

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FlatWing Pharmaceuticals, LLC

Petitioner

v.

Anacor Pharmaceuticals Inc.

Patent Owner

Patent No. US 9,566,290
Issue Date: February 14, 2017

Title: Boron-Containing Small Molecules

**DECLARATION OF NARASIMHA MURTHY, PH.D
IN SUPPORT OF PETITION FOR INTER PARTIES
REVIEW OF U.S. PATENT NO. 9,566,290**

Case No. 2018-00170

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Declaration of S. Narasimha Murthy, Ph.D.

I. INTRODUCTION

1. I, S. Narsimha Murthy, Ph.D., hereby declare that the following is true and correct. I am over the age of 18, competent to make this declaration, and I am familiar with the facts below. I offer this declaration in support of the Petition for *inter partes* review of claims of U.S. Patent No. 9,566,290 (the '290 Patent).

II. QUALIFICATIONS AND EXPERIENCE

A. Background and Work Experience

2. I received a Bachelor of Pharmacy from Bangalore University, India, in 1992, a Master of Pharmacy from Bangalore University, India, in 1994, and a Ph.D. in Pharmaceutics from Bangalore University, India, in 2002. I completed my post-doctoral research in the department of Molecular and Cellular Biophysics at Roswell Park Cancer Institute, Buffalo, NY from 2002-2005.

3. I was an Assistant Professor of Pharmaceutics at the M.S.R. College of Pharmacy, India from 1994-2002. I was an Assistant Professor of Pharmaceutics at Ohio Northern University, Ohio from 2005-2006, and an Assistant Professor of Pharmaceutics at the University of Mississippi from 2006-2011. I was an Associate Professor of Pharmaceutics from 2011-2016 at the University of Mississippi and continuing as Professor of Pharmaceutics and Drug Delivery since 2016 until the present. I founded the Institute for Drug Delivery and Biomedical Research in Bangalore, India in 2013.

Declaration of S. Narasimha Murthy, Ph.D.

4. I have received numerous research grants directed to the topical administration of therapeutics, including “Nail Penetration of Antifungal Drugs” sponsored by Arno Therapeutics (2014-15), “Bioadhesive Properties of Nail Lacquers” sponsored by Chanelle Group, France (2010), “Rapid Transdermal Delivery of Drugs” sponsored by Transport Pharmaceuticals Inc. (2008-09), and “Electret Effects on the Skin Permeability” sponsored by Rad Elec. Inc. (2005-06).

5. I have served as the Chief Editor of two books: *Dermatokinetics of Therapeutic Agents* (2011) and *Topical Nail Products and Ungual Drug Delivery* (2012). I have also authored eleven (11) book chapters directed to topical and other routes of administration of therapeutics.

6. Since the late 1990s, my research interests have been based on intradermal, transdermal, and unguial (nail) drug delivery. My research has resulted in over 85 publications in peer reviewed journals.

7. My CV is attached as Exhibit 1006.

8. I am competent to make this declaration based upon my personal knowledge and expertise in the area of product development, drug delivery mechanisms, topical drug formulations, and in vitro and in vivo evaluation of therapeutic agents to treat onychomycosis and other nail diseases.

B. Engagement

9. I am being compensated \$500 per hour for services I provide in this case, and \$1000 per day if travel is required. This compensation is not contingent upon my performance, the outcome of this petition for *inter partes* review, or any issues involved in or relating to this petition for *inter partes* review.

III. MATERIALS CONSIDERED

10. In preparing this Declaration, I reviewed the following documents and information, and the Petition:

| EXHIBIT | DESCRIPTION | SHORT FORM |
|----------|--|--------------|
| Ex. 1001 | U.S. Patent No. 9,566,290 | '290 Patent |
| Ex. 1002 | Prosecution History of the '290 Patent | |
| Ex. 1007 | Austin et al., PCT Pub. No. WO 1995/033754 | Austin '574 |
| Ex. 1008 | Brehove, U.S. Patent Pub. No. 2002/0165121 | Brehove '121 |
| Ex. 1009 | Freeman et al., PCT Pub. No. WO 2003/009689 | Freeman '689 |
| Ex. 1010 | Samour et al., U.S. Patent No. 6,224,887 | Samour '887 |
| Ex. 1012 | U.S. Patent No. 7,582,621 | '621 Patent |
| Ex. 1013 | Prosecution History of the '621 Patent | |
| Ex. 1014 | Final Written Decision, <i>Coalition for Affordable Drugs X LLC v. Anacor Pharmaceuticals, Inc.</i> , IPR2015-01776 (P.T.A.B. Feb. 23, 2017), Paper 70 | |
| Ex. 1015 | U.S. Patent No. 7,767,657 ("the '657 Patent") | '657 Patent |

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