

**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 May 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 May 19, 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 Axselbrad  
Title: Chief Financial Officer  
Date: May 19, 2011



## **Compugen Discloses Discovery Method for Drug Candidates That Interfere With Protein Conformations**

*In silico method relies on prediction of hidden conformations of target proteins*

*Scientific paper being published in Bioinformatics*

Tel Aviv, Israel, May 19, 2011 --- Compugen Ltd. ([NASDAQ: CGEN](#)) announced today the development of a method to identify novel therapeutic candidates to interfere with disease associated protein conformations and protein-protein interactions. This new *in silico* method relies on the prediction of hidden conformations of the proteins of interest, which is the subject of a scientific paper to be published in the journal *Bioinformatics*, and is now available online at this [link](#).

Proteins are dynamic entities and can adopt a series of different conformations. However, some of these conformations are “hidden”, since they are short-lived or difficult to study experimentally for other reasons. Since this dynamic property of proteins is important for their function in healthy and diseased states, a broad view of a protein’s conformational space is crucial in many aspects of drug discovery.

Dr. Zurit Levine, Compugen’s V.P. of R&D, explained, “This new method has been developed to detect protein conformations that have not been observed experimentally in target proteins. This is accomplished through *in silico* prediction based on structures of other proteins that are remotely related to the target proteins of interest. Algorithms, enabling the appropriate weighting of the structural information extracted from the various remote homologous proteins, are a key component of the new method, resulting in the prediction of previously unknown conformations for the target protein. Detecting these hidden conformations extends our ability to design novel peptide product candidates that interfere with disease associated conformations (DAC) and protein-protein interactions (PPI), in addition to providing important new insights for our protein therapeutic product candidate discovery activities.”

Dr. Levine continued, “The concepts underlying this method have been recently incorporated into PEPPER, a previously undisclosed Compugen software infrastructure. PEPPER, which was designed to provide a basis for efficient and systematic development of new product candidate discovery platforms, tools and systems, consists of software modules for the extraction, analysis and integration of information from multiple and diverse sources and a number of distinct, but mutually supporting proprietary therapeutic discovery methodologies. These methodologies include the previously disclosed PPI and DAC Blockers Platforms, as well as other disclosed and undisclosed discovery approaches.”

Dr. Levine added, “During the past few years, in addition to this article being published in *Bioinformatics*, we have disclosed several of the science-based methodologies underlying certain of our therapeutic peptide discovery platforms. A series of six such peer-reviewed articles, describing various Compugen *in silico* methodologies for the design of peptides required for blocking either disease-associated conformations or protein-protein interactions, have been published to date. These articles provide further evidence of the uniqueness, power and scientific leadership of our predictive discovery capabilities.” (See “Scientific Publications” under “Research & Discovery” on Compugen’s website: [www.cgen.com](http://www.cgen.com))

### **About Protein Conformations and Protein-Protein Interactions**

Proteins are dynamic entities, which can adopt a series of different conformations (i.e. three dimensional structures), which determine their activity and interactions with other proteins or molecules. Several novel drugs take advantage of this dynamic nature by binding to a disease-associated protein in its inactive conformation and blocking it from adopting its active form. The ability to identify unknown protein conformations and predict molecules that can interfere with, and thereby block, these conformations greatly enhances discovery of novel therapeutic agents.

### **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](http://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](http://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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