

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

KVK-TECH, INC.

Petitioner,

v.

SHIRE, LLC

Patent Owner.

Case IPR2018-00293
US Patent No. 9,173,857

DECLARATION OF JAMES MCCRACKEN, M.D.

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DECLARATION OF JAMES MCCRACKEN, M.D.

I, James McCracken, do hereby declare and say as follows:

I. OVERVIEW

1. I am over the age of 18 and otherwise competent to make this declaration. I understand that this declaration is being submitted together with a petition for Inter Partes Review (“IPR”) of claims 1-31 of U.S. Patent No. 9,173,857 (the “‘857 patent”).

2. I have been retained as an independent expert on behalf of KVK-Tech, Inc. (“KVK”), the Petitioner, in this proceeding. I am being compensated for my time in connection with this IPR at my standard legal consultant rate. I have no personal or financial interest in KVK or in the outcome of this proceeding.

3. I understand that this proceeding involves the ‘857 patent, which has an effective filing date of May 12, 2006, having been filed as U.S. Patent Application No. 11/383,066 (“the ‘066 application”), and which issued on November 3, 2015. I understand that the earliest possible filing date of the ‘857 patent is May 12, 2006. I further understand that the patent is assigned to Shire LLC (“Shire”). I have been asked to provide my analysis of the ‘857 patent based on prior art and the knowledge in the art before May 12, 2006.¹

¹ My opinions would be unaffected if Shire established an earlier filing date in 2005 or 2006.

4. I further understand that the claims of the '857 patent recite, among other things, a method of treating ADHD with a pharmaceutical composition comprising pharmaceutically active mixed amphetamine salts in three types of beads: (1) immediate release beads ("IR beads"); (2) delayed pulsed release beads ("DR beads"); and (3) delayed sustained release beads ("SR beads"). I refer to this claimed three bead composition as the "Mixed Bead Formulation."

5. I have been asked to address alleged issues concerning "acute tolerance" and "food effect" – as raised by Dr. James Polli Ph.D. on pages 74-93 and 100-103 of his declaration (Polli Decl. EX. 2060) – and what effect, if any, they may have on the therapeutic efficacy of amphetamine-containing medications. Specifically, Dr. Polli contends that acute tolerance and food effect are characteristic to amphetamine formulations, and that these characteristics made the addition of a third sustained release bead to a formulation containing two pulsed release beads unlikely to extend therapeutic efficacy of the pulsed beads. I understand that these questions are relevant to the patentability of the Mixed Bead Formulation claimed in the '857 patent.

6. First, I have been asked to opine on whether acute tolerance was known to diminish the therapeutic efficacy of amphetamines, and whether this would have discouraged the use of the Mixed Bead Formulation for treating ADHD.

7. Second, I have been asked to opine on whether food effect was a known issue affecting the absorption and therapeutic efficacy of amphetamines, and whether the claimed “food effect” recited in claim 19 is an inherent property of the Mixed Bead Formulation.

II. QUALIFICATIONS

8. This declaration is based on my personal knowledge as a practicing physician and expert in the field of psychiatry and the use of amphetamines to treat attention deficit hyperactivity disorder (“ADHD”).

9. I am a medical doctor and professor, with significant experience in both academia and as a practicing physician. I received my B.A. from the University of Texas in 1976, and attended the Baylor College of Medicine, earning my medical degree in 1980. I completed my residency in general psychiatry at the Duke University Medical Center in 1984, and completed a combined child psychiatry and research fellowship at the UCLA Neuropsychiatric Institute in Los Angeles, California from 1984 to 1987.

10. I am board-certified in general and child and adolescent psychiatry, and have been a full-time faculty member in the Department of Psychiatry and Biobehavioral Sciences at the David Geffen School of Medicine at UCLA in Los Angeles, California for 31 years. I am an active clinician, supervising attending physician, teacher, and researcher with extensive experience in the diagnosis and

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