

**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 April 2009

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 April 01, 2009 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: April 01, 2009



## **Compugen Announces Inhibition of Angiogenesis by Novel Peptide**

### ***CGEN-25017 peptide was predicted using Compugen's DAC Blockers Discovery Platform***

Tel Aviv, Israel, April 1 2009 – Compugen Ltd. (NASDAQ: CGEN) announced today that CGEN-25017, a novel peptide antagonist of the Angiopoietin/Tie-2 pathway, has shown inhibitory effects in a model of angiogenesis. These initial results support the potential use of this novel peptide for the treatment of angiogenesis-related diseases, such as cancer, macular degeneration, diabetic retinopathy, psoriasis, arthritis, and atherosclerosis. The sequence and potential use of CGEN-25017 was first predicted *in silico* using Compugen's DAC Blockers Platform, which was designed to predict peptides that block proteins of interest from achieving certain disease-associated conformations.

Using the chorioallantoic membrane (CAM) model, a widely recognized model to examine compounds affecting angiogenesis, CGEN-25017 demonstrated potent dose-dependent anti-angiogenic activity. These findings further support previous data obtained for CGEN-25017 in an *in vitro* multi-cellular assay of angiogenesis.

"Angiogenesis, the growth of new capillary blood vessels in the body, is an important natural process for healing and reproduction. However, abnormal blood vessel growth is now recognized as a common denominator underlying an increasing list of deadly and debilitating conditions. At present, targeting angiogenesis is one of the most intensely studied approaches to cancer treatment and therefore discovering a novel peptide with the ability to inhibit angiogenesis is an important breakthrough," said Dr. Anat Cohen-Dayag, vice president, research and development. "Of equal importance, we are very pleased to see the continuing validation of our unique DAC Blockers Platform. Understanding the folding of proteins remains one of the key mysteries of molecular biology, and therefore the now proven ability of our DAC Blockers platform to predict the sequence of peptides that should block the folding of certain proteins into their disease associated state is anticipated to yield a number of product candidates for unmet clinical needs."

CGEN-25017 is the third peptide predicted using Compugen's DAC Blockers Discovery Platform that has shown therapeutic potential. Additional peptides predicted by this platform to be conformation blockers targeting several other proteins, are now undergoing initial experimental evaluation.

#### **About Angiopoietin/Tie-2**

Angiogenesis, the process of new blood-vessel growth, plays an essential role in many physiological and pathological processes. Angiopoietins are naturally occurring secreted angiogenic factors. Their receptor, Tie2, which belongs to the family of tyrosine kinase receptors, is almost exclusively expressed by endothelial and hematopoietic stem cells. Modulation of Tie2 activity by Angiopoietins is crucial for angiogenesis, blood vessel maturation, and vascular endothelium integrity. Angiopoietin-1 (Ang-1)-mediated Tie2 activation is required to maintain the quiescent resting state of the endothelium. The agonistic Ang-1 functions are antagonized by Ang-2, which destabilizes the quiescent endothelium and primes it to respond to exogenous cytokines.

### **About the DAC Blockers Discovery Platform**

The Blockers of Disease-Associated Conformation (DAC Blockers) Platform, previously announced by Compugen, is a discovery platform designed for the prediction and selection of peptides that block proteins from adopting their disease-associated conformations. This is accomplished through the use of a series of proprietary algorithms to identify segments in proteins of interest that, if introduced as synthetic peptides, would prevent the proteins from adopting disease-associated conformations and related activities, and thus could have therapeutic benefits. In addition, a key component of the platform is that the prediction and selection approach enables proteome-wide searches for such peptides in proteins of interest within human, viral and bacterial proteomes.

### **About Compugen**

Compugen is a leading drug and diagnostic product candidate discovery company. Unlike traditional high throughput trial and error experimental based discovery, Compugen's discovery efforts are based on *in-silico* (by computer) prediction and selection utilizing a growing number of field focused proprietary discovery platforms accurately modeling biological processes at the molecular level. The resulting product candidates are then validated through *in vitro* and *in vivo* experimental studies and out-licensed for further development and commercialization under various forms of revenue sharing agreements. Compugen's current collaborations include Biosite, Medarex, Inc., Merck & Co., Inc., Merck Serono, Ortho-Clinical Diagnostics (a Johnson & Johnson company), Roche, Siemens Healthcare Diagnostics, Inc., and Teva Pharmaceutical Industries. 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 about Compugen, please visit the Company's corporate Web site 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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