UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NALOX-1 PHARMACEUTICALS, LLC, Petitioner,

v.

ADAPT PHARMA OPERATIONS LIMITED, and OPIANT PHARMACEUTICALS, INC., Patent Owners.

Case IPR2019-00688 U.S. Patent 9,468,747

SUPPLEMENTAL DECLARATION OF STUART A. JONES, PH.D.



TABLE OF CONTENTS

I.	INT	INTRODUCTION	
II.			
III.			
	A.	The POSA would have recognized that excipients can increase drug degradation through indirect mechanisms	4
	B.	BZK's surfactant properties could increase the naloxone degradation observed in Wyse.	7
IV.	THE POSA WOULD NOT HAVE PERFORMED ADDITIONAL EXPERIMENTS TO DETERMINE THE "ROOT CAUSE" OF THE DEGRADATION OBSERVED IN WYSE.		16



I, Stuart A. Jones, Ph.D., declare as follows:

I. INTRODUCTION

- 1. I am an expert in the field of drug development, including the fields of intranasal drug formulation, drug delivery, dosage form design, formulation manufacture, and pharmacokinetics.
- 2. I understand that this declaration is being submitted in support of Patent Owners Adapt Pharma Operations Limited and Opiant Pharmaceuticals, Inc. (collectively, "Adapt") in three proceedings before the Patent Trial & Appeal Board—IPR2019-00685, IPR2019-00688, and IPR2019-00694—in which Petitioner Nalox-1 Pharmaceuticals, LLC ("Nalox-1") has challenged the patentability of certain claims of U.S. Patent Nos. 9,211,253 ("the '253 patent"), 9,468,747 ("the '747 patent"), and 9,629,965 ("the '965 patent") (collectively, "the Adapt patents" or "the challenged patents").
- 3. I am over the age of 18 and otherwise competent to make this declaration. I am being compensated at my customary hourly rate of £320.00, as well as reimbursement of reasonable business expenses. My compensation is not contingent upon the outcome of these proceedings or the opinions I reach.
- 4. This is my second declaration in these proceedings. I submitted my first declaration on December 23, 2019. *See* Declaration of Stuart A. Jones, Ph.D., Ex. 2201 ("First Jones Decl."). I have been asked to supplement the opinions set



forth in my first declaration to respond to certain opinions offered in the Supplemental Declaration of Maureen Donovan, Ph.D. (Nalox1201) ("Supp. Donovan Decl."). In this declaration, I apply the legal principles of obviousness and the same definition of the person of ordinary skill in the art ("POSA") that I set forth in my first declaration. First Jones Decl. (Ex. 2201) ¶¶ 29–44.

- 5. In preparing this declaration, I have considered the documents cited in my first declaration, the Supplemental Declaration of Dr. Donovan and the documents she cited in it, and the additional documents identified herein. I understand that each of the three IPR proceedings at issue has its own set of exhibit numbers, but that the same exhibit numbers have been maintained for the same exhibits across the three proceedings. I will therefore refer to the exhibits by name; a chart of the relevant exhibit numbers in and the short names I use to refer to different documents is attached to the end of this declaration.
- 6. Having considered Dr. Donovan's supplemental declaration, it remains my opinion that none of claims 1–29 of the '253 patent, claims 1–45 of the '747 patent, or claims 1–30 of the '965 patent ("the challenged claims") would have been obvious to the POSA.

II. BACKGROUND & QUALIFICATIONS

7. In addition to the experience and qualifications described in my previous declaration, *see*, *e.g.*, First Jones Decl. (Ex. 2201) ¶¶ 1, 10–21, I have the



following experience and qualifications relevant to my response to Dr. Donovan set forth in this supplemental declaration.

- 8. My research involves the use of surfactants to design drug delivery systems. I also have studied how surface active excipients influence the formulation characteristics and pharmacokinetics of intranasal medicines. I also have expertise in chemistry, including the physical chemistry of drug-excipient interactions, as well as expertise concerning the ability of metal complexes to influence the physical and chemical stability of formulations. My research and experience in these areas have been the subject of grants I have received and studies published in peer-reviewed scientific journals, as described in my curriculum vitae, previously submitted as Exhibit 2200.
- 9. In addition to my research, I have been a reviewer for *Langmuir*, a scientific journal published by the American Chemistry Society, including for review articles attempting to understand surfactant behavior in formulations and the use of surfactant micelles to enhance the delivery of drugs.

III. THE POSA WOULD HAVE FOLLOWED WYSE'S TEACH-AWAY CONCERNING BZK AND NALOXONE.

10. In her Supplemental Declaration, Dr. Donovan opines for the first time that BZK "does not act as an oxidizing agent in pharmaceutical formulations" and therefore "could not have been responsible" for the naloxone degradation observed in Wyse. Supp. Donovan Decl. (Nalox1201) ¶¶ 12, 15 & n.7, 16. Dr.



DOCKET

Explore Litigation Insights



Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.

