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May 28, 2021

Via Edgar

Ms. Jen Do
Ms. Lynn Dicker
Ms. Margaret Schwartz
Mr. Tim Buchmiller
Securities and Exchange Commission
Division of Corporate Finance
100 F Street, N.E.
Washington, D.C. 20549

Re: **SeqLL Inc.**
Registration Statement on Form S-1
Filed March 31, 2021
File No. 333-254886

Ladies and Gentlemen:

On behalf of our client, SeqLL Inc., a Delaware corporation (the "Company"), and pursuant to the applicable provisions of the Securities Act of 1933, as amended (the "Securities Act"), and the rules promulgated thereunder, we hereby submit in electronic form the accompanying Amendment No. 1 to Registration Statement on Form S-1 of the Company ("Amendment No. 1"), marked to indicate changes from the Registration Statement on Form S-1 that was initially filed with the Securities and Exchange Commission (the "Commission") on March 31, 2021.

Amendment No. 1 reflects the responses of the Company to comments received from the Staff of the Commission (the "Staff") in a letter dated April 27, 2021 (the "Comment Letter"). The discussion below is presented in the order of the numbered comments in the Comment Letter. Certain capitalized terms set forth in this letter are used as defined in Amendment No. 1. For your convenience, references in the responses to page numbers are to the marked version of Amendment No. 1 and to the prospectus included therein.

The Company has asked us to convey the following responses to the Staff:

Registration Statement on Form S-1, Filed March 31, 2021
Summary, page 1

1. *Please revise this section to clarify your current operations, including the products and services you are selling, years of sales and geographical distribution.*

Response: The Registration Statement has been revised in response to the Staff's comment by clarifying under the caption "Prospectus Summary - Overview" the nature of the Company's current operations and product or services offerings. As disclosed in Amendment No 1, unlike most companies that are offering or developing NGS products, the Company has not developed, and is not developing, products for, and does not offer or sell products directly to, healthcare professionals or consumers. Instead, the Company's target customers are consumers of NGS products and services engaged in research activities and the development of new or improved products in the field of life sciences, including customers such as academic and government institutions, hospitals and medical centers, pharmaceutical and biotechnology companies, and non-profit research organizations. The products and services that the Company offers to those target customers are described under that caption. See pages 1 and 54 of Amendment No. 1.

2. *Given the extensive disclosure regarding the benefits of your product relative to competing products, please explain the reasons for your current level of sales and share of the market in which you compete.*

Response: The Registration Statement has been revised in response to the Staff's comment by added disclosure regarding the Company's early stage of development, the Company's inability to obtain outside funding during the COVID-19 pandemic and the reduction in research grants and other funding available to the Company and its partners and collaborators during the COVID-19 pandemic for non-COVID-19 related sequencing research and development projects. Those factors have adversely affected the Company's sales and results of operations during 2020 and the first quarter of 2021. See pages 7 and 17 of Amendment No. 1.

3. *On pages 5-6 you state that your technology could be used as a companion diagnostic in clinical trials, or to diagnose disease. Please clarify the FDA approval status or whether you intend to seek FDA approval in the future for any products. Clarify which strategies will require regulatory approval.*

Response: The Registration Statement has been revised in response to the Staff's comment to disclose that the Company has not sought FDA approval of its sequencers because to-date the Company has marketed its products only for research purposes and not for clinical diagnostics. In addition, disclosure was added detailing the likely need for the Company to support its partners and collaborators during the FDA approval process for their future products. In addition, disclosure has been added that the Company intends to raise additional funds in the future if it determines to seek FDA approval for any product in the future. See pages 6 and 68 of Amendment No. 1.

4. *Highlight in an appropriate section of your prospectus summary that you intend to raise additional funds following the completion of this offering and that your ability to continue to operate is dependent upon the success of this offering, as you disclose on page 45.*

Response: The Registration Statement has been revised in response to the Staff's comment by incorporating under the caption "Prospectus Summary – Our Strategy" the Company's expected use of a portion of the net proceeds of this offering to support its existing partnerships and collaborations and its expectation that it will raise additional capital to advance its existing partnerships and collaborations and to fund the initial costs of new relationships into which it may enter. See page 7 of Amendment No. 1.

