

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 2011

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 07, 2011, 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: Ms. Dikla Czaczkes Axsellbrad
Title: Chief Financial Officer
Date: March 07, 2011



Compugen Announces Positive Animal Model Results for Novel Peptide Predicted to Block Protein-Protein Interaction

***CGEN-25068 predicted and selected in silico during validation of Protein-Protein Interaction Blockers Discovery Platform
Blocking Peptides for four oncology-related pathways now under evaluation***

Tel Aviv, Israel, March 7, 2011 --- Compugen Ltd. ([NASDAQ: CGEN](#)) announced today positive animal model results for CGEN-25068, a novel peptide predicted and selected *in silico* to block a specific protein-protein interaction known to play an important role in various immune-related disease conditions. CGEN-25068 is one of a number of novel peptides predicted and selected as part of the validation activities for Compugen's Protein-Protein Interaction Blockers (PPI Blockers) Discovery Platform and is the first of these peptides to complete animal model testing. Additional peptides predicted to block targeted interactions in other pathways, primarily cancer-related, are at various stages of validation.

Protein-protein interactions are central to many key biological functions and thus the potential therapeutic applications of inhibiting such interactions are wide-ranging and of high industry interest. However, the discovery of drugs for such targeted therapy is extremely challenging and research efforts to find small molecules that inhibit such protein-protein interactions have been largely unsuccessful.

The PPI Blockers Platform was developed in order to address this need. Through the use of sequence and structure based proprietary algorithms integrated with additional computational biology tools, the Platform identifies potential protein binding segments on the target protein of interest or on proteins predicted to interact with the target protein. The identification and prioritization of these segments then allows the prediction and selection of peptides that could serve as drugs by blocking all, or a portion of, an interacting site. These "blocking peptides" could either serve as therapeutic agents themselves, or be used for the development of therapeutic agents such as monoclonal antibodies.

Using the PPI Blockers Platform, CGEN-25068 was one of several novel peptides predicted to inhibit a specific protein-protein interaction occurring in a protein target expressed on neutrophils and monocytes, and known to play an important role in certain disease conditions by amplifying the immune response. After synthesizing the *in silico* predicted novel peptides, initial *in vitro* cell-based validation supported CGEN-25068's effect on the immune response by inhibition of neutrophils' activation. The animal model which was then used for *in vivo* validation was lipopolysaccharide (LPS)-induced endotoxemia, a model for septic shock, which leads to animal death. In these experiments, CGEN-25068 was shown to significantly increase the survival rate of the animals.

Dr. Zurit Levine, Compugen's VP R&D stated, "We are pleased to report this first animal model validation of a peptide predicted by our PPI Platform to block disease associated protein-protein interactions. The PPI Blockers Platform is now proving to be an important addition to our predictive discovery infrastructure, with recent efforts focused on the identification of novel peptides designed to interfere with protein-protein interactions involved in cancer biology and development. To date, four pathway targets for cancer therapy have entered our Pipeline Program and blocking peptides for each are at various stages of evaluation. These four pathways are related to aspects of cancer growth, metastasis and cancer stem cells, all areas of high industry interest."

About the Protein – Protein Interactions Blockers (PPI Blockers) Platform

The PPI Blockers Discovery Platform consists of two main components. The first component creates a predicted protein-protein interaction map for the protein target of interest in a selected biological pathway. This map is based on both the target's known protein partners and additional proteins predicted by Compugen as potential partners, through the analysis of human and non-human proteomes and interaction data.

The second component, utilizing a series of sequence and structure based proprietary algorithms and other computational biology tools, identifies potential protein binding segments on the target protein of interest or on proteins predicted to interact with it. The identification and prioritization of these segments then allows the prediction and selection of peptides that could serve as drugs by blocking all, or a portion of, an interacting site. After prediction and selection, the peptides are synthesized and undergo first *in vitro*, and then *in vivo* studies. These peptide blockers may either serve as therapeutic peptides or be used for the development of therapeutic agents such as monoclonal antibodies.

About Compugen

Compugen is a leading drug and diagnostic discovery company providing novel product candidates addressing important unmet therapeutic and diagnostic needs to pharmaceutical, biotech and diagnostic companies under milestone and royalty bearing – or other revenue sharing – agreements. Unlike traditional high throughput trial and error experimental based discovery, Compugen's discovery efforts consist of *in silico* (by computer) hypothesis-driven product candidate prediction and selection followed by *in vitro* and *in vivo* experimental validation. Compugen's unique *in silico* prediction and selection capabilities are based on a broad and continuously growing infrastructure of proprietary scientific understandings and predictive platforms, algorithms, machine learning systems and other computational biology tools. Industry collaborations may be entered into before product candidate discovery is undertaken pursuant to "discovery on demand" type arrangements, or with respect to existing product candidates, can be initiated prior to, or at the proof of concept stage, or after selected preclinical activities have been undertaken by Compugen. In 2002, Compugen established an affiliate, Evogene Ltd. (www.evogene.com) (TASE:EVGN.TA), to utilize certain of the Company's *in silico* predictive discovery capabilities in agricultural biotechnology. For additional information, please visit Compugen's corporate website at www.cgen.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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