US005213580A

United States Patent [19]

Slepian et al.

[11] Patent Number: 5,213,580

[45] Date of Patent: May 25, 1993

[54] BIODEGRADABLE POLYMERIC ENDOLUMINAL SEALING PROCESS

[75] Inventors: **Marvin J. Slepian**, Cleveland Heights, Ohio; **Anton Schindler**, Durham, N.C.

[73] Assignee: **Endoluminal Therapeutics, Inc.**, Tucson, Ariz.

[21] Appl. No.: **857,700**

[22] Filed: **Mar. 25, 1992**

Related U.S. Application Data

[63] Continuation of Ser. No. 593,302, Oct. 3, 1990, abandoned, which is a continuation of Ser. No. 235,998, Aug. 24, 1988, abandoned.

[51] **Int. Cl.**[5] **A61F 2/04**; A61F 2/06

[52] **U.S. Cl.** **623/1**; 623/11; 623/66

[58] **Field of Search** 623/1, 66, 12, 13

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,868,956	3/1975	Alfidi et al. .	
3,880,158	4/1975	Gurney .	
3,987,000	10/1976	Gleichenhagen et al. .	
4,140,126	2/1979	Choudhury	623/1 X
4,156,067	5/1979	Gould .	
4,272,518	6/1981	Moro et al. .	
4,377,010	3/1983	Fydelor et al. .	
4,459,252	7/1984	MacGregor .	
4,503,569	3/1985	Dotter .	
4,553,545	11/1985	Maass et al. .	
4,580,568	4/1986	Glanturco .	
4,610,662	9/1986	Weikl et al. .	
4,655,746	4/1987	Daniels et al. .	
4,665,771	4/1987	Wallsten .	
4,674,506	6/1987	Alcond	623/66 X
4,690,684	9/1987	McGreevy et al. .	
4,701,509	10/1987	Sun et al. .	
4,702,917	10/1987	Schindler	424/422
4,733,665	3/1988	Palmaz .	
4,799,479	1/1989	Spears .	
4,820,298	4/1989	Leveen et al.	623/1

FOREIGN PATENT DOCUMENTS

0183372	10/1985	European Pat. Off.	623/1

OTHER PUBLICATIONS

Peter Barath, M.D. et al., "Combined Angioplasty and Vascular Stenting by a Novel Heat-Expandable Thermoplastic Device" JACC vol. 11, No. 2-Feb. 1988:65A.

Sandra Blakeslee, "Race Is On to Develop Nonsurgical Ways To Unclog Arteries", The New York Times, HEALTH, Jul. 28, 1988.

"Improved Intravascular Delivery of Drug Via a Polyethylene Jet Catheter", John W. Boretos, The 13th Annual Meeting of the Society for Biomaterials, Jun. 2-6, 1987, New York, N.Y. USA, 128.

"Local Enzymatic Treatment of Atherosclerotic Plaques", T. Kerenyi, V. Merkel, Z. Szabolcs, A. Pusztai, and G. Nadasy, Experimental and Molecular Pathology 49, 330-338 (1988).

Primary Examiner—David Isabella
Assistant Examiner—Debra S. Brittingham
Attorney, Agent, or Firm—Brumbaugh, Graves, Donohue & Raymond

[57] **ABSTRACT**

A novel process for paving or stabilizing sealing the interior surface of a body vessel or organ by entering the interior of the vessel or organ and applying a polymer to the interior surface of the vessel or organ.

17 Claims, 3 Drawing Sheets