

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 8-K

CURRENT REPORT PURSUANT
TO SECTION 13 OR 15(D) OF THE
SECURITIES EXCHANGE ACT OF 1934

Date of report (Date of earliest event reported): April 4, 2012

Bacterin International Holdings, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware

(State or Other Jurisdiction of Incorporation)

001-34951

(Commission File Number)

20-5313323

(IRS Employer Identification No.)

600 Cruiser Lane
Belgrade, Montana

(Address of Principal Executive Offices)

59714

(Zip Code)

(406) 388-0480

(Registrant's Telephone Number, Including Area Code)

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 7.01 Regulation FD Disclosure.

The Company has issued a press release entitled “Peer Review Determines Bacterin’s OsteoSponge[®] Superior to Autograft and Ideal for Bone Regeneration in *Dove Press Journal*” which is attached as Exhibit 99.1 and incorporated herein.

The information in this Item 7.01 and the document attached as Exhibit 99.1 are being furnished and shall not be deemed “filed” for purposes of Section 18 of the Securities and Exchange Act of 1934, as amended (the “Exchange Act”), nor otherwise subject to the liabilities of that section, nor incorporated by reference in any filing under the Securities Act of 1933 or the Exchange Act, except as shall be expressly set forth by specific reference in such a filing.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

Exhibit No	Description
99.1	Press Release of Bacterin International Holdings, Inc. dated April 4, 2012 entitled “Peer Review Determines Bacterin’s OsteoSponge [®] Superior to Autograft and Ideal for Bone Regeneration in <i>Dove Press Journal</i> ”

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: April 4, 2012

BACTERIN INTERNATIONAL HOLDINGS, INC.

By: /s/ Guy S. Cook

Name: Guy S. Cook

Title: President and Chief Executive Officer

EXHIBIT INDEX

- 99.1 Press Release of Bacterin International Holdings, Inc. dated April 4, 2012 entitled “Peer Review Determines Bacterin’s OsteoSponge[®] Superior to Autograft and Ideal for Bone Regeneration in *Dove Press Journal*”
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Peer Review Determines Bacterin's OsteoSponge® Superior to Autograft and Ideal for Bone Regeneration in *Dove Press Journal*

BELGRADE, Mont. Apr. 4, 2012 - Bacterin International Holdings, Inc. (NYSE Amex: BONE), a leader in the development of revolutionary bone graft material and antimicrobial coatings for medical applications, announces that a peer review article in *Dove Press Journal* has determined its OsteoSponge® allograft exhibits ideal properties for bone regeneration, similar to those of autografts (graft of patient's own bone) with the distinct advantage over autografts, in that there is no risk of complications at the harvest site or donor pain postoperatively. The article describes the rationale for, and characteristics of, the OsteoSponge, summarizing the results from preclinical and human studies, and includes a discussion of the strengths and limitations of different types of bone graft for the treatment of osseous defects.

"We are very pleased to share this paper with surgeons, materials managers, and distributors that not only is OsteoSponge equal to, but offers attributes even better than, the patient's own bone, for graft procedures," said Guy Cook, Bacterin's chairman and CEO. "The OsteoSponge product was and still is a revolutionary concept in the field of bone grafting and this paper is another step in validating our collective efforts."

The paper, titled, "Rationale, characteristics, and clinical performance of the OsteoSponge: a novel allograft for treatment of osseous defects," can be downloaded at the following link: http://www.dovepress.com/articles.php?article_id=9619

About OsteoSponge®

The OsteoSponge® allograft consists of 100% demineralized human cancellous bone, with no additional carrier materials. The OsteoSponge is compressible, allowing precise graft placement in most osseous defects; subsequent expansion completely fills the void. The material is prepared using methods that preserve native growth factors, thereby promoting cellular ingrowth, proliferation, and ultimately osteogenesis. OsteoSponge has been used in over 100,000 procedures.

About Bacterin International Holdings

Bacterin International Holdings, Inc. (NYSE Amex: BONE) develops, manufactures and markets biologics products to domestic and international markets. Bacterin's proprietary methods optimize the growth factors in human allografts to create the ideal stem cell scaffold to promote bone, subchondral repair and dermal growth. These products are used in a variety of applications including enhancing fusion in spine surgery, relief of back pain, promotion of bone growth in foot and ankle surgery, promotion of cranial healing following neurosurgery and subchondral repair in knee and other joint surgeries. Bacterin's Medical Device division develops, employs, and licenses bioactive coatings for various medical device applications. Bacterin's strategic coating initiatives include antimicrobial coatings designed to inhibit biofilm formation and microbial contamination. For further information, please visit www.bacterin.com.

Important Cautions Regarding Forward-looking Statements

This news release contains certain disclosures that may be deemed forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that are subject to significant risks and uncertainties. Forward-looking statements include statements that are predictive in nature, that depend upon or refer to future events or conditions, or that include words such as "continue," "efforts," "expects," "anticipates," "intends," "plans," "believes," "estimates," "projects," "forecasts," "strategy," "will," "goal," "target," "prospects," "potential," "optimistic," "confident," "likely," "probable" or similar expressions or the negative thereof. Statements of historical fact also may be deemed to be forward-looking statements. We caution that these statements by their nature involve risks and uncertainties, and actual results may differ materially depending on a variety of important factors, including, among others: the Company's ability to launch beta and full product releases, the Company's ability to obtain FDA concurrence use for anti-microbial coatings in a timely manner; the Company's ability to meet its obligations under existing and anticipated contractual obligations; the Company's ability to develop, market, sell and distribute desirable applications, products and services and to protect its intellectual property; the ability of the Company's sales force to achieve expected results; the ability of the Company's customers to pay and the timeliness of such payments, particularly during recessionary periods; the Company's ability to obtain financing as and when needed; changes in consumer demands and preferences; the Company's ability to attract and retain management and employees with appropriate skills and expertise; the impact of changes in market, legal and regulatory conditions and in the applicable business environment, including actions of competitors; and other factors. Additional risk factors are listed in the Company's Annual Report on Form 10-K under the heading "Risk Factors." The Company undertakes no obligation to release publicly any revisions to any forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events, except as required by law.

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