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 December 2016

Commission File Number 000-30902

COMPUGEN LTD.

(Translation of registrant's name into English)

26 Harokmim Street
Holon 5885849, 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.

On December 7, 2016, Compugen Ltd. ("Compugen" or the "Company") issued a press release, a copy of which is filed as Exhibit 99.1 to this Form 6-K and incorporated by reference herein.

The information contained in this Report on Form 6-K, including the exhibit hereto, is hereby incorporated by reference into the Company's Registration Statements on Form F-3, File Nos. 333-198368 and 333-213007.

Exhibits

Exhibit Number	**Description of Exhibit**
99.1	Press Release dated December 7, 2016.

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: December 8, 2016

By: /s/ Donna Gershowitz
Donna Gershowitz
General Counsel

Exhibit 99.1

FOR IMMEDIATE RELEASE

Compugen Announces Key Highlights from R&D Day

HOLON, ISRAEL, December 7, 2016 — Compugen Ltd. (NASDAQ: CGEN), a leading predictive drug discovery company, announced today the following key highlights from its R&D Day that took place this morning in NYC:

Disclosure of a therapeutic antibody program targeting TIGIT to complement the Company's CGEN-15029 program, following new data recently generated for the CGEN-15029/PVRIG program. TIGIT and PVRIG represent two distinct arms of the same biological pathway. Based on this and experimental data, the Company believes there is significant added value to developing both arms as a potential combination therapy. Compugen expects to select the lead antibody for CGEN-15137/TIGIT by end of Q1 2017.

COM701, clinical candidate antibody targeting CGEN-15029/PVRIG, is currently undergoing process development as part of the manufacturing activities to generate clinical material. IND-filing for COM701 is anticipated in Q4 2017.

Update on status of cancer immunotherapy partnership with Bayer entered in August 2013. As previously disclosed, after achieving all preclinical stage milestones for CGEN-15001T immune checkpoint, this program was transferred to Bayer for further development. To date, preclinical activities are on track, and pivotal toxicity studies and GMP clinical trial material production are ongoing. As previously disclosed, the second program under the partnership, CGEN-15022, is at an earlier stage and further characterization studies of its role in anti-cancer immune responses are ongoing.

Disclosure of a new therapeutic program focusing on a protein target expressed in various cancers, and which is highly correlated with an M2 macrophages marker. The target was also shown to inhibit T cell activation in cell-based studies. Macrophages are immune cells that are highly immune suppressive in the tumor microenvironment, and targeting such cells offers the potential for efficacy in patients non-responsive to checkpoint inhibitors. Therapeutic antibody discovery activities have been initiated for this program.

Overview of the Company's immuno-oncology target validation pipeline activities, which primarily focus on myeloid targets. With an aim to complement and expand the patient population responsive to checkpoints inhibitors, blocking myeloid targets may serve as the next wave of cancer immunotherapies. Myeloid CGEN-target candidates have been identified within the tumor microenvironment of multiple cancers and are aggressively pursued by the Company and in collaboration with Prof. Drew Pardoll.

- The event also featured a presentation by Prof. Drew Pardoll, Chairman of Compugen's Scientific Advisory Board and Abeloff Professor of Oncology, Medicine, Pathology and Molecular Biology and Genetics at Johns Hopkins University of Medicine, and Director of the Bloomberg~Kimmel Institute for Cancer Immunotherapy at the Sidney Kimmel Cancer Center, Johns Hopkins. The presentation included an overview of the immune checkpoint inhibition landscape, including both T cells and myeloid cells. Prof. Pardoll further presented *in vitro* and *in vivo* data demonstrating the importance of PVRIG/CGEN-15029 as a significant T cell immune checkpoint as well as evidences that PVRIG-blockage synergizes with PD1/PDL1 in unleashing T cell activity.

About Compugen

Compugen is a leading therapeutic discovery company utilizing its broadly applicable predictive discovery infrastructure to identify novel drug targets and develop first-in-class biologics. The primary focus of the Company's current pipeline is on immune checkpoint target candidates discovered by the Company, potentially providing the basis for a next wave of therapeutics for cancer immunotherapy. Compugen's business model is based on selectively entering into collaborations for its novel target candidates and drug product candidates at various stages of research and development under revenue-sharing agreements. The Company is headquartered in Israel, with R&D facilities in Israel and South San Francisco. At the US facilities, monoclonal antibody therapeutic candidates are discovered and developed against the Company's novel target candidates. For additional information, please visit Compugen's corporate website at http://www.cgen.com.

Forward Looking Statement

This press release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements can be identified by the use of terminology such as "will," "may," "expects," "anticipates," "believes," and "intends," and describe opinions about future events, and include statements relating to the potential of the CGEN-15029 program for the development of new cancer immunotherapy treatments, including the potential of COM701 alone or combined with anti-CGEN-15137 antibody as a new cancer immunotherapy treatment. 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. Among these risks: Compugen's business model is substantially dependent on entering into collaboration agreements with third parties, and Compugen may not be successful in generating adequate revenues or commercializing aspects of its business model. Moreover, the development and commercialization of therapeutic candidates involve many inherent risks, including failure to progress to clinical trials or, if they progress to or enter clinical trials, failure to receive regulatory approval. These and other factors are more fully discussed in the "Risk Factors" section of Compugen's most recent Annual Report on Form 20-F as filed with the Securities and Exchange Commission as well as other documents that may be subsequently filed by Compugen from time to time 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.

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