FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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* <u>KLEIN JOSEPH III</u>										or Tradin		mbol ALS INC] (Che	Relationship of Reporting Person(s) to Issuer (Check all applicable) X Director 10% Owner						
(Last)	,	First) AACEUTICALS	(Middle)			Date 7/01/2		st Trai	nsacti	ion (Mont	th/Da	ay/Year)		Officer (give title below)		Other (speci below)		specify		
2855 GAZELLE COURT						If Am	andment	Date	of O	riginal Eil	od (Month/Day/Y	6 Inc	lividual or 10	oint/Group	Eiling	(Check And	nlicable	4	
(Street) CARLSBAD CA 92010				4.	II AIII	enument	, Date	: 01 0	nginai Fii	eu (wonth/Day/1	Line)	Form filed by One Reporti Form filed by More than C Person			rting Perso	n			
(City) (State)		(Zip)											reison							
		Ta	able I - Nor	n-Deriv	ativ	ve S	ecuriti	es A	cqu	ired, D	isp	osed of,	or Bene	eficially	Owned					٦
1. Title of Security (Instr. 3)		2. Transac Date (Month/Da			2A. Deemed Execution Date if any (Month/Day/Yea			Code (Instr					5. Amount of Securities Beneficially Owned Following		Form:	Direct Indirect str. 4)	7. Nature o Indirect Beneficial Ownership			
										Code	/	Amount	(A) or (D)	Price	Reported Transaction (Instr. 3 ar				(Instr. 4)	
Common	Stock			07/0	01/2019		07/01/2019		19	M ⁽¹⁾		666(1)	A	\$0	13,2	272		D		
Common	Stock			07/0	1/2019		07/01/2019		١9	M ⁽¹⁾		667(1)	A	\$0	13,9	13,939		D		
Common	Stock			07/02	2/2019		07/02/2019		١9	M ⁽¹⁾		889(1)	A	\$0	14,8	828		D		
Common Stock				07/03	3/2019		07/03/2019		.9	M ⁽¹⁾		667(1)	A	\$ <mark>0</mark>	15,4	495		D		
Common Stock														10	100		I	By son		
			Table II -									sed of, o			wned					
1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Da if any (Month/Day/Y	te, 4.	ansac	5. Number 6.		6. Date Exercisable and Expiration Date (Month/Day/Year)				7. Title and of Securiti Underlying Derivative (Instr. 3 and	d Amount es Security	8. Price of Derivative Security (Instr. 5)	9. Number derivativ Securitie Beneficia Owned Following Reported Transact (Instr. 4)	ve es ally ig d tion(s)	10. Ownershi Form: Direct (D) or Indirect (I) (Instr. 4	Beneficial Ownership t (Instr. 4)		
				Co	ode	v	(A)	(D)	Date	e rcisable		kpiration ate	Title	Amount or Number of Shares	ber					
Restricted Stock Units	(2)	07/01/2019	07/01/2019	9 1	M			666		(3)		(3)	Common Stock	666	\$0	0		D		
Restricted Stock Units	(2)	07/01/2019	07/01/2019	9 N	M			667		(3)		(3)	Common Stock	667	\$0	666	5	D		
Restricted Stock Units	(2)	07/02/2019	07/02/2019	9 1	M			889		(3)		(3)	Common Stock	889	\$0	2,66	6	D		
Restricted Stock Units	(2)	07/03/2019	07/03/2019) N	M			667		(3)		(3)	Common Stock	667	\$0	1,33	3	D		
Restricted Stock Units	(2)	07/01/2019	07/01/2019	9 /	A		7,110			(4)		(4)	Common Stock	7,110	\$0	7,11	0	D		
Director Stock Option (right to	\$64.8	07/01/2019	07/01/2019	9 7	A		16,000		07/0)1/2020 ⁽⁵⁾	06	6/30/2029 ⁽⁵⁾	Common Stock	16,000	\$0	16,00	00	D		_

Explanation of Responses:

- 1. Acquired pursuant to vesting and release of shares pursuant to Restricted Stock Unit awards.
- 2. Each Restricted Stock Unit represents a contingent right to receive one share of Ionis common stock, or its equivalent cash value.
- 3. Restricted Stock Units vest in four equal annual installments. Upon vesting, the restricted stock units will be paid out in whole shares of Ionis common stock or cash as may be determined by the Company.
- 4. Grant of July 1, 2019 to reporting person of Restricted Stock Unit Award under the Amended and Restated Ionis Pharmaceuticals, Inc. 2002 Non-Employee Directors' Stock Option Plan. Restricted Stock Units vest in four equal annual installments, the first installment vesting on July 1, 2020. Upon vesting, the restricted stock units will be paid out in whole shares of Ionis common stock or cash as may be determined by the Company. The RSU shall be fully vested on July 1, 2023. The RSU is vested as to 0 shares on July 1, 2019.
- 5. Grant of July 1, 2019 to reporting person of stock options under the Amended and Restated Ionis Pharmaceuticals, Inc. 2002 Non-Employee Directors' Stock Option Plan. The option vests and becomes exercisable in four equal annual installments, the first installment vesting on July 1, 2020. The option shall be fully vested and exercisable on July 1, 2023. The option is exercisable to 0 shares on July 1, 2019.

Remarks:

** 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.

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.