FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

OMB APPROVAL

OMB Number: 3235-0287 Estimated average burden hours per response: 0.5

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

. ,			or Sec	tion 30(h) of the In	vestment Con	pany Act of 1940				
1. Name and Addre		Person*		er Name and Ticke		ymbol LS INC [ISIS]		ationship of Reportir (all applicable)	ng Person(s) to I	ssuer
<u>PARSHALL</u>	BLYNNE		1515	1111 II CONTROL	<u> </u>	<u> </u>	X	Director	10% (Owner
(Last)	(First)	(Middle)	3. Date	of Earliest Transa	ction (Month/E	Day/Year)	X	Officer (give title below)	Other below	(specify)
C/O ISIS PHAI	RMACEUTIC	ALS, INC.	12/16	/2011				Direct	or, COO	
2855 GAZELL	E COURT									
(Street)			4. If An	nendment, Date of	Original Filed	(Month/Day/Year)	6. Indi	vidual or Joint/Grou	p Filing (Check A	Applicable
CARLSBAD	CA	92010					X	Form filed by On	e Reporting Pers	son
								Form filed by Mo Person	re than One Rep	orting
(City)	(State)	(Zip)						Person		
		Table I - No	n-Derivative S	ecurities Acq	uired, Disp	oosed of, or Benefi	cially	Owned		
1. Title of Security	y (Instr. 3)		2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any	3. Transaction Code (Instr.	4. Securities Acquired (A) Disposed Of (D) (Instr. 3,		5. Amount of Securities Beneficially	6. Ownership Form: Direct (D) or Indirect	7. Nature of Indirect Beneficial

(Street) CARLSBAD CA 920 (City) (State) (Zip	010	mendment, Date of	Original	Filed	(Month/Day/Y	Line)	Individual or Joint/Group Filing (Check Applicable Line) X Form filed by One Reporting Person Form filed by More than One Reporting Person				
Table	- Non-Derivative S	ecurities Acq	uired,	Dis	posed of, o	or Ben	eficially	Owned			
1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transa Code (I 8)		4. Securities Disposed Of 5)	Acquired (D) (Instr.	(A) or 3, 4 and	5. Amount of Securities Beneficially Owned Following	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership	
			Code	v	Amount (A) or		Price	Reported Transaction(s) (Instr. 3 and 4)		(Instr. 4)	
Common Stock	12/16/2011	12/16/2011	M ⁽¹⁾		2,000(1)	A	\$5.8	3,985	D		
Common Stock	12/16/2011	12/16/2011	S ⁽¹⁾		2,000(1)	D	\$6.79	1,985	D		
Common Stock	12/19/2011	12/19/2011	M ⁽²⁾		2,000(2)	A	\$5.8	2,000	I	By daughter	
Common Stock	12/16/2011	12/16/2011	S ⁽²⁾		2,000(2)	D	\$6.79	0	I	By daughter	
Common Stock	12/16/2011	12/16/2011	M ⁽²⁾		2,000(2)	A	\$5.8	2,000	I	By daughter	
Common Stock	12/16/2011	12/16/2011	S ⁽²⁾		2,000(2)	D	\$6.79	0	I	By daughter	
Common Stock	12/19/2011	12/19/2011	M ⁽¹⁾		2,054(1)	A	\$5.8	4,039	D		
Common Stock	12/19/2011	12/19/2011	S ⁽¹⁾		2,054(1)	D	\$6.82	1,985	D		
Common Stock	12/19/2011	12/19/2011	M ⁽¹⁾		246(1)	A	\$5.8	2,231	D		
Common Stock	12/19/2011	12/19/2011	S ⁽¹⁾		246(1)	D	\$6.9	1,985	D		
Common Stock	12/19/2011	12/19/2011	M ⁽²⁾		2,054(2)	A	\$5.8	2,054	I	By daughter	
Common Stock	12/19/2011	12/19/2011	S ⁽²⁾		2,054(2)	D	\$6.82	0	I	By daughter	
Common Stock	12/19/2011	12/19/2011	M ⁽²⁾		246(2)	A	\$5.8	246	I	By daughter	
Common Stock	12/19/2011	12/19/2011	S ⁽²⁾		246(2)	D	\$6.9	0	I	By daughter	
Common Stock	12/20/2011	12/20/2011	M ⁽¹⁾		2,900(1)	A	\$5.8	4,885	D		
Common Stock	12/20/2011	12/20/2011	S ⁽¹⁾		2,900(1)	D	\$6.82	1,985	D		
Common Stock	12/20/2011	12/20/2011	M ⁽¹⁾		700(1)	A	\$5.8	2,685	D		
Common Stock	12/20/2011	12/20/2011	S ⁽¹⁾		700(1)	D	\$6.92	1,985	D		
Common Stock	12/20/2011	12/20/2011	M ⁽²⁾		700(2)	A	\$5.8	700	I	By daughter	
Common Stock	12/20/2011	12/20/2011	S ⁽²⁾		700(2)	D	\$6.92	0	I	Bu daughter	
Common Stock	12/20/2011	12/20/2011	M ⁽²⁾		2,800(2)	A	\$5.8	2,800	I	By daughter	
Common Stock	12/20/2011	12/20/2011	S ⁽²⁾		2,800(2)	D	\$6.82	0	I	By daughter	

