



**Via Edgar**

February 8, 2011

Securities and Exchange Commission  
100 F Street, N.E.  
Washington D.C. 20549  
Attn: Jeffrey Riedler, Assistant Director

Re: Bacterin International Holdings, Inc.  
Registration Statement on Form S-1  
File No. 333-169620

Dear Mr. Riedler:

Pursuant to Rule 461 under the Securities Act of 1933, as amended, Bacterin International Holdings, Inc. (the "Company") requests acceleration of the effective date of the above-referenced Registration Statement so that the same shall become effective as of 5:00 p.m. Eastern Time on February 10, 2011, or as soon thereafter as possible.

The Company hereby acknowledges that

- Should the Commission or the Staff, acting pursuant to delegated authority, declare the Registration Statement effective, it does not foreclose the Commission from taking any action with respect to the Registration Statement;
  - The action of the Commission or the Staff, acting pursuant to delegated authority, in declaring the Registration Statement effective, does not relieve the Company from its full responsibility for the adequacy and accuracy of the disclosure in the Registration Statement; and
  - The Company may not assert Staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.
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Very truly yours,

By: /s/ John Gandolfo

Name: John Gandolfo

Title: Chief Financial Officer

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