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[54] POLYMERIZABLE BIODEGRADABLE POLYMERS INCLUDING CARBONATE OR DIOXANONE LINKAGES

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[52] U.S. Cl. **424/426; 514/772.3**

[58] Field of Search **424/426; 514/772.3**

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[57] ABSTRACT

Water-soluble macromers including at least one hydrolysable linkage formed from carbonate or dioxanone groups, at least one water-soluble polymeric block, and at least one polymerizable group, and methods of preparation and use thereof are described. The macromers are preferably polymerized using free radical initiators under the influence of long wavelength ultraviolet light or visible light excitation. Biodegradation occurs at the linkages within the extension oligomers and results in fragments which are non-toxic and easily removed from the body. The macromers can be used to encapsulate cells, deliver prophylactic, therapeutic or diagnostic agents in a controlled manner, plug leaks in tissue, prevent adhesion formation after surgical procedures, temporarily protect or separate tissue surfaces, and adhere or seal tissues together.

36 Claims, 2 Drawing Sheets

