

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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ALPHATEC HOLDINGS, INC. AND ALPHATEC SPINE, INC.  
Petitioner,

v.

NUVASIVE, INC.  
Patent Owner.

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Case No. IPR2019-00362  
U.S. Patent No. 8,361,156

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**DECLARATION OF CHARLES L. BRANCH, JR., M.D. IN SUPPORT OF  
PETITION FOR *INTER PARTES* REVIEW OF  
U.S. PATENT NO. 8,361,156**

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## TABLE OF CONTENTS

	<b>Page</b>
I. SCOPE OF ASSIGNMENT .....	1
II. QUALIFICATIONS .....	2
III. MATERIALS CONSIDERED .....	4
IV. LEVEL OF ORDINARY SKILL IN THE ART .....	5
V. SUMMARY OF THE '156 PATENT AND ITS TECHNICAL FIELD .....	6
A. Overview of the human spine.....	6
B. Interbody spinal fusion procedures and implants. ....	11
C. The '156 patent.....	16
VI. CLAIM INTERPRETATION .....	24
VII. LEGAL STANDARDS .....	24
A. Obviousness.....	24
VIII. OVERVIEW OF THE REFERENCES .....	28
A. U.S. Patent No. 5,192,327 (“Brantigan”).....	28
B. Berry <i>et al.</i> “A Morphometric Study of Human Lumbar and Selected Thoracic Vertebrae,” 12 Spine, 362–367 (1987) (“Berry”).....	31
C. U.S. Patent App. Pub. No. 2003/0028249 (“Baccelli”) .....	33
D. U.S. Patent No. 5,860,972 (“Michelson '973”) .....	34
IX. ANALYSIS OF THE CHALLENGED CLAIMS OF THE '156 PATENT .....	38
A. The challenged claims .....	38
X. INVALIDITY .....	38
A. Ground 1: claims 1-3, 5, 9–10, 12-21, 23–24, and 27 are rendered obvious by Brantigan in view of Baccelli and Berry .....	38
1. Claim 1 .....	45
2. Claim 2 .....	75
3. Claim 3 .....	77
4. Claim 5 .....	78
5. Claim 9 .....	82
6. Claim 10 .....	83
7. Claim 12 .....	84
8. Claim 13 .....	85

9.	Claim 14.....	87
10.	Claim 15.....	88
11.	Claim 16.....	90
12.	Claim 17.....	91
13.	Claim 18.....	93
14.	Claim 19.....	95
15.	Claim 20.....	96
16.	Claim 21.....	98
17.	Claim 23.....	100
18.	Claim 24.....	101
19.	Claim 27.....	104
B.	Ground 2: claim 9 is rendered obvious by Brantigan in view of Bacelli, Berry, and Michelson '973.....	105
20.	Claim 9.....	106
XI.	SECONDARY CONSIDERATIONS.....	111
XII.	CONCLUSION.....	111

## TABLE OF EXHIBITS

<b>PETITIONER'S EXHIBIT LIST</b>	
<b>Exhibit No.</b>	<b>Brief Description</b>
1001	U.S. Patent No. 8,361,156 to Curran <i>et al.</i> (“’156 patent”)
1002	Declaration of Charles L. Branch, Jr., M.D.
1003	<i>Curriculum Vitae</i> of Charles L. Branch, Jr., M.D.
1004	IPR2013-00506, Final Written Decision, Paper No. 47 (“IPR506 FWD”)
1005	<i>In re: NuVasive, Inc.</i> , No. 2015-1670, Opinion, (Fed. Cir. Dec. 7, 2016) (“IPR2013-00506 CAFC Opinion”)
1006	IPR2013-00506, Judgment Granting Joint Motion to Terminate after Remand from the Court of Appeals for the Federal Circuit, Paper No. 57
1007	U.S. Patent No. 5,192,327 to Brantigan (“Brantigan”)
1008	U.S. Patent App. Pub. No. 2003/0028249 to Baccelli <i>et al.</i> (“Baccelli”)
1009	Synthes Vertebral Spacer-PR Brochure (“SVS-PR”)
1010	Telamon Verte-Stack PEEK Vertebral Body Spacer Brochure (“Telamon Brochure”)
1011	Telamon Implantation Guide (“Telamon Guide”)
1012	<i>Warsaw Orthopedic, Inc. v. NuVasive, Inc.</i> , No. 2013-1576, -1577, Joint Appendix, Docket No. 52-1 (Fed. Cir. June 16, 2014)
1013	Prosecution History of the ’156 patent, U.S. App. No. 13/441,092
1014	IPR2013-00208, Corrected Petition for <i>Inter Partes</i> Review of United States Patent No. 8,251,997, Paper No. 5 (“IPR208 Petition”)
1015	IPR2013-00206, Corrected Petition for <i>Inter Partes</i> Review of U.S. Patent No. 8,251,997, Paper No. 5 (“IPR206 Petition”)
1016	IPR2013-00206, Petitioner’s Reply to Patent Owner’s Response, Paper No. 43, (“IPR206 Reply”)
1017	IPR2013-00206, Final Written Decision, Paper No. 65 (“IPR206 FWD”)
1018	IPR2013-00208, Final Written Decision, Paper No. 62 (“IPR208 FWD”)
1019	<i>In re: Warsaw Orthopedic, Inc.</i> , Nos. 2015-1050, 2015-1058 (Fed. Cir. Aug. 9, 2016) (“IPR208 CAFC opinion”)

