

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 23, 2014

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 “Bacterin Announces Preclinical Results on the use of OsteoSelect® DBM Putty Published in The Journal of Craniofacial Surgery” 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.

<u>Exhibit No</u>	<u>Description</u>
99.1	Press Release of Bacterin International Holdings, Inc. dated April 23, 2014 entitled “Bacterin Announces Preclinical Results on the use of OsteoSelect® DBM Putty Published in The Journal of Craniofacial Surgery”

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 23, 2014

BACTERIN INTERNATIONAL HOLDINGS, INC.

By: /s/ John Gandolfo
Name: John Gandolfo
Title: CFO

Exhibit No	Description
99.1	Press Release of Bacterin International Holdings, Inc. dated April 23, 2014 entitled "Bacterin Announces Preclinical Results on the use of OsteoSelect® DBM Putty Published in The Journal of Craniofacial Surgery"

Bacterin Announces Preclinical Results on the use of OsteoSelect® DBM Putty Published in The Journal of Craniofacial Surgery

BELGRADE, Mont., April 23, 2014 -- Bacterin International Holdings, Inc. (NYSE MKT: BONE), a leader in the development of revolutionary bone graft materials and bioactive coatings for medical applications, announced today that positive results utilizing OsteoSelect® Demineralized Bone Matrix Putty bone graft for cranial defect repair has been published in the peer-reviewed Journal of Craniofacial Surgery. This is the first peer reviewed publication evaluating the performance of OsteoSelect® DBM to date.

The article compares the bone regeneration potential of OsteoSelect® DBM to a competitive synthetic bone graft substitute (Novabone Putty) in a rabbit cranial defect model using semi-quantitative histology and quantitative histomorphometry evaluated at 43 and 91 days post-implantation. Defects filled with OsteoSelect® DBM were histologically associated with less inflammation and fibrous tissue in the defect and more new bone than the synthetic counterpart at both time points. Histomorphometric analysis indicated the defects filled with OsteoSelect® DBM were associated with significantly more bone formation at day 43 (70.7% vs 40.7%) and at day 91 (70.4% vs 39.9%) relative to the synthetic bone graft substitute.

“Bacterin is proud to announce yet another peer-reviewed publication supporting the efficacy of our products,” said Gregory Juda, Chief Scientific Officer for Bacterin. “We believe that the results of this animal study further support the superiority of Bacterin’s allograft derived bone grafts over competitive products of synthetic origin. We look forward to substantiating the exceptional performance of the OsteoSelect® product line in future clinical reports.”

The full article may be accessed using the link below or located in the March 2014 issue of *The Journal of Craniofacial Surgery*.

http://journals.lww.com/jcraniofacialsurgery/Fulltext/2014/03000/Comparison_of_the_Osteogenic_Potential_of.90.aspx

About Bacterin International Holdings

Bacterin International Holdings, Inc. (NYSE MKT: BONE) develops, manufactures and markets biologics products to domestic and international markets. 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 coatings for various medical device applications. 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 meet its existing and anticipated contractual obligations, including financial covenant and other obligations contained in the Company's secured lending facility; the Company's ability to manage cash flow and achieve profitability; the Company's ability to remain listed on the NYSE MKT; 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; 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 Company's ability to successfully conclude government investigations; 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 and Quarterly Reports on Form 10-Q 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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