United States Patent [19]

Polimeni et al.

[11] **4,154,822**

[45] **May 15, 1979**

[54] **POLYSACCHARIDE FOR ENHANCEMENT OF CARDIAC OUTPUT**

[75] Inventors: **Philip I. Polimeni; Jafar Al-Sadir,** both of Chicago; **Anthony F. Cutilletta,** Flossmoor, all of Ill.

[73] Assignee: **The University of Chicago,** Chicago, Ill.

[21] Appl. No.: **710,699**

[22] Filed: **Aug. 2, 1976**

[51] **Int. Cl.**[2] **A61K 31/715**

[52] **U.S. Cl.** **424/180;** 536/1; 536/4

[58] **Field of Search** 424/180; 536/1

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,830,910	8/1974	Homsy	424/180
3,849,554	11/1974	Winitz	424/180
3,911,915	10/1975	Seifter et al.	424/180

OTHER PUBLICATIONS

Smith Thesis "The Subacute Toxicity of Intravenously Administered Okra Mucilage," Clemson U. Library, May, 1973.

Primary Examiner—Johnnie R. Brown

Attorney, Agent, or Firm—Merriam, Marshall & Bicknell

[57] **ABSTRACT**

Polysaccharide substances—essentially consisting of rhamnose, galactose and galacturonic acid and preferably derived by extraction and purification of okra plant materials—are administered to provide selective rheological and hemodynamic effects and specifically to enhance cardiac output without substantial increment in circulatory (plasma) volume or concurrent inotropic, chronctropic or vasoactive effects.

5 Claims, 4 Drawing Figures