

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 November 29, 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 November 29, 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: November 29, 2011



Compugen and DiscoverRx® Form Collaboration to Commercialize Novel Peptide Ligands for GPCR Drug Targets

Targeted Compugen peptide library contains more than 900 molecules designed by Compugen utilizing its GPCR Peptide Ligand Discovery Platform

DiscoverRx to utilize its industry leading PathHunter® Platform and largest portfolio of functional GPCR assays to match individual peptides with specific GPCR drug targets

Tel Aviv, Israel and Fremont, California - November 29, 2011 – Compugen Ltd. (NASDAQ: CGEN) and DiscoverRx Corporation announced today that they have entered into a collaborative partnership for the purpose of commercializing novel Compugen designed peptides to be matched with specific G protein-coupled receptor (“GPCR”) targets utilizing DiscoverRx GPCR related technologies. The new agreement follows a successful pilot program between the two companies.

Under the terms of the collaboration, DiscoverRx will utilize its PathHunter Platform as well as its extensive suite of additional proprietary cell based GPCR assays and related technologies to match individual peptides in the Compugen GPCR targeted peptide library with specific GPCR drug targets of interest to DiscoverRx’s pharmaceutical company clients and others. Following these activities, peptides of interest will be available for licensing from Compugen under milestone and royalty bearing agreements. The parties have agreed to a revenue sharing financial model providing different pre-arranged sharing percentages for each category of revenue anticipated by the collaboration.

The peptides in Compugen’s GPCR targeted library were predicted through the use of Compugen’s GPCR Peptide Ligand Discovery Platform. During the initial validation activities for this platform, three predicted peptides, CGEN-856, CGEN-855 and CGEN-25009, were subsequently shown to have therapeutic potential in disease animal models of cardiovascular, fibrotic and inflammatory conditions. In addition, Compugen has recently announced that the Pulmonary Fibrosis Foundation will fund further studies to evaluate the potential of CGEN-25009 for treating lung fibrosis.

This successful initial validation of the GPCR peptide platform, and subsequent enhancements and extensions of the platform prompted Compugen to utilize it to predict and synthesize a GPCR targeted peptide library, currently containing more than 900 peptides predicted to have a high likelihood of modulating GPCR targets. The analysis of this unique peptide library with DiscoverRx’s PathHunter Platform and broad range of GPCR assays and related technologies is the basis for this collaboration. The GPCR family of membrane protein receptors is the largest family of known drug targets, and an estimated 40% of prescription drugs currently available are thought to modulate GPCRs. Furthermore, newly discovered GPCR peptide ligands in the past have shown a high probability of being successfully developed into new drugs.

The two companies recently completed a pilot project whereby the DiscoverX technologies were applied to analyze the Compugen designed peptides with a small subset of GPCR targets. This pilot resulted in promising initial results for a number of library peptides that were shown to modulate specific GPCR targets, thus demonstrating both the library's potential as a reservoir of therapeutically relevant peptides, as well as the ability of DiscoverX's functional GPCR assays to identify novel peptide/GPCR target interactions.

Dr. Pyare Khanna, CEO of DiscoverX Corp., stated, "We see this collaboration as a unique opportunity to address a key drug target class through a combination of DiscoverX's most comprehensive and market leading GPCR cell based assay platforms, and Compugen's leading predictive capability for peptide discovery. Based on these synergistic competitive advantages, and the demonstrated success of the recently completed pilot program, we believe that via this partnership, pharmaceutical and biotech companies will be able to gain access to novel peptides for both research and product development purposes. DiscoverX will continue to innovate in the field of GPCR drug discovery, and is pleased to now bring to the industry, together with Compugen, novel solutions in this key area of high industry interest and need."

"Compugen is very enthusiastic regarding this collaboration with DiscoverX, one of the leading companies in the GPCR screening field, for the commercialization of Compugen-designed molecules from our GPCR peptide library," said Anat Cohen-Dayag, Ph.D., Compugen's President and CEO.

