

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP**

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| OMB APPROVAL                                 |           |
|--|-----------|
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|  |  |   |
|--|--|---|
| 1. Name and Address of Reporting Person*<br><u>COOK GUY S</u><br><br>(Last) (First) (Middle)<br><u>246 PAINTED HILLS ROAD</u><br><br>(Street)<br><u>BOZEMAN MT 59715</u><br><br>(City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol<br><u>Bacterin International Holdings, Inc. [ BONE ]</u> | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable)<br><br>Director <input checked="" type="checkbox"/> 10% Owner<br>Officer (give title below) Other (specify below) |
|  | 3. Date of Earliest Transaction (Month/Day/Year)<br><u>04/08/2014</u>                                |   |
|  | 4. If Amendment, Date of Original Filed (Month/Day/Year)   | 6. Individual or Joint/Group Filing (Check Applicable Line)<br><input checked="" type="checkbox"/> Form filed by One Reporting Person<br>Form filed by More than One Reporting Person     |

**Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned**

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) |   | 4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5) |            |                         | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|------------|-------------------------|---|--|---|
|                                 |                                      |  | Code                           | V | Amount  | (A) or (D) | Price                   |   |  |   |
| Common Stock                    | 04/08/2014                           |  | S                              |   | 310,000 <sup>(1)</sup>  | D          | \$0.722 <sup>(2)</sup>  | 4,450,049   | D  |   |
| Common Stock                    | 04/09/2014                           |  | S                              |   | 100,000 <sup>(1)</sup>  | D          | \$0.7087 <sup>(3)</sup> | 4,350,049   | D  |   |
| Common Stock                    |                                      |  |                                |   |   |            |                         | 1,800,000   | I  | By Michelle Allison Cook Trust                        |
| Common Stock                    |                                      |  |                                |   |   |            |                         | 1,800,000   | I  | By Steven Thomas Cook Trust                           |
| Common Stock                    |                                      |  |                                |   |   |            |                         | 1,700,000   | I  | By Timothy Shane Cook Trust                           |

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) |   | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) |     | 6. Date Exercisable and Expiration Date (Month/Day/Year) |                 | 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
|--|--|--------------------------------------|--|--------------------------------|---|--|-----|--|-----------------|---|--|--|---|--|
|  |  |                                      |  | Code                           | V | (A)  | (D) | Date Exercisable   | Expiration Date |   |  |  |   |  |

**Explanation of Responses:**

- The reporting person recognizes that the transactions reported on this Form 4 are matchable under Section 16(b) of the Securities Exchange Act of 1934 in connection with the reporting person's purchase of 162,320 shares of common stock at a price of \$0.6426 per share on January 15, 2014. The reporting person will pay to the issuer the profit realized in connection with these transactions as calculated pursuant to the requirements of Section 16(b).
- The price shown is a weighted average sale price for shares sold in multiple transactions; the sale prices ranged from \$0.70 to \$0.75 per share. The reporting person will provide to the issuer, any security holder of the issuer, or the SEC staff, upon request, information regarding the number of shares sold at each price within the range.
- The price shown is a weighted average sale price for shares sold in multiple transactions; the sale prices ranged from \$0.70 to \$0.7172 per share. The reporting person will provide to the issuer, any security holder of the issuer, or the SEC staff, upon request, information regarding the number of shares sold at each price within the range.

/s/ Guy S. Cook 04/10/2014

\*\* Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

\* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.