



DIVISION OF
CORPORATION FINANCE

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

August 9, 2010

Mr. Larry Bullock
Chief Financial Officer
BioMimetic Therapeutics, Inc.
389 Nichol Mill Lane
Franklin, TN 37067

Re: BioMimetic Therapeutics, Inc.
Form 10-K for the fiscal year ended December 31, 2009
Filed March 12, 2010
Form 10-Q for the quarterly period ended March 31, 2010
File No. 000-51934

Dear Mr. Bullock:

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

Sincerely,

Brian Cascio
Accounting Branch Chief