

[54] VASCULAR PROSTHESIS AND METHOD OF MAKING THE SAME

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[75] Inventors: Raymond T. Greer; Bradley H. Vale, both of Ames; Randall L. Knoll, Altoona, all of Iowa

Primary Examiner—Sidney Marantz
Attorney, Agent, or Firm—Tilton, Fallon, Lungmus et al.

[73] Assignee: Iowa State University Research Foundation, Inc., Ames, Iowa

[57] ABSTRACT

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A vascular prosthesis and its method of fabrication. The prosthesis takes the form of a flexible and conformable support tube having a luminal surface formed of a smooth, homogenous, and substantially non-thrombogenic hydrogel having relatively small pores or microvoids suitable for tissue ingrowth but resistant to thrombus formation, and having an outer surface formed of essentially the same hydrogel having a heterogeneous microstructure which includes relatively large pores or macrovoids especially suitable for cellular ingrowth from perigraft sources and attachment sites. In one embodiment, the tubular substrate is foraminous and the inner and outer hydrogel layers merge through the interstices of the substrate to provide a unified ground substance characterized by strata having selectively different pore characteristics for promoting effective endothelialization and for reducing possibilities of thrombotic occlusion.

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Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 30,146, Apr. 16, 1979, abandoned.

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[52] U.S. Cl. 3/1.4; 3/1; 427/2

[58] Field of Search 3/1, 1.4; 427/2

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34 Claims, 7 Drawing Figures