5. *We note your disclosure on page 1 that data produced by your tSMS platform generates highly accurate, reproducible molecular profiles, often providing researchers with new insights into the biology being researched, such as revealing previously unknown characteristics of molecular structures. We also note your disclosure on page 5 that you provide solutions for a variety of applications, including genome structural analysis. While it seems to be clear from your disclosure how your sequencing technology works, please clarify how your platform reveals previously unknown characteristics of molecular structures and provides genome structural analysis, and clarify whether this feature is available in the platform that you currently offer. For example, we note from your disclosure under "Our Customers and Collaborations" on page 7 that some of these technologies may be part of new prototype systems that you intend to make available to some of your collaborators on an early-access basis in the second half of 2021, and it is unclear whether some of this technology refers to the work being performed by the Broad Institute based on anti-body based detection coupled-with your system, or otherwise.*

Response: The Registration Statement has been revised in response to the Staff's comments by updating the language in the second paragraph under the caption "Prospectus Summary – Overview" on page 1. The updated language clarifies the Company's belief that its current platform offers advantages by detecting single molecules of DNA/RNA with little to no sample manipulation. The Company believes future products to be developed through its collaborative efforts will allow genome structural analysis and could reveal previously-unknown molecular structures. The Company's collaborators at The Jackson Laboratory, for example, wrote the following on their website in 2019:

"We have preliminary results that indicate the potential for smChIA," says Wei. "Once fully developed, we believe that it (tSMS) may exceed previous methodologies to such an extent that it will revolutionize the field of 3D genome biology. It will be able to generate genome-wide single molecule chromatin interaction maps in a variety of biological systems, and it will uncover the structural detail of multiplex chromatin loci that are currently unresolvable."

https://www.jax.org/news-and-insights/2019/march/3d-genomics-one-nucleus-at-a-time

6. *We note from your disclosure that Figure 1 is intended to show antibody-detection reactions but Figure 1 does not appear to show that part of the workflow. Please revise as appropriate.*

Response: The Registration Statement has been revised in response to the Staff's comments by updating the language referencing Figure 1. The Company intends for Figure 1 to be illustrative of its standard sequencing processes. However, the Company's standard sequencing process does not include antibody detection and only specific projects will rely on antibody detection as part of the workflow. It is those research and development efforts that will allow the Company's platform to provide genome structural analysis and possibly reveal previously-unknown molecular characteristics. As antibody detection will not be applicable to all projects, the Company believes it would not be proper to revise Figure 1 and, instead, has updated the language referencing Figure 1 to delete the reference to "antibody detection reactions." Please see pages 4 and 56 of Amendment No. 1.

Our Strategy, page 6

7. *We note your disclosure that you "generate revenues through a combination of product sales, research services and research grants." Please balance this disclosure by indicating that the company recognized $0 and $2,000 in revenue from product sales for the years ended December 31, 2020 and 2019, respectively, as indicated on page F-9.*

Response: The Registration Statement has been revised in response to the Staff's comment to disclose that the Company has generated only nominal revenues to date from its current operating model and does not expect its revenues to scale significantly until one or more of its customers, partners or collaborators develops application-specific assays or tests founded on the Company's platform. Please see page 7 of Amendment No. 1.

Our Customers and Collaborators, page 7

8. *Please revise pages 7-8 to clarify whether you are selling products or services to these entities or collaborating with them pursuant to an agreement. If the former, please ensure the products and/or services are described for each entity. If the latter, please describe the material terms of the agreements and file the agreements as exhibits pursuant to Item 601(b)(10) of Regulation S-K.*

Response: The Registration Statement has been revised in response to the Staff's comment to disclose that the Company has not yet generated significant revenues from its customers or collaborators from the sale of its products or services, and that it has not yet entered into any material agreements with any of these entities as to how its technology will be used by them in the future. In addition, additional disclosure has been added to the description of each of its identified partnerships or collaborations to disclose the specific activities the Company has undertaken to date for each of such relationships. Please see pages 8-9 and 67-68 of Amendment No. 1. As the Company does not have any material agreements with the identified customers or collaborators, no additional exhibits are required by Item 601(b)(10) of Regulation S-K.

Risk Factors, page 14

9. *If true, please add a risk factor disclosing that your CEO and William C. St Laurent will beneficially control a majority of the voting power of your outstanding common stock, and as a result, will be able to determine the outcome of future corporate actions including the election of directors. Please clarify the percentage that will be held by insiders if an anchor investor insider purchased additional shares in this offering, as indicated on the cover.*

Response: The Registration Statement has been revised in response to the Staff's comment by revising the Risk Factor entitled "Our directors, executive officers and principal stockholders will continue to have substantial control over our company after this offering, which could limit your ability to influence the outcome of key transactions, including a change of control." Please see page 31 of Amendment No. 1.