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)			Acquired (D) (Instr	I (A) or . 3, 4 and	5. Amount of Securities Beneficially Owned Following	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership		
			Code V		Amount	(A) or (D) Price		Reported Transaction(s) (Instr. 3 and 4)		(Instr. 4)		
Common Stock	12/20/2011	12/20/2011	M ⁽²⁾		700(2)	A	\$5.8	700	I	By daughter		
Common Stock	12/20/2011	12/20/2011	S ⁽²⁾		700(2)	D	\$6.92	0	I	By daughter		
Common Stock	12/20/2011	12/20/2011	M ⁽²⁾		2,800(2)	A	\$5.8	2,800	I	By daughter		
Common Stock	12/20/2011	12/20/2011	S ⁽²⁾		2,800(2)	D	\$6.82	0	I	By daughter		
Common Stock	12/19/2011	12/19/2011	M ⁽²⁾		246(2)	A	\$5.8	246	I	By daughter		
Common Stock	12/19/2011	12/19/2011	S ⁽²⁾		246(2)	D	\$6.9	0	I	By daughter		
Common Stock	12/19/2011	12/19/2011	M ⁽²⁾		2,054(2)	A	\$580	2,054	I	By daughter		
Common Stock	12/19/2011	12/19/2011	S ⁽²⁾		2,054(2)	D	\$6.82	0	I	By daughter		

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) 3A. Deemed 4. 5. Number 6. Date Exercisable and 7. Title and 8. Price of

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. Transa Code (8)		of		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	Title	Amount or Number of Shares				
Employee Stock Option (right to buy)	\$5.8	12/16/2011	12/16/2011	M			2,000	01/03/2009	01/02/2012	Common Stock	2,000	\$0	8,263	D	
Employee Stock Option (right to buy)	\$5.8	12/16/2011	12/16/2011	М			2,000	01/03/2009	01/02/2012	Common Stock	2,000	\$0	8,000	I	By daughter
Employee Stock Option (right to buy)	\$5.8	12/16/2011	12/16/2011	М			2,000	01/03/2009	01/02/2012	Common Stock	2,000	\$0	8,000	I	By daughter
Employee Stock Option (right to buy)	\$5.8	12/19/2011	12/19/2011	М			2,300	01/03/2009	01/02/2012	Common Stock	2,300	\$0	5,963	D	
Employee Stock Option (right to buy)	\$5.8	12/19/2011	12/19/2011	М			2,300	01/03/2009	01/02/2012	Common Stock	2,300	\$0	5,700	I	By daughter
Employee Stock Option (right to buy)	\$5.8	12/19/2011	12/19/2011	М			2,300	01/03/2009	01/02/2012	Common Stock	2,300	\$0	5,700	I	By daughter
Employee Stock Option (right to buy)	\$5.8	12/20/2011	12/20/2011	M			3,600	01/03/2009	01/02/2012	Common Stock	3,600	\$0	2,363	D	
Employee Stock Option (right to buy)	\$5.8	12/20/2011	12/20/2011	М			3,500	01/03/2009	01/02/2012	Common Stock	3,500	\$0	2,200	I	By daughter

	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	Title	Amount or Number of Shares				
Employee Stock Option (right to buy)	\$5.8	12/20/2011	12/20/2011	M			3,500	01/03/2009	01/02/2012	Common Stock	3,500	\$0	2,200	I	By daughter

Explanation of Responses:

- 1. Acquired as a result of exercising a stock option that was scheduled to expire on 1/2/12. The purchase and sale reported on this Form 4 was effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on 10/21/11.
- 2. Acquired as a result of exercising a stock option that was scheduled to expire on 1/2/12. The purchase and sale reported on this Form 4 was effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person's daughter on 10/21/11.

Remarks:

B. Lynne Parshall 12/20/2011

** Signature of Reporting Person

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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