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 July 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 July 9, 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: July 9, 2008

Exhibit 1

For Release

Compugen Announces Positive In-Vivo Results for Therapeutic Peptide Candidate for Immune Related Diseases

CGEN-25007 was predicted using Compugen's DAC Blockers discovery platform

Tel Aviv, Israel – July 9, 2008 – Compugen Ltd. (NASDAQ: CGEN) announced today positive results from a recently completed in vivo study of CGEN-25007, a novel peptide antagonist of the gp96 protein. The data indicate that CGEN-25007 has immunosuppressive effects and therapeutic potential for the treatment of various inflammatory diseases and other immune related pathologies. CGEN-25007, which has been shown to bind to recombinant gp96 in a dose dependent manner, was initially predicted using the Company's previously announced DAC blockers platform, which was designed to predict peptides that block proteins of interest from achieving certain disease-associated conformations.

Using an animal model of endotoxemia, a condition in which there is a substantial increase in the levels of inflammatory cytokines and chemokines in serum, CGEN-25007 was shown to exhibit a profound and dose-dependent anti-inflammatory activity. In this study, the novel peptide was administered following the introduction of lipopolysaccharide (LPS), a bacterial substance that induces a strong response in the animal immune system leading to systemic inflammation. The administration of CGEN-25007 resulted in a decrease of approximately 50% in the serum levels of inflammatory cytokines and chemokines, including tumor necrosis factor alpha (TNF-α), IL-6, interferon-gamma (IFN-γ), MIP-1α and MIP-2.

In addition, in ex-vivo experiments CGEN-25007 was found to strongly inhibit the secretion of inflammatory cytokines from human peripheral blood mononuclear cells (PBMCs) which had been challenged with LPS, staphylococcus epidermidis or anti-CD3 antibody, compounds known to activate the human immune system through different receptors. PBMCs triggered with these compounds and treated with CGEN-25007 exhibited more than 80% inhibition of secretion of cytokines, including TNFα, IL-1β, IL-6, IL-8, IL-12 and MIP-1α. In addition, CGEN-25007 had only a 20% inhibitory effect on the secretion of GM-CSF and no effect on the secretion of IL-2, suggesting selectivity in the action of this peptide.

These results support the potential use of this peptide as a novel approach for the treatment of many immune related diseases, including sepsis, autoimmune disorders, cardiovascular diseases and acute transplant rejection.

Yossi Cohen, M.D., Compugen's Vice President of Research and Development, said, "Reduction of certain inflammatory cytokines and chemokines in serum is the primary target of many anti-inflammatory drugs. As such, we are looking forward to continuing the development of this novel peptide which has now shown therapeutic potential for several important medical conditions. In addition, we are extremely pleased by this further validation of the ability of our DAC Blockers platform to predict peptides that can target and block disease-associated conformations of proteins. Additional peptides, targeting two other proteins and predicted in the pilot run of the platform to be conformation blockers, are now undergoing initial experimental evaluation."

About gp96

The gp96 protein triggers both the innate and adaptive arms of the immune system and its importance in inflammatory responses has been demonstrated in recent years. Through its involvement in the innate branch of immunity, gp96 potentiates responsiveness for Toll-like receptors (TLRs) on antigen presenting cells (APCs). TLR activation on APCs induces a pro-inflammatory response, including cytokine secretion and expression of co-stimulatory molecules, which in turn recruit and activate T cells. In addition, gp96 enables specific immune responses by transferring immunogenic peptides to MHC class I molecules, thus facilitating antigen specific activation of cytotoxic T cells. These key roles make gp96 an important target for therapeutic intervention in the treatment of immune-related disorders.

About the DAC Blockers Discovery Platform

The Blockers of Disease-Associated Conformation (DAC Blockers) platform, which was recently 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 capability of the platform is that the prediction and selection capability enables proteome-wide searches for such peptides in proteins of interest within human, viral and bacterial proteomes.

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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