Dr. Cohen-Dayag continued, "As previously disclosed, Compugen is focusing its discovery and development efforts towards addressing unmet medical needs in our focus areas of oncology and immunology through the use of novel protein and antibody therapeutics. However, as part of the development and validation activities associated with establishing our broadly applicable predictive discovery capabilities, a number of very promising discoveries were made that have significant potential in other areas. Therefore, in recent months, we have been in various discussions for arrangements with other organizations to advance certain of these earlier discoveries, including a number related to potential peptide therapeutics, largely without the need for further Compugen financial resources, such as this very promising collaboration with DiscoverX being announced today."

About Compugen's GPCR Peptide Library

The more than 900 peptide molecules in Compugen's GPCR peptide library were predicted through the use of Compugen's GPCR Peptide Ligand Discovery Platform. The initial validation activities for this platform resulted in the predictive discovery of a number of novel peptides that were subsequently shown to have therapeutic potential in disease animal models of cardiovascular, fibrotic and inflammatory conditions. Further enhancements and extensions during, and subsequent to, the initial validation, have resulted in the current platform, which relies on a series of sequential computational biology models and machine learning capabilities for the prediction and selection of product candidates. The platform incorporates a proprietary model of the "peptidome", an *in silico* prediction of putative human peptides, which includes thousands of novel predicted human peptide sequences, based on predicting cleavage sites in precursor proteins. The discovery platform utilizes proprietary machine-learning algorithms to analyze this peptidome and to identify peptides likely to activate GPCRs.

About DiscoverX's PathHunter Platform and GPCR related Technologies

DiscoverX's innovative approach to GPCR signaling assay development, using a simple, homogeneous, chemiluminescent, read-out based on β -galactosidase-based enzyme fragment complementation (EFC), is core to the success of many drug discovery programs. The emerging field of GPCR drug discovery is necessitating the analysis of GPCRs using multiple assay

approaches. From the traditional second messenger signaling assays to the novel, universal β -arrestin recruitment assays for known and orphan GPCRs to the next generation platforms for studying GPCR internalisation and heterodimerisation, DiscoverRx is addressing current and emerging drug discovery needs through innovative GPCR assays and profiling services and by offering more than one signaling assay platform for a single GPCR target (www.discoverx.com/gpcrs).

About Compugen

Compugen is a leading therapeutic product candidate discovery company, currently focused on biologics-based therapy to address important unmet needs in the fields of immunology and oncology, either for Compugen or its partners. Unlike traditional high throughput trial and error experimental based drug candidate discovery, Compugen's discovery efforts are based on systematic and continuously improving *in silico* (by computer) product candidate prediction and selection followed by experimental validation, with selected product candidates being advanced in its Pipeline Program to the pre-IND stage. Compugen's *in silico* predictive models utilize a broad and continuously growing infrastructure of proprietary scientific understandings and predictive platforms, algorithms, machine learning systems and other computational biology capabilities. The Company's business model primarily involves collaborations covering the further development and commercialization of Compugen-discovered product candidates and various forms of "discovery on demand" arrangements, in both cases providing Compugen with potential milestone payments and royalties on product sales or other forms of revenue sharing. In 2002, Compugen established an affiliate, Evogene Ltd. (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.

About DiscoverRx

Founded in 2000, DiscoverRx is a privately held, venture-backed company headquartered in Fremont, California, with additional offices in San Diego, CA and Birmingham, England. DiscoverRx is dedicated to the development and commercialization of cutting-edge solutions to study GPCRs, kinases and other major drug target classes, and many of their innovative products as well as service offerings have been widely adopted in global drug discovery campaigns. The Company core platforms 1) β -galactosidase enzyme fragment complementation in biochemical and cell based assays for discovery research, and 2) KINOMEscan in-vitro binding assay platform for kinase profiling are routinely deployed by leading pharmaceutical, biotech and academic laboratories on a worldwide basis. For more information on DiscoverRx products, please visit www.discoverx.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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