**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 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 May 20, 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: May 20, 2008

Exhibit 1



# Compugen Presents Experimental Results for Three G-Protein Coupled Receptor (GPCR) Ligands

## Results for Relaxin related peptides presented at the Relaxin 2008 Conference

**Tel Aviv – May 20, 2008** – Speaking before the 5th International Conference on Relaxin and Related Peptides in Maui, Hawaii, Dr. Ronen Shemesh of Compugen Ltd. (NASDAQ: CGEN) today presented experimental results for three Compugen discovered  Relaxin related molecules that could have therapeutic activity in various clinical indications, including labor complications, infertility, inflammation, congestive heart failure and fibrotic diseases.

The three novel peptides, CGEN-25009, 25010 and 25011, were predicted *in silico* through the use of Compugen's GPCR Peptide Discovery Platform and were then shown to activate the GPCRs LGR7 (RXFP1) and LGR8 (RXFP2) . These receptors are known to be activated by Relaxin and Insulin-like 3 (INSL3), respectively. CGEN-25009, 25010 and 25011 are short and linear peptides derived through the use of the GPCR platform novel cleavage sites predictor from a precursor protein for which there was no known function.

In his presentation, Dr. Shemesh, project manager for the GPCR platform, summarized recently obtained results from a series of further experiments with the three peptides– such as cAMP measurements and downstream changes measured by cell impedance. In these experiments, the activation of the GPCRs LGR7 and LGR8 was further confirmed and additional information obtained regarding the activity of these novel molecules . By activation of these receptors, these peptides could potentially have a therapeutic effect in a large number of key pathophysiological conditions.  A provisional patent application covering the peptides has been filed by Compugen.

"Our GPCR Peptide Discovery Platform relies on a series of sequential computational biology predictive models and machine learning capabilities" stated Dr. Shemesh.  "Therefore – and particularly in view of both the critical role of GPCR receptors in the pharmaceutical world and the difficulty in finding novel ligands through traditional experimental methods - it is extremely rewarding for the project team to see the continuing validation of the platform's exceptional efficiency and accuracy", Dr. Shemesh concluded ".

**About Relaxin**
Substantial on-going world-wide research efforts are now demonstrating that the natural peptide hormone Relaxin and its family members (INSL3 and other insulin- like peptides) are multi-functional factors in a broad range of target tissues including both reproductive and other organs, in addition to their historical role as the "pregnancy hormone". Known to activate the GPCR- LGR7 and LGR8 receptors, the diverse and vital currently known roles of Relaxin include homeostatic roles in reproductive health, fertility and ageing, as well as exhibiting therapeutic properties in various pathophysiological conditions such as infertility, pregnancy and labor complications, fibrotic diseases, inflammatory disorders, wound healing, and cardiovascular diseases.

**About GPCRs and the GPCR Peptide Discovery Platform**

GPCRs are membrane protein receptors that are involved in signal transduction of numerous physiological processes. GPCRs are by far the largest family of known drug targets, and at least 40% of prescription drugs currently available are thought to act on GPCRs. Furthermore, newly discovered GPCR peptide ligands have in the past shown a high probability of being successfully developed into new drugs.

Compugen's previously disclosed GPCR discovery platform incorporates a proprietary model of the "peptidome", an *in silico* prediction of probable human peptides. Peptides are formed through the cleavage of precursor proteins, and Compugen's proprietary peptidome –which includes thousands of novel human peptide sequences – is based on predicting cleavage sites in precursor proteins. The discovery platform utilizes proprietary machine-learning algorithms to analyze the predictive peptidome and to identify peptides likely to activate GPCRs. To date, a pilot validation discovery run and two subsequent production runs of this platform have been completed by Compugen. As previously disclosed with respect to the pilot run, thirty three peptides, all novel, were synthesized and screened in a functional assay against a panel of 152 GPCRs. Eight of these peptides were shown to activate six different GPCRs in a concentration-dependent manner, including some for which there are no known endogenous ligands. CGEN-25009 and 25010, for which experimental results are now being presented, are two of these eight peptides; CGEN-25010 is a sub-segment of CGEN-25009, and CGEN-25011 constitutes a smaller segment that is present in both CGEN-25009 and 25010. In addition, this GPCR discovery platform is the basis of Compugen's recently announced collaboration with Merck & Co., Inc.

**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.

**Company contact:**
Dikla Czaczkes Axselbard
Acting Chief Financial Officer
Compugen Ltd.
Email: dikla@cgen.com
Tel: +972-54-530-4469