

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 6-K

**REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16
UNDER THE SECURITIES EXCHANGE ACT OF 1934**

For the month of August 2013

Commission File Number 000-30902

COMPUGEN LTD.
(Translation of registrant's name into 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 of Form 20-For Form 40-F:

Form 20-F Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

Compugen Ltd.

Research and Development Collaboration and License Agreement

On August 5, 2013, Compugen Ltd. (“Compugen” or, the “Company”) and BayerPharma AG (“Bayer”) entered into a Research and Development Collaboration and License Agreement (the “Agreement”) for the research, development, and commercialization of antibody-based therapeutics for cancer immunotherapy against two novel, Compugen-discovered immune checkpoint regulators.

Under the terms of the Agreement, Compugen will receive an upfront payment of \$10 million, and is eligible to receive an aggregate of over \$500 million in potential milestone payments for both programs, not including aggregate preclinical milestone payments of up to \$30 million during the research programs. Additionally, Compugen is eligible to receive mid- to high single digit royalties on global net sales of any approved products under the collaboration.

Under the Agreement, the parties will jointly pursue a preclinical research program with respect to each of the two immune checkpoint regulators. A joint steering committee consisting of an equal number of representatives from each party will be responsible for overseeing and directing each such research program pursuant to an agreed-upon workplan. Each party will be responsible for the costs and expenses incurred by it in performing its designated activities under the workplans during the research programs. Following each such research program, Bayer will have full control over further clinical development of any cancer therapeutic product candidates targeting the Compugen-discovered immune checkpoint regulators and will have worldwide commercialization rights for any approved products.

Bayer may terminate the Agreement, either in whole or only with respect to one of the programs, and in each case also on a product-by-product and/or country-by country basis, at any time without cause, upon ninety (90) days prior written notice. Either party may also terminate the Agreement, either in whole or with respect to only one of the programs, if the other party is in material breach and such breach has not been cured within the applicable cure period. Upon any termination of the Agreement, depending upon the circumstances, the parties have varying rights and obligations with respect to the continued development and commercialization of any products and certain (or various) payment and royalty obligations.

A copy of the press release announcing the Agreement is attached to this Report as Exhibit 99.1 and is incorporated herein by reference.

The information contained in this Report, including the exhibit hereto, is hereby incorporated by reference into the Company’s Registration Statements on Form F-3, File Nos. 333-171655 and 333-185910.

Exhibits

Exhibit Number	Description of Exhibit
99.1	Press Release dated August 5, 2013.

Signatures

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.

Date: August 5, 2013

By: /s/ Dikla Czaczkes Axselbrad

Dikla Czaczkes Axselbrad
Chief Financial Officer



Compugen Announces Collaboration and License Agreement with Bayer for Antibody-Based Cancer Immunotherapies

Compugen to hold 2nd Quarter Conference Call August 7, 2013

Tel Aviv, Israel, August 5, 2013 --- Compugen Ltd. ([NASDAQ: CGEN](#)) announced today the signing of a collaboration and license agreement for the research, development, and commercialization of antibody-based therapeutics for cancer immunotherapy against two novel Compugen discovered immune checkpoint regulators. Under the terms of the agreement, Bayer HealthCare (Bayer) and Compugen will jointly pursue a preclinical research program. Subsequently, Bayer will have full control over further development and have worldwide commercialization rights for potential cancer therapeutics.

Under the agreement Compugen will receive an upfront payment of USD 10 million, and is eligible to receive over USD 500 million in potential milestone payments for both programs, not including milestone payments of up to USD 30 million associated with preclinical activities. Additionally, Compugen is also eligible to receive mid to high single digit royalties on global net sales of any resulting products under the collaboration.

“Bayer is committed to translating the science of cancer research into effective therapies helping people affected by cancer live longer and improve their quality of life,” said Prof. Andreas Busch, Member of the Bayer HealthCare Executive Committee and Head of Global Drug Discovery. “Antibody-based immunotherapies are promising approaches in oncology which can stimulate the body’s own immune cells to fight cancer cells. Immunotherapy is one of our focus areas in oncology research. We are looking forward to expanding our portfolio in this area through partnering with Compugen.”

