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 February 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 February 15, 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: February 15, 2011



Compugen Ltd. Reports Fourth Quarter and Calendar 2010 Financial Results

Company Discloses New Capabilities in Monoclonal Antibody Target Discovery

TEL AVIV, ISRAEL – February 15, 2011 – Compugen Ltd. (NASDAQ: CGEN) today reported financial results for the fourth quarter and year-ending December 31, 2010.

Dr. Anat Cohen-Dayag, president and CEO, stated, "Compugen's long-term commitment to pioneering predictive drug discovery continues to provide the basis for the development of unique and powerful discovery capabilities in areas of high industry interest and unmet medical needs. For example, during 2010 we announced the development of three additional discovery platforms: the Protein Family Members Discovery Platform, the Protein-Protein Interaction Blockers Discovery Platform, and the Intracellular Drug Delivery Discovery Platform. In addition, during the past few months, field extension modules were added to our previously disclosed monoclonal antibody (mAb) target discovery capability."

Dr. Cohen-Dayag continued, "Antibody therapeutics comprise the fastest growing drug field and are now yielding improved therapeutics to treat many life-threatening and debilitating diseases. Although significant progress has been made in recent years, one of the key challenges in the mAb therapeutic field remains the identification and validation of novel targets that are overexpressed in a particular disease state or involved in the modulation of the disease. Such targets allow the development of antibody-based therapeutic molecules which can either specifically destroy these cells - while sparing normal and healthy tissues - or modulate the course of the disease." Dr. Cohen-Dayag continued, "With the recently added field extension modules, Compugen's mAb target discovery capability has been expanded beyond the initial focus on various solid tumors such as lung, ovarian, breast, colorectal and hematological cancers, which had resulted in the discovery of a number of drug target candidates for antibody-based therapy, including the previously disclosed CGEN-928, a drug target candidate for treatment of multiple myeloma, and CGEN-671, a drug target candidate for treatment of epithelial cancers. The new capabilities are now enabling the discovery of drug targets involved in drug response, metastatic stage cancer, and additional cancers such as melanoma, renal, liver, and pancreatic. Utilizing these new modules, we have already added five additional product candidates to our Pipeline Program, bringing the current total to more than 30 candidate protein therapeutics, peptide therapeutics and targets for mAb therapy at various stages of validation. With respect to the overall Pipeline Program, we are extremely pleased by our progress to date and look forward to disclosing additional information regarding specific molecules during the coming months."

As previously stated, since current revenues result primarily from fees and milestones, our results are, and will continue to be, subject to substantial fluctuations due to timing. Revenues for the fourth quarter of 2010 were \$190,000 compared with \$25,000 for the comparable period of 2009, and revenues for calendar 2010 were \$1.1 million compared with \$250,000 for calendar 2009.

The net loss for the most recent quarter was \$2.0 million (including a non-cash expense of \$343,000 related to stock based compensation), or \$0.06 per share, compared with a net loss of \$2.0 million (including a non-cash expense of \$440,000 related to stock based compensation), or \$0.07 per share, for the corresponding quarter of 2009. The net loss for calendar 2010 was \$7.2 million (including a non-cash expense of \$2.1 million related to stock based compensation), or \$0.22 per share, compared with a net loss of \$3.8 million (including a non-cash expense of \$1.5 million related to stock based compensation), or \$0.13 per share, for 2009.

The increase in net loss for calendar 2010 compared with calendar 2009 is due to the sale by Compugen during the second quarter of 2009 of a portion of its holdings of Evogene Ltd. shares for a gain of approximately \$3.6 million, which is included in "Other income" for 2009.

Research and development expenses for the fourth quarter of 2010 were \$1.8 million, compared with \$1.6 million for the fourth quarter of 2009 and remained the Company's largest expense. Research and development expenses for calendar 2010 were \$6.2 million compared with \$6.0 million for 2009. These amounts are before the deduction of governmental and other grants, which totaled \$205,000 for the fourth quarter of 2010, compared with \$247,000 for the corresponding quarter in 2009, and \$1.0 million for calendar 2010, compared with \$944,000 for 2009.

At year-end 2010, the asset "Receivables from financing arrangement" in the amount of \$5.0 million (which was subsequently collected by the Company in full in early 2011) and the liability "Research and development funding arrangement" in the amount of \$4.0 million both relate to the research and development funding arrangement signed in December of 2010. The \$4.0 million liability is an estimated value of the instrument for accounting purposes resulting from the right of the investor to waive his right to receive potential future payments in exchange for 833,334 Compugen ordinary shares.

