

Reply Declaration of Sylvia Hall-Ellis, Ph.D.
Petition for *Inter Partes* Review of
U.S. Patent No. 10,716,793 B2

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LIQUIDIA TECHNOLOGIES, INC.,
Petitioner

v.

UNITED THERAPEUTICS CORPORATION,
Patent Owner

IPR2021-00406
U.S. Patent No. 10,716,793 B2

REPLY DECLARATION OF SYLVIA HALL-ELLIS, PH.D.

Table of Contents

	Page
I. INTRODUCTION	3
II. MATERIALS CONSIDERED	4
III. LEGAL PRINCIPLES	8
A. Public Accessibility of a Printed Publication.....	8
B. Persons of Ordinary Skill in the Art	9
C. Priority Date.....	9
D. Summary of Opinions.....	10
IV. Library Cataloging Practices.....	10
V. Wyman is not qualified to opine on the public accessibility of Voswinckel JAHA and Voswinckel JESC.....	11
VI. Voswinckel JAHA qualifies as a publicly accessible printed publication.....	14
VII. Voswinckel JESC qualifies as a publicly accessible printed publication	39

I, Sylvia D. Hall-Ellis, declare as follows:

I. INTRODUCTION

1. I am over the age of eighteen and otherwise competent to make this declaration.
2. I have been retained by counsel for Petitioner Liquidia Technologies, Inc. (“Liquidia”) to offer my expert opinion regarding the public availability of certain publications, discussed below.
3. I understand that the Patent Trial and Appeal Board (“the Board”) has instituted inter partes review of U.S. Patent No. 10,716,793 (“793 Patent”) based on the petition submitted by Liquidia. Since institution, I understand that Patent Owner United Therapeutics Corporation (“UTC”) has filed a Patent Owner Response as well as a declaration from Ms. Pilar Wyman in support thereof.
4. I originally submitted a declaration on January 7, 2021 in this proceeding. My background, qualifications, and experience relevant to the issues raised in this proceeding are summarized in Section I.A of my original declaration. Ex. 1036 at ¶¶ 7-10. A full description of my background and qualifications is set forth in my curriculum vitae, attached as Exhibit A to my original 2021 declaration. *Id.*, Exhibit A.
5. This declaration presents my additional opinions in response to the Declaration of Ms. Pilar Wyman (Ex. 2041) (the “Wyman Declaration”), dated November 10, 2021, as it relates to the public availability of the two printed publications referred to in the Wyman Declaration as Voswinckel JAHA and Voswinckel JESC before May 15, 2006.
6. I reserve the right to supplement or amend my opinions, and bases for them, in response to any additional evidence, testimony, discovery, argument, and/or other additional information that may be provided to me after the date of this Declaration.

7. I am being compensated for my time spent working on this matter at my normal consulting rate of \$300 per hour, plus reimbursement for any additional reasonable expenses. My compensation is not in any way tied to the content of this Declaration, the substance of my opinions, or the outcome of this proceeding. I have no other interests in this proceeding or with any of the parties.

II. MATERIALS CONSIDERED

8. This Declaration is based on information known to me as of the date I signed this Declaration, and I reserve the right to amend or supplement this report in view of any additional discovery, documents, information, reports, and/or testimony that I receive after issuance of this report.

9. The bases for my opinions herein and any testimony that I may be called upon to provide are as follows: (i) the materials identified throughout this Declaration, listed below; (ii) the independent research identified in this Declarations (iii) the materials identified in my 2021 declaration (Ex. 1036); (iv) the materials identified in the Wyman Declaration; (iv) my knowledge, education, research skills and methodology, and experience; and (v) the materials listed in the table below. The foregoing are among the types of information reasonably relied upon by experts in my field for the purposes of forming opinions or inferences on the matters that are the subject of my work in this case. Throughout this report, I cite portions of these documents. These citations are intended only as examples, and I reserve the right to rely on all portions of these documents in addition to those cited in this report.

Exhibit No.	Description
1007	Voswinckel, R., et al., Abstract 218: "Inhaled treprostinil is a potent pulmonary vasodilator in severe pulmonary hypertension," <i>European Heart Journal</i> 25:22 (2004) ("Voswinckel JESC")

Reply Declaration of Sylvia Hall-Ellis, Ph.D.
 Petition for *Inter Partes* Review of
 U.S. Patent No. 10,716,793 B2

1008	Robert Voswinckel, Beate Enke, Andre Kreckel, Frank Reichenberger, Stefanie Krick, Henning Gall, Tobias Gessier, Thomas Schmehl, Markus G. Kohstall, Friedrich Grimminger, Hossein A. Ghofrani, Werner Seeger, and Horst Olschewski, Abstract 1414: “Inhaled Treprostinil Sodium (TRE) For the Treatment of Pulmonary Hypertension,” Abstracts from the 2004 Scientific Sessions of the American Heart Association, <i>Circulation</i> , 110(17 Suppl.):III-295 (October 26, 2004) (“Voswinckel JAHA”)
1036	Declaration of Sylvia Hall-Ellis, Ph.D. (“Hall-Ellis Decl.”)
1089	Voswinckel JESC, UWash
1090	Voswinckel JESC, UWisc
1091	Voswinckel JESC, British Library
1092	Voswinckel JESC, Add’l Pages
1093	Voswinckel JAHA, British Library
1094	Voswinckel JAHA, Library of Congress
1095	Voswinckel JAHA, Stanford
1096	Voswinckel JAHA, UC Davis
1104	Sulica, R. and Poon, M., “Medical therapeutics for pulmonary arterial hypertension: from basic science and clinical trial design to evidence-based medicine,” <i>Expert Rev. Cardiovasc. Ther.</i> 3(2), (2005) (“Sulica 2005”)
1106	Reply Declaration of Nicholas Hill, M.D. (“Hill Reply Declaration”) <i>*Note: I only reviewed the excerpts I cite herein, which were provided to me by Liquidia’s counsel</i>
1110	Transcript from the December 29, 2021 Deposition of Lyndsey Pilar Wyman, <i>Liquida Technologies, Inc. v. United Therapeutics Corp.</i> , IPR2021-00406
1113	JAHA Supplement Author Index
1114	American Heart Association 2004 Online Archive, pages available at https://web.archive.org/web/20041130084648/http://circ.ahajournals.org:80/ ; https://web.archive.org/web/20041206215947/http://aha.agora.com/abstractviewer/ ; https://web.archive.org/web/20041128050933/http://circ.ahajournals.org/content/s-by-date.0.shtml ; and https://web.archive.org/web/20041204145419/http://circ.ahajournals.org/content/vol110/issue17/
1115	Affidavit of Duncan Hall, December 7, 2021
1116	Voswinckel JAHA British Library Declaration
1117	JAHA Supplement PubMed Search Results
1118	PubMed.gov search results for Sulica, R. and Poon, M., “Medical therapeutics for pulmonary arterial hypertension: from basic science and clinical trial design to evidence-based medicine,” <i>Expert Rev. Cardiovasc. Ther.</i> 3(2), (2005)
1119	Voswinckel JESC British Library Declaration
1120	Voswinckel JESC Web of Science Search Results
1121	Ghofrani 2005, British Library
1122	Ghofrani 2005 Search Results
1123	Circulation MARC record, British Library

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.