
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13D

Under the Securities Exchange Act of 1934
(Amendment No. 5)*

BACTERIN INTERNATIONAL HOLDINGS, INC.

(Name of Issuer)

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

15644R 10 1
(CUSIP Number)

Guy S. Cook
246 Painted Hills Road
Bozeman, MT 59715
(406) 570-2658

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

April 8, 2014
(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 §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-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 §§ 240.13d-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 the disclosures provided in a prior cover page.

The information required in 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 ("Act") 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).

1.	Names of Reporting Persons: Guy S. Cook	
2.	Check the Appropriate Box if a Member of a Group (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (see instructions) PF	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) N/A	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 226,004
	8.	Shared Voting Power 380,000
	9.	Sole Dispositive Power 226,004
	10.	Shared Dispositive Power 380,000
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 606,004	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (see instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 9.1%¹	
14.	Type of Reporting Person (See Instructions) IN	

¹ Based on 6,669,898 shares of the common stock outstanding, as reported in the Issuer's prospectus supplement filed on August 1, 2014.

1.	Names of Reporting Persons: Susan Thornton Cook	
2.	Check the Appropriate Box if a Member of a Group (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (see instructions) PF	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) N/A	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 0
	8.	Shared Voting Power 380,000
	9.	Sole Dispositive Power 0
	10.	Shared Dispositive Power 0
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 380,000	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (see instructions) <input checked="" type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 5.7%²	
14.	Type of Reporting Person (See Instructions) IN	

² Based on 6,669,898 shares of common stock outstanding as of July 31, 2014, as reported in the Issuer's prospectus supplement filed on August 1, 2014.

This Amendment No. 5 to Schedule 13D amends and supplements Items 3 and 5 to the initial Schedule 13D filed on May 12, 2011 (“**Initial 13D**”), as amended by Amendment No. 1 filed July 14, 2011 (“**Amendment No. 1**”), Amendment No. 2 filed June 5, 2012 (“**Amendment No. 2**”), Amendment No. 3 filed June 25, 2012 (“**Amendment No. 3**”) and Amendment No. 4 filed on February 24, 2014 (“**Amendment No. 4**”) relating to the Common Stock, \$0.000001 par value per share, of Bacterin International Holdings, Inc., a Delaware corporation (the “**Issuer**”). Except as otherwise provided herein, each Item of the Initial 13D, as previously amended, remains unchanged.

All references to shares of the Company’s Common Stock and sale prices are adjusted to reflect the 1:10 reverse stock split effective on July 25, 2014.

Item 3. Source and Amount of Funds or Other Consideration

This Amendment No. 5 relates to the disposition of an aggregate of 400,000 shares of the Issuer’s Common Stock in open market transactions for an aggregate sale price of \$2,811,685; such disposition is described more fully in Item 5(c).

Item 5. Interest in Securities of the Issuer.

- (a) The following table sets forth the aggregate number of shares and percentage of the Issuer’s Common Stock beneficially owned by each Reporting Person:

<u>Reporting Person</u>	<u>Shares Beneficially Owned</u>	<u>Percentage</u>
Guy S. Cook	606,004(1)	9.1%(3)
Susan Thornton Cook	380,000(2)	5.7%(3)

(1) Includes 380,000 shares of Common Stock (the “**Trust Shares**”) held of record by the Timothy Shane Cook Trust created under the Cook 2012 Gift Trust, the Steven Thomas Cook Trust created under the Cook 2012 Gift Trust and the Michelle Allison Cook Trust created under the Cook 2012 Gift Trust (collectively, the “**Trusts**”).

(2) Comprised solely of the Trust Shares. Mrs. Cook does not have any power to vote or direct the vote, or to dispose or direct the disposition of, the shares held of record by Mr. Cook; accordingly, the 226,004 shares of the Issuer’s Common Stock held of record by Mr. Cook are not included in Mrs. Cook’s beneficial ownership and Mrs. Cook disclaims beneficial ownership of such shares.

(3) Percentage calculation based on 6,669,898 shares of the Issuer’s Common Stock outstanding as of July 31, 2014, as reported in the Issuer’s prospectus supplement filed on August 1, 2014.

- (b) The following table sets forth the number of shares of the Issuer's Common Stock as to which each Reporting Person has (i) sole power to vote or direct the voting, (ii) sole power to dispose or to direct the disposition, (iii) shared power to vote or direct the voting and (iv) shared power to dispose or direct the disposition:

<u>Reporting Person</u>	<u>Sole Voting Power</u>	<u>Sole Power of Disposition</u>	<u>Shared Voting Power</u>	<u>Shared Power of Disposition</u>
Guy S. Cook	226,004	226,004	380,000(1)	380,000(1)
Susan Thornton Cook	0	0	380,000(1)	0

(1) Represents the Trust Shares.

- (c) As of February 24, 2014 (the date of Amendment No. 4), Mr. Cook beneficially owned 1,006,004 shares of the Issuer's Common Stock, of which 530,000 shares were held indirectly through the Trusts. The following table sets forth information about Mr. Cook's sales of shares of Common Stock in open market transactions since February 24, 2014:

<u>Transaction Date</u>	<u>Number of Shares Sold</u>	<u>Price Per Share (\$)</u>
4/8/2014	31,000	7.220
4/9/2014	10,000	7.087
4/17/2014	7,500	7.000
4/21/2014	14,000	7.032
4/22/2014	27,000	7.138
4/23/2014	26,000	7.019
4/24/2014	13,000	7.061
4/25/2014	10,000	7.011
4/29/2014	4,500	7.000
4/30/2014	4,000	7.002
5/1/2014	5,000	7.084
5/2/2014	23,000	7.295
5/5/2014	2,500	7.402
5/6/2014	72,500	7.521
Total	250,000	

As of February 24, 2014 (the date of Amendment No. 4), the Trusts held an aggregate of 530,000 shares of the Issuer's Common Stock. The following table sets forth information about sales of shares of Common Stock by the Trusts in open market transactions since February 24, 2014:

<u>Transaction Date</u>	<u>Number of Shares Sold</u>	<u>Price Per Share (\$)</u>
5/6/2014	13,500	7.521
5/7/2014	50,000	6.600
5/7/2014	50,000	6.600
5/7/2014	36,500	6.600
Total	150,000	

- (d) The trustee of the Trusts is Deutsche Bank Trust Company Delaware, and the beneficiaries of the Trusts are the Reporting Persons' children: Timothy Shane Cook (120,000 shares), Steven Thomas Cook (130,000 shares) and Michelle Allison Cook (130,000 shares).
- (e) Not applicable.

Item 7. Materials to be Filed as Exhibits.

Exhibit 99.1 Agreement Pursuant to Rule 13d-1(k)(1)(iii)

SIGNATURE

After reasonable inquiry and to the best of the Reporting Person's knowledge and belief, the Reporting Person certifies that the information set forth in this statement is true, complete and correct.

Date: August 25, 2014

GUY S. COOK

/s/ GUY S. COOK

Guy S. Cook

SUSAN THORNTON COOK

/s/ SUSAN THORNTON COOK

Susan Thornton Cook

Pursuant to Rule 13d-1(k)(1)(iii) of Regulation 13D-G of the General Rules and Regulations of the Securities and Exchange Commission under the Securities Exchange Act of 1934, as amended, the undersigned agree that the statement to which this Exhibit is attached is filed on behalf of each of them in the capacities set forth herein below.

Date: August 25, 2014

GUY S. COOK

/s/ GUY S. COOK

Guy S. Cook

SUSAN THORNTON COOK

/s/ SUSAN THORNTON COOK

Susan Thornton Cook