

**On Behalf Of:**

Novartis AG and LTS Lohmann Therapie-Systeme AG

**By:**

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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**NOVEN PHARMACEUTICALS INC.,**  
Petitioner

v.

**NOVARTIS AG AND LTS LOHMANN THERAPIE-SYSTEME AG,**  
Patent Owners

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*Inter Partes* Review No. 2014-00550

U.S. Patent 6,335,031

DECLARATION OF PROFESSOR ALEXANDER M. KLIBANOV

# TABLE OF CONTENTS

## Contents

I.	QUALIFICATIONS .....	1
II.	MATERIALS CONSIDERED .....	4
III.	SUMMARY OF OPINIONS .....	4
IV.	LEGAL STANDARDS .....	6
V.	THE RELEVANT DATE OF INVENTION, PERSON OF ORDINARY SKILL IN THE ART, AND CLAIM CONSTRUCTION .....	8
	A.    Date Of Invention .....	8
	B.    A Person Of Ordinary Skill In The Art.....	8
	C.    Claim Construction .....	10
VI.	THE STATE OF THE ART .....	12
	A.    Dr. Kydonieus’s Opinions On The State Of The Art.....	12
	B.    The True State Of The Art .....	16
	1.    Drug Formulation Work Is Complex And Antioxidants Are Not Added To Drug Formulations Unless Necessary.....	16
	2.    The Art As A Whole Taught That Rivastigmine Was Stable.....	22
	3.    Oxidative Degradation Is Formulation Specific .....	27
VII.	THE OXIDATIVE DEGRADATION OF RIVASTIGMINE WAS UNKNOWN IN THE ART .....	28
	A.    The Rivastigmine/RA <sub>7</sub> Art Did Not Teach Or Suggest That Rivastigmine Had An Oxidative Degradation Problem.....	29
	1.    GB Patent Application 2 203 040 A (“Enz”).....	29
	2.    U.S. Patent No. 4,948,807 (“Rosin”).....	33
	3.    Elmalem .....	41
	B.    The Petitioner’s Structural Theories Are Contradicted By Pharmaceutical Realities.....	71

1.	Oxidation Is A Complex And Poorly Understood Phenomenon.....	72
2.	The Structure Of The Molecule As A Whole Influences Stability.....	75
3.	Dextromethorphan Is Stable And Does Not Require An Antioxidant Under Pharmaceutically Relevant Conditions.....	84
4.	Nicotine Is Not Structurally Similar To Rivastigmine And Does Not Require An Antioxidant In A Transdermal Device.....	86
5.	A POSA Would Not Draw Conclusions About The Stability Of All Amines In All Formulations Based On The Teaching Of Sasaki.....	91
6.	The Inventors Themselves Did Not Predict Stability Problems With Rivastigmine And Discovered A Problem Only After Testing.....	97
C.	Ebert And The Handbook Would Not Have Led A POSA To Include An Antioxidant In Formulations Containing Rivastigmine.....	100
1.	PCT Publication WO 95/24172 (“Ebert”).....	100
2.	Handbook Of Pharmaceutical Excipients (“Handbook”).....	106
VIII.	NO CHALLENGED CLAIM OF THE ’031 PATENT IS OBVIOUS OVER ANY COMBINATION OF PRIOR ART CITED BY THE PETITIONER IN GROUNDS 3-5.....	108

**I, Alexander M. Klibanov, Ph.D., declare as follows:**

**I. QUALIFICATIONS**

1. I am a Novartis Endowed Chair Professor of Chemistry and Bioengineering at the Massachusetts Institute of Technology (“M.I.T.”), where I have been teaching and conducting research for over 35 years. In 2012-2013, I held the Roger and Georges Firmenich Endowed Chair Professorship in Chemistry and Bioengineering, and in 2007-2012, a Novartis Endowed Chair Professorship of Chemistry and Bioengineering at M.I.T.<sup>1</sup> Prior to that, I was a Professor of Chemistry and a Professor of Bioengineering at M.I.T., positions I held from 1988 and 2000, respectively. From 1979 to 1988, I was an Assistant Professor, then Associate Professor, and thereafter a Full Professor of Applied Biochemistry in the Department of Applied Biological Sciences (formerly the Department of Nutrition and Food Science) at M.I.T.

2. I obtained my M.S. in Chemistry from Moscow University in Russia in 1971 and Ph.D. in Chemical Enzymology from the same University in 1974. Thereafter, I was a Research Chemist at Moscow University’s Department of Chemistry for three years. From 1977 to 1979, following my immigration to the

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<sup>1</sup> Novartis does not decide who receives this position, and this position in no way affects the content of this declaration.

United States, I was a Post-Doctoral Associate at the Department of Chemistry, University of California in San Diego.

3. Over the last 45 years as a practicing chemist, I have extensively researched, published, taught, and lectured in many areas of biological, medicinal, bioorganic, formulation, and polymer chemistry, including oxidations, oxidative degradation, and antioxidants.

4. I have earned numerous prestigious professional awards and honors. For example, I was elected to the U.S. National Academy of Sciences (considered among the highest honors that can be given to an American scientist) and also to the U.S. National Academy of Engineering (considered among the highest honors that can be given to an American engineer or applied scientist). I am also a Founding Fellow of the American Institute for Medical and Biological Engineering and a Corresponding Fellow of the Royal Society of Edinburgh (Scotland's National Academy of Science and Letters). In addition, I have received the Arthur C. Cope Scholar Award, the Marvin J. Johnson Award, the Ipatieff Prize, and the Leo Friend Award, all from the American Chemical Society, as well as the International Enzyme Engineering Prize.

5. I currently serve on the Editorial Boards of 12 scientific journals, including "Open Journal of Pharmacology," "Applied Biochemistry and Biotechnology," "Nanocarriers," "Open Access Academic Books in Chemistry,"

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