As of December 31, 2010, cash and cash related accounts totaled \$21.8 million compared with \$23.4 million at December 31, 2009 (including for 2009 remaining receivables from the equity offering completed in late December 2009). These amounts do not include either the market value of Compugen's holdings of Evogene shares at each such year-end, or for 2010, the \$5.0 million received in early 2011 from a research and development funding arrangement signed prior to year-end 2010 referred to in the prior paragraph. For calendar 2011, the Company anticipates an increase in gross cash expenditures to approximately \$10 million due primarily to increased activities under its expanded Pipeline Program. Such estimated gross cash expenditures will be offset by revenues and other cash sources in calculating net cash flow for the year.

Conference Call and Webcast Information

A replay of the conference call will be available approximately two hours after the completion of the live conference call. To access the replay, please dial 1-888-295-2634 from the US or 972-3-925-5921 internationally. The replay will be available until 12 noon EST on February 18, 2011.

(Tables to follow)

About Compugen

Compugen is a leading drug and diagnostic product candidate discovery company. Unlike traditional high throughput trial and error experimental based discovery, Compugen's discovery efforts are based on *in silico* (by computer) product candidate prediction and selection utilizing a broad and continuously growing infrastructure of proprietary scientific understandings and predictive platforms, algorithms, machine learning systems and other computational biology tools to address important unmet therapeutic and diagnostic needs – both for Compugen and its partners. Compugen's growing number of collaborations covering the further development and commercialization of Compugen-discovered product candidates provides Compugen with potential milestone payments and royalties on product sales or other forms of revenue sharing. These collaborations may be entered into before product candidate discovery is undertaken pursuant to "discovery on demand" type arrangements, or with respect to existing product candidates, collaborations can be initiated prior to or at the proof of concept stage, or after additional preclinical activities have been undertaken by Compugen. In 2002, Compugen established an affiliate,

Evogene Ltd. (<u>www.evogene.com</u>) (<u>TASE: EVGN.TA</u>), 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 <u>www.cgen.com</u>.

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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COMPUGEN LTD. CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(U.S. dollars in thousands, except for share and per-share amounts)

	Three Months Ended <u>December 31,</u>		Year Ended December 31,	
	<u>2010</u>	<u>2009</u>	<u>2010</u>	<u>2009</u>
Revenues	190	25	1,115	250
Cost of revenues	26	-	224	-
Gross profit	164	25	891	250
Research and development expenses	1,757	1,625	6,237	5,995
Less: governmental and other grants	(205)	(247)	(1,010)	(944)
Research and development expenses, net	1,552	1,378	5,227	5,051
Marketing and business development expenses	98	21	633	681
General and administrative expenses	814	577	2,909	2,147
Total operating expenses *	2,464	1,976	8,769	7,879
Operating loss	(2,300)	(1,951)	(7,878)	(7,629)
Financing income (loss), net	(111)	(152)	241	65
Other income	397	64	434	3,721
Net loss from continuing operations	(2,014)	(2,039)	(7,203)	(3,843)
Gain (loss) from discontinued operations	-	(2)	-	12
Net loss	(2,014)	(2,041)	(7,203)	(3,831)
Basic and diluted loss per ordinary share from continuing operations	(0.06)	(0.07)	(0.22)	(0.13)
Basic and diluted loss per ordinary share from discontinued operations	-	-	-	-
Basic and diluted net loss per ordinary share	(0.06)	(0.07)	(0.22)	(0.13)
Weighted average number of ordinary shares outstanding * Includes stock based compensation	33,536,120	28,852,335	33,284,017	28,608,317

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COMPUGEN LTD. CONDENSED CONSOLIDATED BALANCE SHEETS DATA

(U.S. dollars, in thousands)

	December 31,	December 31,
	<u>2010</u>	<u>2009</u>
ASSETS		
Current assets		
Cash, cash equivalents and short-term bank deposits	21,824	15,639
Restricted cash	684	161
Trade receivables	21	-
Accounts receivables and prepaid expenses	548	720
Receivables from financing arrangements	5,000	7,790
Total current assets	28,077	24,310
Long-term investments		
Investment in Evogene	6,227	3,898
Long-term prepaid expenses	64	18
Severance pay fund	1,510	1,224
Total long-term investments	7,801	5,140
Property and equipment, net	580	735
Total assets	36,458	30,185
LIABILITIES AND SHAREHOLDERS' EQUITY Current liabilities		
Accounts payable and accrued expenses	2,441	1,357
Deferred revenues	-	113
Total current liabilities	2,441	1,470
Long-term liabilities		
Research and development funding arrangement	4,037	_
Accrued severance pay	1,695	1,317
Total long-term liabilities	5,732	1,317
Total shareholders' equity	28,285	27,398
Total liabilities and shareholders' equity	36,458	30,185