

COOK GUY S  
Form SC 13D  
May 12, 2011

UNITE STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549

SCHEDULE 13D  
Under the Securities Exchange Act of 1934  
(Amendment No. \_\_\_\_)\*

Bacterin International Holdings, Inc.  
(Name of Issuer)

Common Stock, \$0.000001 par value  
(Title of Class of Securities)

05644R101  
(CUSIP number)

Guy S. Cook  
664 Cruiser Lane  
Belgrade, MT 59714  
(406) 388-0480  
(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

May 2, 2011  
(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), 13d-1(f) or 13d-1(g), check the following box " .

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 13d-7 for other parties to whom copies are to be sent.

\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

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 control number.



CUSIP No.

1. NAMES OF REPORTING PERSONS  
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Guy S. Cook

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*  
(a)   
(b)

3. SEC USE ONLY

4. SOURCE OF FUNDS (SEE INSTRUCTIONS)  
PF

5. CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS  
REQUIRED PURSUANT TO ITEM 2(d) or 2(e)

6. CITIZENSHIP OR PLACE OF ORGANIZATION  
USA

- |               |     |  |
|---------------|-----|--|
| NUMBER OF     | 7.  | SOLE VOTING POWER: 13,231,765 (1)      |
| SHARES        |     |  |
| BENEFICIALLY  | 8.  | SHARED VOTING POWER: 0                 |
| OWNED BY EACH |     |  |
| REPORTING     | 9.  | SOLE DISPOSITIVE POWER: 13,231,765 (1) |
| PERSON WITH   |     |  |
|               | 10. | SHARED DISPOSITIVE POWER: 0            |

11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON:  
13,231,765

12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11)  
EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  
34.8%

14. TYPE OF REPORTING PERSON\*  
IN

(1) Includes 104,594 shares underlying a warrant and 25,000 shares subject to employee stock options held by spouse.

Item 1 Security and Issuer

This statement on Schedule 13D relates to the acquisition of shares of common stock (the “Common Stock”) of Bacterin International Holdings, Inc., a Delaware corporation (the “Company”). The principal executive offices of the Company are located at 600 Cruiser Lane, Belgrade, MT 59714.

Item 2. Identity and Background

(a) Guy S. Cook

(b) 600 Cruiser Lane, Belgrade, MT 59714

(c) CEO, President and Chairman of the Board of the Company

(d) The reporting person has not, during the last five years, been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).

(e) The reporting person has not, during the last five years, been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction resulting in a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(f) The reporting person is a United States citizen.

Item 3. Source and Amount of Funds or Other Consideration

The source of funds for the acquisition consisted of cash resulting from the private discounted sale of 150,000 shares of the Company’s common stock.

Item 4. Purpose of Transaction

The purpose of the transaction was to provide the Company with additional funds and to purchase securities in the Company’s private placement transaction.

(a) The reporting person has agreed to sell additional securities in a series of private transactions, as described in Exhibit 99.1. Depending on the Company’s cash flow needs and ability to raise money from other sources, the reporting person may also purchase additional Company securities.

(b) N/A

(c) N/A

(d) The reporting person does not have any plans or proposals relating to any change in the present board of directors or management of the issuer, except that a Company proposal for staggered terms for existing Board members may appear in the Company’s upcoming proxy statement.

(e) N/A

(f) N/A

- |     |     |
|-----|-----|
| (g) | N/A |
| (h) | N/A |
| (i) | N/A |
| (j) | N/A |

Item 5. Interest in Securities of the Issuer

- (a) The reporting person beneficially owns 13,231,765 shares, which includes 104,594 shares underlying a warrant and 25,000 shares subject to employee stock options held by the reporting person's spouse. The reporting person's beneficial ownership represents approximately 34.8% of the issued and outstanding shares of the Company's common stock.
- (b) Except for 25,000 shares underlying stock options held by the reporting person's spouse, the reporting person has the sole power to vote and dispose all of the shares he beneficially owns.
- (c) On May 2, 2011, the reporting person sold 150,000 shares of the Company's common stock for \$3.2029 per share ) and purchased 142,045 shares at \$3.52 per share.

(d) N/A

(e) N/A

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer

The reporting person is subject to a Shareholder Lock-up Agreement which is attached as Exhibit 10.3 to the Company's Form 8-K filed July 7, 2010. The reporting person has agreed to sell shares in a series of private transactions, as set forth in attached Exhibit 99.1.

Item 7. Material to be Filed as Exhibits

The Shareholder Lock-up Agreement is attached as Exhibit 10.3 to the Company's Form 8-K filed July 7, 2010 and incorporated by reference herein. A copy of the Stock Purchase Agreement referenced in Item 6 is attached as Exhibit 99.1.

Signature

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

5/12/11

Date

/s/ Guy S. Cook

Signature

Guy S. Cook

Name/Title

The original statement shall be signed by each person on whose behalf the statement is filed or his authorized representative. If the statement is signed on behalf of a person by his authorized representative (other than an executive officer or general partner of the filing person), evidence of the representative's authority to sign on behalf of such person shall be filed with the statement: provided, however, that a power of attorney for this purpose which is already on file with the Commission may be incorporated by reference. The name and any title of each person who signs the statement shall be typed or printed beneath his signature.

Attention: Intentional misstatements or omissions of fact constitute Federal criminal violations (See 18 U.S.C 1001)

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Exhibit Index

No. Description

99.1 Stock Purchase Agreement

99.2 Shareholder Lock-up Agreement (incorporated by reference to the Company's Form 8-K filed July 7, 2010)

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