10. *Please include risk factor disclosure concerning the bankruptcy of Helicos, who appears to have attempted to develop and commercialize a version of the technology you are developing today, or advise.*

Response: The Registration Statement has been revised in response to the Staff's comment by adding an additional Risk Factor disclosing the bankruptcy of Helicos Biosciences in 2012 and the risk of the Company's failure to successfully develop and commercialize a version of the tSMS technology. See page 16 of Amendment No. 1.

Dilution, page 42

11. *In the second paragraph it appears that you have presented your pro forma net tangible book value (deficit) as your historical net tangible book value (deficit). Please revise to present historical net tangible book value (deficit) separately from pro forma net tangible book value (deficit) which gives effect to the conversion of all outstanding shares of preferred stock and the conversion of outstanding indebtedness.*

Response: The Registration Statement has been revised in response to the Staff's comment by disclosing separately under the heading "Dilution" the Company's historical net tangible book value (deficit) at March 31, 2021, both actual and on a per share basis, and the Company's pro forma net tangible book value (deficit) at March 31, 2021, both actual and on a per share basis. See page 42 of Amendment No. 1.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Comparison of Years Ended December 31, 2020 and 2019, page 46

12. We note your disclosure that your research and development expenses and general and administrative expenses decreased in 2020 as compared to 2019 due to the COVID-19 pandemic-related reductions, salary reductions, furloughs and reduced spending. If these expenses will increase in 2021, please describe any known trends or uncertainties that are reasonably likely to have a material impact on your income or losses from continuing operations. Refer to Item 303(b)(2)(ii) of Regulation S-K.

Response: The Registration Statement has been revised in response to the Staff's comment by updating the disclosure regarding the Company's research and development expenses and general and administrative expenses to include disclosure of expected increases in those expenses following the closing of this offering. The disclosure has also been updated to reflect the first quarter comparisons for 2021 and 2020, consistent with updated financials included in Amendment No, 1. Please see page 46 of Amendment No, 1.

Critical Accounting Policies and Estimates

Revenue Recognition, page 50

13. We note the revenue recognition policy on page 50 related to the sale of products and services. Given the description of the components of your tSMS single molecule sequencing platform on pages 60-61, i.e., consumables, sample loader, tSMS sequencer and image analysis engine, please clarify herein and in the significant accounting policy on page F-9 whether any of the foregoing components can be purchased and/or effectively utilized apart from one another. If so, please explain how and/or under what circumstances. Explain whether service revenue, i.e., genetic sequencing involved with research services and associated bioinformatics specialist support, can be purchased and/or effectively utilized apart from the foregoing tSMS single molecule sequencing components. Finally, if there is no binding agreement or requirement to purchase the components and/or services together - and so can be used without each other - clarify how this impacts your determination of your performance obligations.

Response: The Registration Statement has been revised in response to the Staff's comment to clarify that the components of the genetic sequencing process, including consumables, sample loader and sequencer, are not distinct and do not have a stand-alone value to the customer as the single performance obligation of the Company is to generate sample-specific data. As such, service revenue, i.e., genetic sequencing involved with research services and associated bioinformatics specialist support, can not be purchased and/or not effectively utilized apart from the foregoing tSMS single molecule sequencing components. See pages 1, 52 and 62 of Amendment No. 1.

Our Technology Solution, page 55

14. We note your disclosure under the heading "Minimal Sample Preparation" appears to be based on data from 2012 and your disclosure under the heading "Greater Sensitivity" appears to be based on data from 2011. Please tell us if this data continues to be reliable or if more recent data is available. If this data does not accurately represent the current state-of-the-art of your competitor's products, please revise or remove these comparisons as appropriate.

Response: Please be advised that the Company believes the 2011 and 2012 data referenced in the Registration Statement continues to be reliable and is consistent with the experiences of the Company's customers and collaborators. The Company continues to hear from its customers that they have difficulty with consistency and reproducibility due to the complex approach of other technology, which infers a lack of sensitivity. The Company believes its ability to analyze molecules after only a few simple, straightforward steps remains of significant value.

Intellectual Property, page 68

15. On page 25 you state that you license or sub-license intellectual property that is important to your business from Fluidigm Corporation and Arizona Science and Technology Enterprises LLC. Please revise to provide a description of the agreements and file these agreements as exhibits.

Response: The Registration Statement has been revised in response to the Staff's comment by adding additional disclosure regarding the license agreement from Fluidigm Corporation and the sublicense agreement from Arizona Science and Technology Enterprises LLC. See page __ of Amendment No. 1. The license agreement from Fluidigm Corporation is currently filed as Exhibit 10.2 to the Registration Statement and the sublicense agreement from Arizona Science and Technology Enterprises LLC is currently filed as Exhibit 10.3 to the Registration Statement.

