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9605 Medical Center Drive, Suite 270  
Rockville, Maryland 20850

August 20, 2018

VIA EDGAR

United States Securities  
and Exchange Commission  
Division of Corporation Finance  
Office of Healthcare & Insurance  
100 F Street, NE  
Washington, D.C. 20549  
Attention: Ms. Irene Paik  
Ms. Christine Westbrook

Re: Synthetic Biologics, Inc.  
Registration Statement on Form S-3  
Filed August 1, 2018  
File No. 333-226500

Dear Mss. Paik and Westbrook:

Synthetic Biologics, Inc. (the "Company") hereby requests acceleration of the effective date of the above-referenced Registration Statement on Form S-3 so that it may become effective at 5:00 p.m. (New York City Time) on Wednesday, August 22, 2018, or as soon thereafter as reasonably practicable.

The Company hereby authorizes its legal counsel, Leslie Marlow and/or Patrick Egan of Gracin & Marlow, LLP, to orally modify or withdraw this request for acceleration. Please contact Ms. Marlow at (516) 496-2223 or (212) 907-6457, or Mr. Egan at (914) 557-5574 with any questions you may have concerning this request, and please notify either of them when this request for acceleration has been granted.

Very truly yours,

SYNTHETIC BIOLOGICS, INC.

By: /s/ Steven A. Shallcross  
Name: Steven A. Shallcross  
Title: Interim Chief Executive  
Officer and Chief Financial  
Officer

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