



US005324844A

United States Patent [19]
Zalipsky

[11] **Patent Number:** **5,324,844**
[45] **Date of Patent:** * **Jun. 28, 1994**

[54] **ACTIVE CARBONATES OF
POLYALKYLENE OXIDES FOR
MODIFICATION OF POLYPEPTIDES**

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[*] **Notice:** **The portion of the term of this patent
subsequent to Jun. 16, 2009 has been
disclaimed.**

[21] **Appl. No.:** **817,757**

[22] **Filed:** **Jan. 8, 1992**

Related U.S. Application Data

[60] **Division of Ser. No. 511,243, Apr. 19, 1990, Pat. No.
5,122,614, which is a continuation-in-part of Ser. No.
340,928, Apr. 19, 1989, abandoned.**

[51] **Int. Cl.⁵ C07D 207/46; C07D 211/94;
C07D 403/12**

[52] **U.S. Cl. 548/520; 435/177;
435/188; 530/363; 530/389.1; 530/406;
530/410; 546/208; 546/243; 548/435; 548/465;
548/475; 548/542**

[58] **Field of Search 546/208, 243; 548/435,
548/465, 475, 520, 542; 530/363, 389.1, 406,
410; 435/177, 188**

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[57] **ABSTRACT**

Poly(ethylene glycol)-N-succinimide carbonate and its preparation are disclosed. Polyethylene glycol (PEG) is converted into its N-succinimide carbonate derivative. This form of the polymer reacts readily with amino groups of proteins in aqueous buffers. The modified proteins have PEG-chains grafted onto the polypeptide backbone by means of stable, hydrolysis-resistant urethane (carbamate) linkages.

7 Claims, 3 Drawing Sheets