Management, page 70

16. Please provide the Compensation Committee Interlocks and Insider Participation information required by Item 407(e)(4).

Response: The Registration Statement has been revised in response to the Staff's comment by adding the requested disclosure under the heading "Management – Board Committees – Compensation Committee." See page 75 of Amendment No. 1.

Executive Compensation, page 76

17. Page F-13 indicates stock options are outstanding as of December 31, 2020. Please revise this section to provide the information required by Item 402(p) of Regulation S-K to the extent applicable.

Response: The Registration Statement has been revised in response to the Staff's comment by adding the requested disclosure under the heading "Executive Compensation – Outstanding Equity Awards at Fiscal Year-End." See page 82 of Amendment No. 1.

Principal Stockholders, page 81

18. Please revise your disclosure to identify the natural person or persons who have voting and/or investment control of the shares held by the Georges C. St. Laurent Jr. Trust. Refer to Item 403 of Regulation S-K.

Response: The reference to the Georges C. St. Laurent Jr. Trust in the principal stockholders table was an error and should have been a reference to Georges C. St. Laurent Jr., an individual. That error has been corrected in Amendment No. 1 and the Company believes no additional disclosure is required in response to this comment. See page 85 of Amendment No. 1.

Certain Relationships and Related Party Transactions, page 83

19. We note your statement on page 84 that the principal on the Georges C. St. Laurent Jr. Trust promissory note will convert on the closing of this offering and the accrued interest will be paid out of the cash proceeds. Please state the amount of shares that the Georges C. St. Laurent Jr. Trust promissory note principal will convert into upon the closing of this offering. Please also reconcile this disclosure with page 37, where you state you will repay a to-be-provided amount in principal amount of outstanding promissory notes that bear interest at the rate of 10% per annum and related accrued interest given these appear to be the same promissory note, or clarify that they are different notes.

Response: The Registration Statement has been revised in response to the Staff's comment by adding the number of shares of common stock into which the promissory note held by the Georges C. St. Laurent Jr. Trust will be converted on the closing of this offering. See page 87 of Amendment No. 1.

The 10% promissory note referenced under the caption "Use of Proceeds" as being repaid with a portion of the net proceeds of this offering was a different promissory note (not held by the Georges C. St. Laurent Jr. Trust); however, that promissory note will now be converted to shares of our common stock in connection with the closing of this offering and, as a result, such disclosure has been revised to indicate that only the accrued interest on that note will be paid out of the net proceeds of this offering. See page 37 of Amendment No. 1.

20. *We note the related party payables chart on page F-13. Please revise this section to describe the arrangements between the Company and each of these entities associated with William C. St. Laurent.*

Response: The Registration Statement has been revised in response to the Staff's comment on related party payables noted on page F-28. The Company has been advised by its auditors that such information is not required in its already - completed audited financial statements.

Description of Capital Stock, page 85

21. *Please revise to specify the number of shares with registration rights under the amended and restated investors' rights agreement and the parties thereto.*

Response: The Registration Statement has been revised in response to the Staff's comment by revising the disclosure under the caption "Description of Capital Stock – Registration Rights" to indicate that the current holders of the Company's Series A-1 preferred stock and the Company's Series A-2 preferred stock are the parties to the Company's two investor rights agreements, the terms of which are substantially identical, and to disclose the aggregate number of shares of common stock that constituted registrable securities under such agreements at March 31, 2021. In addition, the Company has filed a copy of its Investor Rights Agreement dated as of September 30, 2018 as Exhibit 10.13 to the Registration Statement.

General

22. *Please supplementally provide us with copies of all written communications, as defined in Rule 405 under the Securities Act, that you, or anyone authorized to do so on your behalf, present to potential investors in reliance on Section 5(d) of the Securities Act, whether or not they retain copies of the communications.*

Response: The Company respectfully acknowledges the Staff's comment and advises the Staff that neither the Company nor anyone authorized by the Company has presented any written communications to investors in reliance on Section 5(d) of the Securities Act as of the date hereof. The Company will supplementally provide to the Staff under separate cover all written communications that the Company or anyone authorized to act on the Company's behalf may present to potential investors in reliance on Section 5(d) of the Securities Act in the future.

*** * ***

As it is the goal of the Company to have the Form S-1 declared effective as soon as possible, the Company would greatly appreciate the Staff's review of Amendment No. 1 as promptly as practicable. If the Staff has any questions with respect to the foregoing, please contact the undersigned at (212) 326-0846.

Very truly yours,

/s/ Eric M. Hellige
Eric M. Hellige

cc: Daniel Jones
SeqLL Inc.