<b>PETITIONER'S EXHIBIT LIST</b>	
<b>Exhibit No.</b>	<b>Brief Description</b>
1020	Prosecution History of U.S. Patent No. 7,918,891, U.S. App. No. 11/093,409
1021	U.S. Patent No. 8,251,997 to Michelson ("Michelson '997")
1022	Berry <i>et al.</i> "A Morphometric Study of Human Lumbar and Selected Thoracic Vertebrae," 12 SPINE, 362-367 (1987) ("Berry")
1023	Prosecution History of U.S. Patent No. 8,187,334, U.S. App. No. 13/079,645
1024	<i>Warsaw Orthopedic, Inc. v. NuVasive, Inc.</i> , No. 3:08-cv-1512 CAB-MDD, NuVasive Inc.'s Memorandum of Points and Authorities in Support of its Renewed Motion for Judgment as a Matter of Law or a new Trial, Docket No. 407-1 (S.D. Cal. Oct. 27, 2011) (" <i>Warsaw JMOL</i> ")
1025	Prosecution History of U.S. Patent No. 8,246,686, U.S. App. No. 13/440,062
1026	U.S. Provisional Patent App. No. 60/557,536, filed March 29, 2004
1027	RESERVED
1028	U.S. Patent No. 5,127,912 to Ray <i>et al.</i>
1029	U.S. Patent No. 5,514,180 to Heggeness <i>et al.</i>
1030	Amonoo-Kuofi, "Age-Related Variation in the Horizontal and Vertical Diameters of the Pedicles of the Lumbar Spine," 186 J. ANAT., 321-328 (1995)
1031	IPR2013-00506 Decision to Institute, Paper No. 9
1032	U.S. Patent No. 5,860,973 to Michelson ("Michelson '973")
1033	IPR2013-00504, Decision Denying Institution, Paper No. 8
1034	IPR2013-00506, Petition, Paper No. 1
1035	<i>Warsaw Orthopedic, Inc. v. NuVasive, Inc.</i> , No. 2013-1576, -1577, NuVasive's Opening Brief, Docket No. 33 (Fed. Cir. Feb. 3, 2014)
1036	Panjabi <i>et al.</i> , "Complexity of the Thoracic Spine Pedicle Anatomy," 6 EUR. SPINE J., 19-24 (1997)
1037	Kopperdahl <i>et al.</i> , "Yield Strain Behavior of Trabecular Bone," 31 J. BIOMECHANICS, 601-608 (1998)
1038	IPR2013-00208, Declaration of Dr. Paul McAfee, M.D., M.B.A., Paper No. 1001
1039	<i>NuVasive Inc. v. Medtronic, Inc.</i> , No. 2015-1670, Corrected NuVasive's Opening Brief, Docket No. 19 (Fed. Cir. July 23, 2015)
1040	U.S. Patent Application No. 2002/0165550 to Frey <i>et al.</i>
1041	IPR2013-00504, Petition, Paper No. 3

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