Anat Cohen-Dayag, Ph.D., President and CEO of Compugen, added “We are very excited to initiate this collaboration with Bayer, a leading global life science company with a broadening oncology franchise, for the development of antibody-based cancer immunotherapies against these two promising novel immune checkpoint targets. In addition, we believe that the prediction and validation of these two targets, through the use of our broadly applicable predictive discovery infrastructure, provides additional validation for our long-term commitment to establishing this unique capability”.

The immunotherapy approach aims at combatting cancer by stimulating the body’s own immune cells. The tumor and its environment suppress the ability of cancer patients to develop an effective anti-tumor immune response and in this way protect both tumor growth and survival. Compugen has discovered two novel immune checkpoint regulators that potentially play a key role in immunosuppression. Researchers at Compugen are developing specific therapeutic antibodies that are geared to block the immunosuppressive function of these targets and to reactivate the patient’s anti-tumor immune response in order to fight cancer.

About Cancer Immunotherapy

Latest cancer immunotherapies have demonstrated impressive clinical benefit, even for end-stage patients with difficult-to-treat tumors such as metastatic melanoma and non-small cell lung cancer. Unlike conventional cancer therapies, which act by directly targeting the cancer cells, resulting often in only transient clinical responses as cancer cells become resistant, clinical responses to cancer immunotherapy tend to be durable, sometimes resulting in dramatic long term survival and absence of resistance or recurrences.

About Compugen

Compugen is a leading drug discovery company focused on therapeutic proteins and monoclonal antibodies to address important unmet needs in the fields of immunology and oncology. The Company utilizes a broad and continuously growing integrated infrastructure of proprietary scientific understandings and predictive platforms, algorithms, machine learning systems and other computational biology capabilities for the *in silico* (by computer) prediction and selection of product candidates, which are then advanced in its Pipeline Program. The Company's business model includes collaborations covering the further development and commercialization of selected product candidates from its Pipeline Program and various forms of research and discovery agreements, in both cases providing Compugen with potential milestone payments and royalties on product sales or other forms of revenue sharing. In 2012, Compugen established operations in California for the development of oncology and immunology monoclonal antibody therapeutic candidates against Compugen drug targets. For additional information, please visit Compugen's corporate website at www.cgen.com.

On August 2, 2013 Compugen filed Form-6K with its financial statements for the six months ended June 30, 2013 and will host a public conference call at 10:00 AM EST on Wednesday, August 7, 2013 to discuss these results and any questions with respect to this press release. Further information regarding the conference call is provided in a separate press release issued today and on our website.

About Bayer HealthCare

The Bayer Group is a global enterprise with core competencies in the fields of health care, agriculture and high-tech materials. Bayer HealthCare, a subgroup of Bayer AG with annual sales of EUR 18.6 billion (2012), is one of the world's leading, innovative companies in the healthcare and medical products industry and is based in Leverkusen, Germany. The company combines the global activities of the Animal Health, Consumer Care, Medical Care and Pharmaceuticals divisions. Bayer HealthCare's aim is to discover, develop, manufacture and market products that will improve human and animal health worldwide. Bayer HealthCare has a global workforce of 55,300 employees (Dec 31, 2012) and is represented in more than 100 countries. More information at www.healthcare.bayer.com.

This press release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These statements, which include statements related to the potential development and commercialization of antibody-based cancer immunotherapies against the Compugen-discovered immune checkpoint targets, potential milestone and royalty payments, and that the collaboration validates Compugen's predictive discovery infrastructure, include words such as "may," "expects," "anticipates," "potential," "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 and other factors are discussed in the "Risk Factors" section of Compugen's Annual Report on Form 20-F for the year ended December 31, 2012 as filed with the Securities and Exchange Commission. In addition, any forward-looking statements represent Compugen's views only as of the date of this release and should not be relied upon as representing its views as of any subsequent date. Compugen does not assume any obligation to update any forward-looking statements unless required by law.

Company contact:

Tsipi Haitovsky
Global Media Liaison
Compugen Ltd.
Email: tsipih@netvision.net.il
Tel: +972-52-598-9892