

**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**

Lombard Medical Technologies PLC (“Lombard” or “Petitioner”) hereby requests *Inter Partes* Review (“IPR”) of Claims 1-10 and 18-22 in U.S. Patent Number 6,306,141 (“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. 16–0605. This document, together with all exhibits referenced herein, has been served on the patent owner at the address of record for the 141 patent, as well as on the counsel of record for the 141 patent, as reflected in the accompanying Certificate of Service.

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**EXHIBIT LIST**

- 1001** U.S. Patent No. 6,306,141 to Jervis
- 1002** U.S. Patent No. 4,512,338 to Balko et al.
- 1003** Schetky, *Shape Memory Alloys*, Kirk-Othmer Encyclopedia of Chemical Technology, Vol. 20 726-736 (3d Ed. 1982)
- 1004** U.S. Patent No. 4,503,569 to Dotter
- 1005** A. Cragg *et al.*, *Nonsurgical Placement of Arterial Endoprostheses: A New Technique Using Nitinol Wire*, Radiology, Vol. 147: 261-263 (April 1983)
- 1006** Japanese Patent Publication No. S58-46923 (filed Sept. 12, 1981; disclosed Mar. 18, 1983) to Miyauchi et al.
- 1007** Certified Translation of Japanese Patent Publication No. S58-46923 to Miyauchi et al.
- 1008** U.S. Patent No. 5,597,378 to Jervis
- 1009** Declaration of Scott M. Russell
- 1010** Curriculum Vitae of Scott M. Russell
- 1011** U.S. Patent No. 4,307,723 to Finney
- 1012** Prosecution History of U.S. Patent No. 6,306,141
- 1013** Prosecution History of U.S. Patent No. 5,597,378
- 1014** U.S. Patent No. 4,485,805 to Foster
- 1015** Certified Transcript of Deposition of Dr. Lee Middleman, Dec. 10-11, 2008.
- 1016** Inherent Properties Video Presentation by Mr. Scott M. Russell

- 1017 Double Patenting Video Presentation (Part 1) by Mr. Scott M. Russell
- 1018 C. Dotter et al., *Transluminal Expandable Nitinol Coil Stent Grafting: Preliminary Report*, Radiology, Vol. 147: 259 (April 1983)
- 1019 Otsuka et al., *Pseudoelasticity*, 4 Metals Forum No. 3, 142 (Aus. Inst. of Metals 1981)
- 1020 Delaey, et al., *Thermoelasticity, pseudoelasticity and the memory effects associated with martensitic transformations. Part 1: Structural and microstructural changes associated with the transformations*, 9 Journal of Materials Science 1521 (1974)
- 1021 Krishnan, et al., *Thermoplasticity, pseudoelasticity and the memory effects associated with martensitic transformations. Part 2: The macroscopic mechanical behavior*, 9 Journal of Materials Science 1536 (1974)
- 1022 U.S. Patent No. 3,890,977 to Wilson
- 1023 European Patent Publication No. 0129634 to Drettner
- 1024 Canadian Patent No. 1001034 to McWhorter
- 1025 U.S. Patent No. 4,401,433 to Luther
- 1026 Double Patenting Video Presentation (Part 1) by Mr. Scott M. Russell
- 1027 Kauffman et al., *The Story of Nitinol: The Serendipitous Discovery of the Memory Metal and Its Applications*, Vol. 2, No. 2 The Chemical Educator 1, 4-6
- 1028 Ling et al., *Phase Transitions and Shape Memory in NiTi*, 11A Metallurgica Transactions A 77, 77-79 (1980)
- 1029 Schetky, *Shape-Memory Alloys*, 241:5 Scientific American 74-82 (November 1979)
- 1030 Patel et al., *Criterion for the Action of Applied Stress in the Martensitic Transformation*, 1 Acta Metalurgica 531-538 (1953)



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