

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).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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>KIRK RANDAL J</u> (Last) (First) (Middle) <u>C/O THIRD SECURITY, LLC</u> <u>1881 GROVE AVENUE</u> (Street) <u>RADFORD</u> <u>VA</u> <u>24141</u> (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>Synthetic Biologics, Inc. [SYN]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director <input checked="" type="checkbox"/> 10% Owner Officer (give title below) Other (specify below)
	3. Date of Earliest Transaction (Month/Day/Year) <u>09/02/2015</u>	
	4. If Amendment, Date of Original Filed (Month/Day/Year)	

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)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	09/02/2015		P		937,500 ⁽¹⁾	A	\$3.2	9,613,268	I	by Intrexon ⁽²⁾
Common Stock								3,625,000	I	by NRM VII Holdings ⁽³⁾

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		Date Exercisable	Expiration Date					

1. Name and Address of Reporting Person* <u>KIRK RANDAL J</u> (Last) (First) (Middle) <u>C/O THIRD SECURITY, LLC</u> <u>1881 GROVE AVENUE</u> (Street) <u>RADFORD</u> <u>VA</u> <u>24141</u> (City) (State) (Zip)
1. Name and Address of Reporting Person* <u>INTREXON CORP</u>

(Last)	(First)	(Middle)
C/O LEGAL DEPARTMENT		
20374 SENECA MEADOWS PARKWAY		
<hr/>		
(Street)		
GERMANTOWN	MD	20876
<hr/>		
(City)	(State)	(Zip)

Explanation of Responses:

1. On September 2, 2015 and pursuant to a Stock Issuance Agreement between the issuer and Intrexon Corporation ("Intrexon") dated August 10, 2015, the issuer issued 937,500 shares of its Common Stock to Intrexon in consideration for the execution and delivery of an Exclusive Channel Collaboration Agreement dated August 10, 2015 between the issuer and Intrexon.
2. Randal J. Kirk, directly and through certain affiliates, has voting and dispositive power over a majority of the outstanding capital stock of Intrexon. Mr. Kirk may therefore be deemed to have voting and dispositive power over the shares of the issuer owned by Intrexon. Shares held by Intrexon may be deemed to be indirectly beneficially owned (as defined under Rule 13d-3 promulgated under the Securities Exchange Act of 1934, as amended) by Mr. Kirk. Mr. Kirk disclaims beneficial ownership of such shares, except to the extent of any pecuniary interest therein.
3. Randal J. Kirk controls NRM VII Holdings I, LLC ("NRM VII Holdings"). Shares held by this entity may be deemed to be indirectly beneficially owned (as defined under Rule 13d-3 promulgated under the Securities Exchange Act of 1934, as amended) by Mr. Kirk. Mr. Kirk disclaims beneficial ownership of such shares, except to the extent of any pecuniary interest therein.

Remarks:

/s/ Randal J. Kirk 09/04/2015

/s/ Randal J. Kirk , CEO
Intrexon Corporation 09/04/2015

** 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.