

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

TEVA PHARMACEUTICALS USA, INC.,  
*Petitioner*

v.

CORCEPT THERAPEUTICS, INC.,  
*Patent Owner*

---

Case PGR2019-00048  
U.S. Patent No. 10,195,214

---

**DECLARATION OF F. PETER GUENGERICH, Ph.D.**

## TABLE OF CONTENTS

I.	INTRODUCTION .....	1
II.	QUALIFICATIONS AND MATERIALS RELIED UPON .....	1
III.	SUMMARY OF OPINIONS .....	6
IV.	TECHNICAL BACKGROUND .....	6
A.	Drug-Drug Interactions .....	6
B.	Mifepristone .....	8
1.	Mifepristone is a CYP3A Substrate.....	8
2.	Mifepristone has Complicated Pharmacokinetics .....	10
V.	LEGAL STANDARDS .....	11
VI.	THE CLAIMS OF THE '214 PATENT WOULD NOT HAVE BEEN OBVIOUS.....	13
A.	Dr. Greenblatt's Definition of a POSA.....	13
B.	Dr. Greenblatt's Has Not Established That A POSA Would Have A Reasonable Expectation That The Claimed Methods Would Be Safe and Effective.....	14
C.	If Anything a POSA Would Have Expected There to be a Significant Drug-Drug Interaction.....	21
1.	A POSA Would Have Expected Mifepristone to Act As a Sensitive CYP3A Substrate That Would Be Significantly Affected By a Strong CYP3A Inhibitor.....	21
2.	The Only Available Clinical Data Indicated a Clinically Significant DDI.....	26
3.	A POSA Would Expect The Ratio Of Ketoconazole's Concentration To Its Inhibition Constant To Be Greater Than 10, Indicating a High Probability of a Clinically Significant Interaction with Mifepristone .....	29
D.	Corcept's DDI Study Was Not Routine .....	32
E.	The Claimed Inventions Demonstrate Unexpected Results.....	33
VII.	CONCLUSION.....	36

I, F. Peter Guengerich, hereby declare and state as follows:

I submit this declaration on behalf of Corcept Therapeutics, Inc. (“Corcept” or “Patent Owner”), the owner of U.S. Patent No. 10,195,214 (“the ’214 Patent”), in connection with the Petition for Post-Grant Review filed by Teva Pharmaceuticals USA, Inc. (“Teva” or “Petitioner”).

## **I. INTRODUCTION**

1. I have been asked to review and respond to certain of the opinions set forth in the Declaration of Dr. David J. Greenblatt, M.D., submitted on behalf of Petitioner.

## **II. QUALIFICATIONS AND MATERIALS RELIED UPON**

2. I am the Tadashi Inagami Professor of Biochemistry in the Department of Biochemistry at the Vanderbilt University School of Medicine.

3. I received a B.S. in Agricultural Science from the University of Illinois, Urbana in 1970. I then obtained my Ph.D. in Biochemistry from Vanderbilt University in 1973 under the guidance of Professor H.P. Broquist. Following that, I was a Postdoctoral Scholar in the laboratory of Professor M.J. Coon in the Department of Biological Chemistry at the University of Michigan Medical School.

4. Subsequent to my postdoctoral work, in 1975 I started as an Assistant Professor of Biochemistry at the Vanderbilt University School of Medicine. In

1980 I was named a tenured Associate Professor of Biochemistry at the Vanderbilt University School of Medicine, and in 1983 I became a (tenured) Professor of Biochemistry at the Vanderbilt University School of Medicine. Since that time, I have held several positions at Vanderbilt University School of Medicine, including: Director, Center in Molecular Toxicology (1981-2011), Harry Pearson Broquist Professor of Biochemistry (2007-2012), Interim Chairman, Department of Biochemistry (2010-2012), Stanford Moore Professor of Biochemistry (2013), and my current position as the Tadashi Inagami Professor of Biochemistry (2013-present).

5. I have decades of experience studying and educating others about drug-drug interactions (“DDI”), including DDIs involving CYP3A inhibitors. Throughout my time at Vanderbilt, I have taught courses on multiple aspects of drug-drug interactions and pharmacokinetics to medical students, graduate students, and post-graduates. I am currently teaching Enzyme Kinetics and Mechanisms. I am also currently teaching Drug Metabolism & Safety, part of a Master’s degree class for postgraduate physicians. I teach pharmacokinetics and toxicokinetics in my Biochemical Toxicology class. In addition, I have created an online course for the Pharmacology Department dealing with pharmacokinetics of drug-drug interactions and called Enzyme Kinetics for Drug Discovery & Development.

6. I have extensive experience in the fields of biochemistry and medicinal chemistry with an emphasis on mechanisms of activation and detoxication of drugs, chemical carcinogens, steroids, and toxicants and characterization of enzymes involved in these processes.

7. During my career I have received numerous honors and distinguished lectureships, which are summarized in my curriculum vitae, which is attached as Appendix A.

8. I have published more than 700 original peer-reviewed scientific articles and more than 270 invited reviews and chapters during my career.

9. I currently serve on the Editorial boards for Chemistry and Biodiversity, Critical Reviews in Toxicology, and Drug Metabolism and Disposition. I was previously on the editorial advisory board for Nature Reviews in Drug Discovery. I also served as an Associate Editor of both the journals Molecular Pharmacology and Chemical Research in Toxicology, and since 2013, I have served as Deputy Editor of The Journal of Biological Chemistry.

10. I am a member of the American Chemical Society, including the Divisions of Biological Chemistry, Medicinal Chemistry, and Chemical Toxicology. I served as Chair of the latter Division from 2007-2008 and have held several other offices in the Division of Chemical Toxicology. In 2009, I was named as an American Chemical Society Fellow, in the inaugural class for that

# 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.