United States Patent [19]

Guire

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[54] **METHOD OF IMPROVING THE BIOCOMPATIBILITY OF SOLID SURFACES**

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Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 428,074, Sep. 29, 1982, Pat. No. 4,722,906, and Ser. No. 920,567, Oct. 17, 1986, abandoned.

[51] **Int. Cl.**[5] **A01N 1/02**; A61K 1/02; A61F 2/54

[52] **U.S. Cl.** **427/2**; 623/66; 623/901; 435/181; 436/905

[58] **Field of Search** 623/1, 6, 11, 66, 901; 427/2; 435/181; 436/532, 525, 905

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[57] **ABSTRACT**

A method for modifying the solid surface to improve its biocompatibility is disclosed. The method employs molecules of a biocompatible agent and a chemical linking moiety possessing a photochemically reactive group capable upon activation of covalently bonding to the solid surface and possessing a different reactive group as capable upon activation of covalently bonding to separate molecules of the biocompatible agent. The method comprises applying stimulus to sequentially activate the groups and covalently bind the different reactive group of the linking moiety to the molecules of the biocompatible agent and to photochemically covalently bind the linking moiety to the solid surface with a sufficient population density to enable the molecules of the biocompatible agent to effectively shield the solid surface and to provide a biocompatible surface.

15 Claims, No Drawings