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Dunn et al.

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[54] **BIODEGRADABLE IN-SITU FORMING IMPLANTS AND METHODS FOR PRODUCING THE SAME**

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Related U.S. Application Data

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[52] **U.S. Cl.** **523/113**; 424/78.26; 424/78.27; 424/78.37; 424/422; 424/426; 525/411; 525/937

[58] **Field of Search** 424/78.26, 78.27, 78.37, 424/426, 422; 525/937, 411; 523/113

[56] **References Cited**

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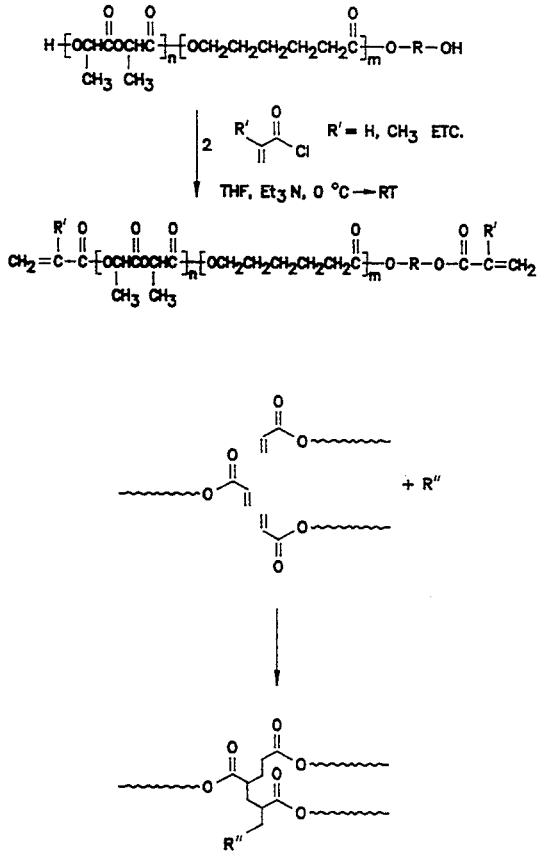
[57] **ABSTRACT**

A biodegradable polymer is provided for use in providing syringeable, in-situ forming, solid biodegradable implants for animals. The polymer is placed into the animal in liquid form and cures to form the implant in-situ. A thermoplastic system to form said implant comprises the steps of dissolving a non-reactive polymer in biocompatible solvent to form a liquid, placing the liquid within the animal, and allowing the solvent to dissipate to produce the implant. An alternative, thermosetting system comprises mixing together effective amounts of a liquid acrylic ester terminated, biodegradable prepolymer and a curing agent, placing the liquid mixture within an animal and allowing the prepolymer to cure to form the implant. Both systems provide a syringeable, solid biodegradable delivery system by the addition of an effective level of biologically active agent to the liquid before injection into the body.

16 Claims, 9 Drawing Sheets