

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF  
SECURITIESFiled 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* <u>HOLMES DARREL LEE</u>	2. Date of Event Requiring Statement (Month/Day/Year) 03/04/2011	3. Issuer Name and Ticker or Trading Symbol <u>Bacterin International Holdings, Inc. [ BONE ]</u>	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <u>Vice President-Medical Devices</u>	5. If Amendment, Date of Original Filed (Month/Day/Year)
(Last) (First) (Middle) 600 CRUISER LANE			6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person
(Street) BELGRADE MT 59714			
(City) (State) (Zip)			

## Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
Common Stock	10,133	D	
Common Stock	35,466	I	By DDS Biomedical LLC

Table II - Derivative Securities Beneficially Owned  
(e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares			
Employee Stock Option	(1)	10/09/2013	Common Stock	45,000	0.1	D	
Employee Stock Option	(2)	10/09/2016	Common Stock	30,000	1.34	D	
Employee Stock Option	12/29/2009	12/29/2018	Common Stock	18,287	1.5	D	
Employee Stock Option	12/29/2010	12/29/2018	Common Stock	11,712	1.5	D	
Employee Stock Option	12/29/2011	12/29/2018	Common Stock	15,000	1.5	D	
Employee Stock Option	12/29/2012	12/29/2018	Common Stock	15,000	1.5	D	
Employee Stock Option	12/29/2013	12/29/2018	Common Stock	15,000	1.5	D	

## Explanation of Responses:

- This option became exercisable in 3 annual installments beginning on 10/9/2004.
- This option became exercisable in 2 annual installments beginning on 10/9/2007.

/s/ Darrel Holmes

03/04/2011

\*\* 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 5 (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.