disease-Associated Conformation (DAC Blockers) platform, a new discovery platform for the identification of peptides that block proteins from adopting their disease-associated conformations. To date, two of the predicted therapeutic peptide candidates from the pilot validation run of the platform have shown initial experimental verification, one with anti-inflammatory and the other with anti-cancer activities.

The newly developed DAC Blockers platform has been designed to identify segments in proteins of interest that, if introduced therapeutically as synthetic peptides, would block specific conformational changes of such proteins, and thereby prevent them from adopting disease-associated conformations and related activities. A key capability of the platform is that it enables the proteome-wide search for such conformational change blocking peptides in human, viral and bacterial proteomes.

An initial run of the discovery platform resulted in the in silico prediction of therapeutic peptide candidates for approximately 40 drug targets of interest with potential usage for various indications, including solid cancers, inflammatory diseases, septic shock and viral diseases. Seven of these drug targets were selected for initial experimental validation and peptide blockers were found for all seven targets.

In addition, to date, two of these peptides have shown biological efficacy in experimental models, further demonstrating both their potential therapeutic utility and the validity of the platform's predictive capability. For example, acute in-vivo administration of one of these peptides was shown to significantly reduce the serum levels of inflammatory cytokines in mice treated with lipopolysaccharide. In other experimental models, the second peptide was shown to induce growth arrest and enhance the susceptibility to chemotherapy agents in breast, lung and prostate cancer cell lines. Both of these peptides are planned to undergo further evaluation in disease-related animal models, and experimental testing is in the planning stages for additional peptide candidates discovered to date.

“Attempting to prevent the disease-associated conformation of proteins has been an area of interest in pharmaceutical research, relying substantially on various experimental discovery methods,” said Yossi Cohen, M.D., Compugen's Vice President of Research and Development. “Therefore, we view our DAC Blockers platform as a major accomplishment in this field since it replaces a largely experimental and inefficient discovery process with a systematic and constantly improving process of in silico prediction followed by experimental validation,” Dr. Cohen continued. “The initial results are extremely encouraging, both in terms of quality and quantity, and we are very pleased to now add this discovery platform – the ninth platform announced to date – to our rapidly expanding discovery infrastructure,” Dr. Cohen concluded.

About Protein Folding and Conformational Changes

In order for proteins to perform their functions – whether good or bad – they must go through a process termed “folding” to adopt a three dimensional conformation. In addition, many proteins undergo subsequent conformational changes as they shift between active and non-active states, including specific conformations that may be associated with one or more disease conditions. Therefore, molecules that can target and block these disease-associated conformations, such as the peptides identified through the use of Compugen’s DAC Blockers platform, have potential applications in many different therapeutic areas.

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) – 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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