FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

OMB APPROVAL												
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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

1. Name and Address of Reporting Person* COOK GUY S						2. Issuer Name and Ticker or Trading Symbol Bacterin International Holdings, Inc. [BONE									ck all app	,	,	to Is: 0% O:	
(Last)	st) (First) (Middle) 0 CRUISER LANE							3. Date of Earliest Transaction (Month/Day/Year) 05/11/2012								er (give title w) C		ther (specify
(Street) BELGRADE MT 59714 (City) (State) (Zip)					4. If	4. If Amendment, Date of Original Filed (Month/Day/Year)								6. Ind Line)					
	Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned																		
1. Title of Security (Instr. 3) 2. Transac Date (Month/Date)						Execution Date,			Code (Instr. 5)							6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)		7. Nature of Indirect Beneficial Ownership (Instr. 4)	
						Code	v	Amount	(A) (D)	or F	Price	Trans	action(s) 3 and 4)			(11150.4)			
Common Stock 05/11/2							2012		P		10,000 A		A !	\$1.68 ⁽¹	12,	12,867,137			
	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. Deem Execution if any (Month/Da	Date,	4. Transa Code (8)	Instr.	Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year) Date Expiration Date Expiration Date			7. Title and Amount of Securities Underlying Derivative Security (Instr. and 4) Amount or Number of Title Shares		nnt per	Price of rivative curity str. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction (Instr. 4)	Owners Form: Direct (or Indir (I) (Inst	D) ect	11. Nature of Indirect Beneficial Ownership (Instr. 4)

Explanation of Responses:

1. The price reported in Column 4 is a weighted average price. These shares were purchased in multiple transactions at prices ranging from \$1.6494 to \$1.70, inclusive. The reporting person undertakes to provide to Bacterin International Holdings, Inc. ("BONE"), any shareholder of BONE, or the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares purchased at each separate price within the range set forth in this footnote.

/s/ Guy Cook

05/11/2012

** 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.

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