

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

DIVISION OF CORPORATION FINANCE

October 6, 2010

John Gandolfo Chief Financial Officer Bacterin International Holdings, Inc. 600 Cruiser Lane Belgrade, MT 59714

> Re: Bacterin International Holdings, Inc. Item 4.01 Form 8-K Filed September 24, 2010 File No. 333-158426

Dear Mr. Gandolfo:

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

Sincerely,

James A. Allegretto Sr. Assistant Chief Accountant