Via Facsimile and U.S. Mail

December 30, 2010

David Aviezer, Ph.D. President and Chief Executive Officer Protalix Biotherapeutics, Inc. 2 Snunit St., Science Park POB 455, Carmiel 20100, Israel

> Re: Protalix Biotherapeutics, Inc. Form 10-K for the Fiscal Year Ended December 31, 2009 Filed February 26, 2010 File No. 001-33357

Dear Dr. Aviezer:

We have completed our review of your filings and do not have any further comments at this time.

Sincerely,

Jeffrey Riedler Assistant Director

cc: James R. Tanenbaum, Esq. Joseph Magnas, Esq. Neeraj Kumar, Esq. Morrison & Foerster LLP 1290 Avenue of the Americas New York, NY 10104-0050