UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Lassen Therapeutics 1, Inc.

Petitioner

v.

Singapore Health Services PTE LTD., and

National University of Singapore

Patent Owner

CASE: Unassigned

Patent No. 10,106,603

DECLARATION OF PETER BOWERS

IN SUPPORT OF

PETITION FOR POST GRANT REVIEW

I. BACKGROUND AND QUALIFICATIONS

1. I, Peter Bowers, Ph.D., have been retained by Drinker Biddle & Reath LLP on behalf of Lassen Therapeutics 1, Inc. ("Lassen") as an independent expert in the field of antibody design and engineering.

2. I am currently Associate Professor at the David Geffen School of Medicine at UCLA where I also serve as Associate Director for Drug Development in the UCLA Clinical and Translational Science Institute (CTSI) and Director of the David Geffen School of Medicine (DGSOM) Therapeutic Antibody Laboratory at the University of California, Los Angeles. At UCLA, I work in part to guide the process of antibody project selection and therapeutic concept design, and oversee management of therapeutic project teams, all aspects of related project antibody discovery, engineering and lead candidate selection, including supervision of staff, data management and screening platforms.

3. Prior to this position, I was Senior Director and scientific founder of AnaptysBio, a now publicly-traded therapeutic antibody product company [NASDQ; ANAB]. While with AnaptysBio, I worked to develop a new antibody discovery platform based on aspects of B cell adaptive immune response and somatic hypermutation for the generation of high-affinity therapeutic antibody discovery and optimization. I also oversaw antibody discovery, antibody humanization and analytics for two first-in-class clinical stage antibodies including Etokimab,

targeting interleukin-33 for the treatment of severe adult asthma and severe adult peanut allergy, and ANB019, an antibody blocking interleukin-36 receptor for the treatment of the rare inflammatory disease, generalized pustular psoriasis.

4. In total, I oversaw antibody discovery and engineering activities for over 35 antibody therapeutic projects including 5 antibodies in clinical trials partnered with pharmaceutical companies targeting checkpoint inhibitors as antagonists and agonists.

5. I obtained my Bachelor's of Science degree in Biochemistry from the University of Iowa in 1992. I obtained my Doctoral degree in Biochemistry from the University of Washington in Seattle 1998 studying protein and protein/DNA structure and biophysics using nuclear magnetic resonance. I performed postdoctoral research in the laboratories of Dr. David Baker (University of Washington) and David Eisenberg (University of California, Los Angeles) focusing on protein engineering and design and functional genomics respectively.

6. I have published or co-authored about 25 scholarly articles peer-reviewed journals such as the Proceedings of the National Academy of Sciences, Science, Nature Structural Biology, Journal of Biological Chemistry, and the Journal of the American Chemical Society. These papers address aspects of protein structure and function with half of the papers relating to antibody discovery and engineering specifically. I have also authored invited review papers, book chapters, and meeting

reports. Several of my publications focus on immunoglobulin crystal structures, binding properties, and therapeutic potential. I am the co-inventor on a dozen U.S. issued and patent applications covering both antibody discovery methods and therapeutic antibodies covering composition of matter.

7. I have lectured, organized, and taught multiple courses at UCLA, on antibody structure, pharmacology and function, protein structure, molecular interactions, and structure-based drug design.

8. Based in part on my research and publications over time, I have been awarded numerous funding grants from national and state scientific organizations (Defense Advanced Research Project Agency (DARPA), Defense Threat Reduction Agency and The National Institutes of Health (NIH) National Heart, Lung, Blood Institute), in the amount of about $3.5M to investigate antibody assays, stability, structure and therapeutic applications in inflammation, MI (myocardial infarction), oncology, and immuno-oncology.

9. My professional qualifications are described in further detail in my curriculum vitae, which is attached as **Appendix A.**

10. I am being compensated for my work on this case at my customary rate of $450 per hour plus expenses. My compensation does not depend in any way on my opinions, my performance, or the outcome of the case. I have no current or past

financial ties with Lassen, nor with Drinker, Biddle, and Reath LLP outside of my engagement in this proceeding.

11. I have not testified in a U.S. court or in any U.S. administrative proceeding over the past ten years.

A. INFORMATION PROVIDED TO ME

12. I have been informed by Drinker Biddle counsel ("Counsel") that the Patent Trial and Appeal Board ("PTAB") applies the same construction standard used in district courts, where the claims are given their ordinary meaning as understood by one skilled in the art at the time of the invention, informed by the claim language itself, the specification, and the prosecution history. I also understand from Counsel that "extrinsic evidence" – i.e., evidence other than the patent and prosecution history – can be relevant in determining how one of ordinary skill would understand terms of art used in the claims. I have been informed by Counsel, however, that extrinsic evidence may not be used to contradict the meaning of the claims as described in the intrinsic evidence – i.e., evidence in the claim language itself, the specification, and the prosecution history.

13. In comparing the claims of the United States Patent No. 10,106,603 ("the '603 patent") to Cook, *et al.* to the known prior art, I have carefully considered the '603 patent and the '603 patent's file history from the perspective of a person of ordinary skill in the art ("POSITA") using my experience and knowledge in the

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