

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 2007

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 30, 2007 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/ Nurit Benjamini
Title: Chief Financial Officer
Date: April 30, 2007

Exhibit 1



Compugen Announces Collaboration for the Discovery of Novel Biomarkers for Unstable Atherosclerotic Plaques

*No reliable markers currently available for leading cause of death
in CAD and Stroke*

Tel Aviv, Israel – April 30, 2007 – Compugen Ltd. (NASDAQ: [CGEN](#)) announced today a collaboration with Mayo Clinic targeted at discovering and validating novel biomarkers for diagnosing the presence of unstable atherosclerotic plaques in coronary artery disease and cerebrovascular disease.

Coronary artery disease (CAD) is the leading cause of death in the developed world and resulted in estimated direct and indirect costs of over \$430 billion in the United States in 2007. Vulnerable plaque is regarded as the most common cause of complications from CAD and can lead to increased incidence of heart attack and stroke. Currently, there are no diagnostic tests to identify patients with unstable atherosclerotic plaques, and therefore, the availability of biomarkers for this purpose would represent a significant medical breakthrough.

Compugen expects to utilize its unique discovery engine approach to predict and validate biomarkers related to active atherosclerotic disease. Compugen's integrated analysis will incorporate data derived from biological materials provided by Mayo Clinic, as well as Compugen's proprietary expression and clinical data. Compugen will have exclusive commercialization rights for products resulting from this collaboration. Mayo Clinic is entitled to compensation under the agreement.

"Reliably identifying the presence of vulnerable plaques is well recognized as a key unmet diagnostic need. Therefore, utilizing the unique predictive biology capabilities that have been developed over the past decade at Compugen with relevant data from a world renowned medical center is an extremely exciting opportunity," said Anat Cohen-Dayag, Ph.D., Vice President, Diagnostic Biomarkers and Drug Targets. "Furthermore, this is another example of how Compugen's broadly applicable discovery engine approach is now being focused 'field by field' for rapid breakthroughs in diverse therapeutic and diagnostic areas, such as our recently announced programs and discoveries with respect to ligands for GPCRs, therapeutic protein candidates, large scale genetic variations, drug toxicity markers and antibody therapeutics," Dr. Cohen-Dayag concluded.

About Compugen

Compugen's mission is to be the world leader in the discovery and licensing of product candidates to the drug and diagnostic industry. The Company's powerful discovery engines enable the predictive discovery of numerous potential therapeutics and diagnostic biomarkers. This capability results from the Company's decade-long pioneering efforts in the deeper

understanding of important biological phenomena at the molecular level through the incorporation of ideas and methods from mathematics, computer science and physics into biology, chemistry and medicine. To date, Compugen's diagnostic and therapeutic product discovery efforts and its initial discovery engines have focused mainly within the areas of cancer, immune-related and cardiovascular diseases. The Company's primary commercialization pathway for its therapeutic and diagnostic product candidates is to enter into milestone and revenue sharing out-licensing and joint development agreements with leading companies. Compugen has established an agricultural biotechnology affiliate – Evogene, and a small-molecule drug discovery affiliate – Keddem Bioscience. 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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