

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent of: James E. Jervis  
U.S. Patent No.: 6,306,141  
Issue Date: October 23, 2001  
Serial No.: 08/483,291  
Filing Date: June 7, 1995  
Title: MEDICAL DEVICES INCORPORATING SIM ALLOY  
ELEMENTS

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**PETITION FOR *INTER PARTES* REVIEW  
OF U.S. PATENT NUMBER 6,306,141 UNDER 35 U.S.C. §§ 311-319**

Edwards Lifesciences Corporation (“Edwards” or “Petitioner”) hereby requests *Inter Partes* Review (“IPR”) of Claims 1-22 in U.S. Patent Number 6,306,141 (“the ’141 Patent”) (**Exhibit 1001**). A detailed statement supporting the petition follows.

The requisite fee accompanies this request. If any additional fee is necessary, the Director is authorized to charge Deposit Account No. 50-5226. This document, together with all exhibits referenced herein, has been served on the patent owner at the addresses of record for the ’141 Patent as reflected in the accompanying Certificate of Service.

Medtronic Exhibit 2009

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EXHIBIT LIST

- 1001 U.S. Patent No. 6,306,141 to Jervis
- 1002 Declaration of Ming H. Wu, Ph.D.
- 1003 Curriculum Vitae of Ming H. Wu, Ph.D.
- 1004 A. Cragg *et al.*, *Nonsurgical Placement of Arterial Endoprostheses: A New Technique Using Nitinol Wire*, *Radiology*, 147: 261-263 (April 1983)
- 1005 A. Cragg *et al.*, *A New Percutaneous Vena Cava Filter*, *American Journal of Roentgenology*, 141: pp. 601-604 (September 1983)
- 1006 Certified Translation of Japanese Patent Publication No. S58-46923 to Miyauchi *et al.* (filed Sept. 12, 1981; disclosed Mar. 18, 1983)
- 1007 U.S. Patent No. 3,620,212 to Fannon *et al.* (Granted Nov. 16, 1971)
- 1008 H. Ling *et al.*, *Phase Transitions and Shape Memory in NiTi*, *Metallurgical Transactions A*, 11A: 77-79 (1980)
- 1009 U.S. Patent No. 4,503,569 to Dotter (Filed Mar. 3, 1983; Granted Mar. 12, 1985)
- 1010 L. Delaey *et al.*, *Thermoelasticity, Pseudoelasticity and the Memory Effects Associated with Martensitic Transformations. Part 1: Structural and Microstructural Changes Associated with the Transformations*, *Journal of Materials Science*, 9: 1521-1535 (1974)
- 1011 R.V. Krishnan *et al.*, *Thermoplasticity, Pseudoelasticity and the Memory Effects Associated with Martensitic Transformations. Part 2: The Macroscopic Mechanical Behavior*, *Journal of Materials Science*, 9: 1536-1544 (1974)
- 1012 K. Otsuka *et al.*, *Pseudoelasticity*, *Metals Forum*, 4(3): 142-152 (1981)

- 1013 J.R. Patel *et al.*, *Criterion for the Action of Applied Stress in the Martensitic Transformation*, *Acta Metallurgica*, 1: 531-538 (1953)
- 1014 L.M. Schetky, *Shape Memory Alloys*, *Scientific American*, 241(5): 74-82 (1979)
- 1015 K. Otsuka *et al.*, *Stress and Strain Induced Martensitic Transformations*, *Proceedings of the Int'l Conference on Martensitic Transformations: ICOMAT 1979*, 607-618 (Jun 1979)
- 1016 February 26, 2001 BPAI Decision (Excerpt from the '141 Patent Prosecution History)
- 1017 March 18, 1998 Applicant Remarks to Office Action (Excerpt from the '141 Patent Prosecution History)
- 1018 April 2, 1997 Applicant Remarks to Office Action (Excerpt from the '141 Patent Prosecution History)
- 1019 March 18, 1998 Declaration of Dr. Lee Middleman (Excerpt from the '141 Patent Prosecution History)
- 1020 U.S. Patent No. 5,597,378 to Jervis
- 1021 T.L. Lopes *et al.*, *Fatigue Performance of Nitinol Tubing with  $A_f$  of 25°C*, *Proceedings of the International Conference on Shape Memory and Superelastic Technologies*, 311-320 (2003)
- 1022 M. Wu *et al.*, *What is the Big Deal About the  $A_f$  Temperature?*, *Proceedings of the International Conference on Shape Memory and Superelastic Technologies*, 143-154 (May 2006)
- 1023 D.B. Chernov *et al.*, *The Multiplicity of Structural Transitions in Alloys Based on TiNi*, *Soviet Physics Doklady*, 24(8): 664-666 (Aug. 1979)
- 1024 Original Japanese Patent Publication No. S58-46923 to Miyauchi *et al.* (filed Sep. 12, 1981; disclosed Mar. 18, 1983)
- 1025 Complete Prosecution History of the '141 Patent

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