



DIVISION OF
CORPORATION FINANCE

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

July 23, 2010

Richard J. Faleschini
President and Chief Executive Officer
BioSphere Medical, Inc.
1050 Hingham Street
Rockland, MA 02370

Re: BioSphere Medical, Inc.
Preliminary Proxy Statement on Schedule 14A
Filed June 10, 2010
File No. 000-23678

Dear Mr. Faleschini:

We have completed our limited review of your filing and have no further comments at this time. If you have any questions, please contact Louis Rambo at (202) 551- 3289 or Mary Beth Breslin, Senior Attorney, at (202) 551-3625.

Sincerely,

Russell Mancuso
Branch Chief

cc (fax): Cynthia T. Mazareas, Esq.
Wilmer Cutler Pickering Hale and Dorr LLP