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August 29, 2017

VIA EDGAR AND HAND DELIVERY

Ms. Suzanne Hayes
Assistant Director
U.S. Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E
Washington, D.C. 20549

Re: Sol-Gel Technologies Ltd.
Registration Statement on Form F-1
(CIK No. 0001684693)

Dear Ms. Hayes:

On behalf of Sol-Gel Technologies Ltd. (the "***Company***"), we are transmitting this letter in response to comments received from the staff (the "***Staff***") of the Securities and Exchange Commission (the "***Commission***") by letter dated August 28, 2017 with respect to the Company's draft Registration Statement on Form F-1 (the "***Confidential Registration Statement***"). This letter is being submitted together with a copy of the Registration Statement on Form F-1, which was filed on EDGAR on August 29, 2017 and revises the Confidential Registration Statement to address the Staff's comments (the "***Registration Statement***"). The bold and numbered paragraphs below correspond to the numbered paragraphs in the Staff's letter and are followed by the Company's responses. For the Staff's convenience, we are also sending, by courier, copies of this letter and marked copies of the Registration Statement that reflect changes made to the Confidential Registration Statement.

Prospectus Summary
Overview, Page 1

1. **We note your reference in the third paragraph on page 1 to a "shorter regulatory approval process for our product candidate compared with drug delivery systems based on novel excipients." As currently drafted, the disclosure implies that your product candidates will be approved and the regulatory process will be shorter than it is for other product candidates. While it is appropriate for you to say that you will be relying upon prior findings during your development program and the process may be more efficient than if you conducted similar trials, please revise your disclosure to remove any implications that your product candidates will be approved, are more likely to receive FDA approval or will be approved quickly. If you continue to believe that the regulatory process is shorter than it is for other product candidates, please explain how you expect your use of silica results in fewer trials, shorter trials or other ways of shortening the regulatory process timeframe. Please also make similar revisions throughout your prospectus, including in your Business section, as necessary.**

   Response: The Company acknowledges the Staff's comment and has revised the disclosure in the Registration Statement on pages 1, 66 and 80.

Risk Factors
Page 21

2. **We note the risk factor on page 21 that 17.6% of patients enrolled in your TWIN Phase II clinical trial did not complete the study. Please revise the Summary and Business section, to clarify that 128 patients did not complete the study.**

   Response: The Company acknowledges the Staff's comment and has revised the disclosure in the Registration Statement on pages 2, 22, 80, 85, 88 and 92.

Prospectus Summary
Overview, Page 2

3. **Efficacy determinations are solely within the FDA's authority. As your product candidates have not received FDA approval, it is premature to state that they are safe or effective. To the extent that your clinical trials support the statements, you may state that your product candidate trials met the primary and secondary endpoints. You may present p values with an explanation of the meaning of these values in the Business section. Please revise your statement "TWIN also exhibited favorable efficacy results compared to its individual active components" on page 2 and all other statements indicating that your products are effective or more effective than other treatments.**

   Response: The Company acknowledges the Staff's comment and has revised the disclosure in the Registration Statement on pages 2 and 81.

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Prospectus Summary
Overview, Page 2

4. We note your statement on page 2 that you believe "TWIN represents a differentiated product when compared with currently approved topical acne treatments and, if approved, has the potential to become a preferred treatment for acne." Additionally, we note your disclosure on page 25 indicating that your branded product candidates were not, and will not be subject to head-to-head clinical trials with drugs considered the applicable standard of care. Please revise the referenced statement comparing TWIN to currently approved products and all other similar statements contained on page 86 and elsewhere.

Response: The Company acknowledges the Staff's comment and has revised the disclosure in the Registration Statement on pages 2, 81, 82, 89 and 92.

Prospectus Summary
Overview, Page 3

5. We note your reference to your generic product candidate agreement you are developing with Douglas Pharmaceuticals. To the extent that the generic product candidate is material to your operations, please identify the drug and the indication. If is not material to your operations, please remove the references from the summary.

Response: The Company acknowledges the Staff's comment and has revised the disclosure in the Registration Statement on pages 3 and 4.

If you have any questions regarding the foregoing responses or the enclosed Registration Statement, please do not hesitate to contact me by telephone at (212) 906-2916.

Very truly yours,

/s/ Nathan Ajiashvili

Nathan Ajiashvili
of LATHAM & WATKINS LLP

cc: Alon Seri-Levy, Chief Executive Officer, Sol-Gel Technologies Ltd.
Joshua Kiernan, Latham & Watkins LLP
Gene Kleinhendler, Gross, Kleinhendler, Hodak, Halevy, Greenberg & Co.