UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SUN PHARMACEUTICAL INDUSTRIES, LTD., SUN PHARMACEUTICAL INDUSTRIES, INC. and SUN PHARMA GLOBAL FZE, Petitioners,

v.

NOVARTIS A.G., Patent Owner.

Patent No. 9,187,405

DECLARATION OF BARBARA S. GIESSER

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I, Barbara S. Giesser, declare as follows:

I. QUALIFICATIONS

 I am currently a Professor of Clinical Neurology at the David Geffen School of Medicine at UCLA and have held faculty appointments there since 2002.
Prior to my appointments at UCLA, I was an Associate Professor of Clinical Neurology at the Arizona Health Sciences Center at the University of Arizona, from 1992-2002. Prior to joining the University of Arizona, I was an Assistant Professor of Neurology at Albert Einstein College of Medicine in Bronx, New York from 1983-1991.

2. I received a Master's Degree in Virology from the University of Texas Graduate School of Biomedical Sciences in 1974 and an M.D. from the University of Texas Medical School at San Antonio in 1978. I completed a medical fellowship in Neurology at the Albert Einstein College of Medicine in 1983 after first completing my medical residency in Neurology at the Bronx Municipal Hospital Center.

3. I became board certified by the American Board of Psychiatry and Neurology in 1985 and by the American Society of Neurorehabilitation in 1992. I became a Fellow of the American Academy of Neurology in 1993 and of the American Neurological Association in 2012. I continue to hold active medical licenses in New York and in California. 4. I have more than thirty years of experience in the treatment of patients with, and research regarding, multiple sclerosis ("MS"), including relapsing-remitting MS. I have received numerous research grants, including several research grants from the National Multiple Sclerosis Society. I have also participated in numerous clinical trials for MS, including trials involving patients with relapsing-remitting MS. I have given dozens of invited lectures and presentations and have been an author or co-author of dozens of books, book chapters, reviews, or peer-reviewed research papers. I have served on numerous professional committees, received many awards, and provided editorial services for multiple journals. For a more detailed listing of my credentials and publications, please see my curriculum vitae, attached as EX1003.

II. SCOPE OF WORK

5. I understand that a petition is being filed with the United States Patent and Trademark Office for *Inter Partes* Review of U.S. Patent No. 9,187,405 ("the '405 patent," EX1001). I have been retained by the Petitioner to provide analysis and opinions regarding the '405 patent. I have reviewed the '405 patent (EX1001) and relevant sections of its prosecution history in the United States Patent and Trademark Office. EX1011. I have also reviewed certain publications in arriving at my opinions, and cite them in this declaration. For convenience, documents cited in this declaration are listed in the Appendix in Section XIII. 6. I am compensated at the rate of \$350/hour for my work except that I will be paid \$500 per hour for time spent testifying in deposition or at trial. My compensation does not depend on the outcome of this matter.

III. OVERVIEW OF THE 9,187,405 PATENT

7. The '405 patent is entitled "S1P Receptor Modulators For Treating Relapsing-Remitting Multiple Sclerosis." The first page of the patent claims priority to a foreign application, 0612721.1 (GB), filed on June 27, 2006 via U.S. Patent Application No. 13/149,468 filed on May 31, 2011, now Patent No. 8,741,963, and via U.S. Patent Application No. 12/303,765 filed as application number PCT/EP2007/005597 on June 25, 2007. EX1001. For the purposes of my analysis, I have assumed that the applicable invention date of the '405 patent is June 27, 2006. However, the results of my analysis would not change if the applicable invention date were June 25, 2007, May 31, 2011, or April 21, 2014.

8. The '405 patent is generally directed to a dosing regimen for the prior art MS drug identified as 2-amino-2-[2-(4-octylphenyl)ethyl]propane-1,3-diol. For convenience, I will refer to this compound as fingolimod.

9. Claim 1 of the '405 patent is an independent claim and recites the following:

A method for reducing or preventing or alleviating relapses in Relapsing-Remitting multiple sclerosis in a subject in need thereof, comprising orally administering to said subject 2-amino-2-[2-(4-

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