

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NEOCHORD, INC.

Petitioner,

v.

UNIVERSITY OF MARYLAND, BALTIMORE

Patent Owner.

Case No.: IPR2015-XXXX

**PETITION FOR *INTER PARTES* REVIEW OF
U.S. PATENT NO. 7,635,386**

DECLARATION OF DR. LISHAN AKLOG

I. Introduction

1. I have been retained as an expert in connection with the above-captioned Petition filed by NeoChord, Inc. (the “Petitioner”) for Inter Partes Review of U.S. Patent No. 7,635,386 (the “’386 Patent”). This Declaration is my direct testimony in relation to the Petition, the ‘386 Patent, the prior art cited in the Petition, and other matters I was asked to address. In making this Declaration, I have reviewed the ’386 Patent, including the prosecution history of the ‘386 Patent, and the prior art cited in the Petition, and I have reviewed and relied upon the Attachments to this Declaration and the Exhibits referenced in the Petition.

II. Qualifications and Compensation

2. I have more than 25 years experience with cardiothoracic surgery including postdoctoral training, academic and clinical appointments at a number of academic medical centers including leadership positions, and serving on boards and committees of many cardiothoracic surgery related organizations and companies. Over this period, I have conducted research activities, published articles, presented seminars, and developed technology in the field of cardiothoracic surgery. During my career, I have observed or performed well over one thousand heart valve repair and/or replacement

procedures. My qualifications are presented more fully in my curriculum vitae, which is attached to this Declaration as Appendix A.

3. I received training in mitral valve repair as cardiothoracic fellow at Harvard Medical School under renowned American mitral surgeons, Drs. Lawrence H. Cohn and David H. Adams. I was awarded the American Association of Thoracic Surgery Travelling Fellowship and received advanced training in mitral valve repair in Paris under the legendary Professor Alain Carpentier, the acknowledged father of mitral valve repair surgery. Throughout my career I have lectured extensively around the world on mitral valve surgery, most recently as an invited presenter for a presentation entitled “Fundamentals of Mitral Valve Repair” at the 2015 Cardiovascular Surgery Exchange Symposium in Havana, Cuba. For many years I ran a Mitral Valve Repair Center of Excellence hands-on course, training dozens of cardiac surgeons from across the country in the fundamentals of mitral valve repair.

4. My previous experiences in court proceedings are limited to several medical malpractice cases where I served as an expert witness, some for the defendant and some for the plaintiff. None of these cases related to mitral valve surgery.

5. I am a named inventor on ten issued U.S. patents, including U.S. Patent No. 8,052,751, entitled “Annuloplasty Rings for Repairing Cardiac Valves.”

6. I am being compensated for my time spent reviewing materials, forming my opinions and in preparing this Declaration at the rate of \$500 per hour. My compensation is not contingent upon my testimony, the outcome of the proceeding or any testimony that I may give.

III. Summary of Conclusions

7. For the reasons set forth in this Declaration, it is my opinion that each and every limitation of independent claims 1 and 19 of the ‘386 Patent is taught by U.S. Patent No. 8,465,500 to Speziali (“Speziali”).

8. For the reasons set forth in this Declaration, it is my opinion that it would have been obvious to one of ordinary skill in the art at the time of the ‘386 Patent to combine the teachings of different prior art references to arrive at the claimed inventions of independent claims 1 and 19 of the ‘386 Patent. Specifically, it is my opinion that one of ordinary skill in the art would have reason to combine the teachings of U.S. Patent No. 6,978,176 to Lattouf (“Lattouf I”) with the teachings of one or more of:

- *Cardiac valve surgery – the “French Correction”* by Alain Carpentier, M.D. (“Carpentier”),
- U.S. Publication No. 2004/0044365 to Bachman (“Bachman”),
and
- U.S. Patent No. 6,840,246 to Downing (“Downing”).

9. For the reasons set forth in this Declaration, it is my opinion that each and every limitation of independent claims 1 and 19 of the ‘386 Patent is taught by U.S. Patent No. 7,871,433 to Lattouf (“Lattouf II”).

10. For the reasons set forth in this Declaration, it is my opinion that it would have been obvious to one of ordinary skill in the art at the time of the ‘386 Patent to combine the teachings of Downing in view of U.S. Patent No. 6,269,819 to Oz (“Oz”) to arrive at the at the claimed inventions of independent claims 1 and 19 of the ‘386 Patent.

11. For the reasons set forth in this Declaration, it is my opinion that the various dependent claims of the ‘386 Patent are taught by one or more of Speziali and Lattouf II and/or would have been obvious to one of ordinary skill in the art at the time of the ‘386 Patent in view of one or more combinations of the prior art references cited in the Petition.

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