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 2010

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 o

On April 27, 2010, 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/ Ms. Dikla Czaczkes Axselbrad Name: Ms. Dikla Czaczkes Axselbrad Title: Chief Financial Officer Date: April 27, 2010