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(54) **DENDRIMER-BASED EXCIPIENTS FOR THE ATTENUATION OF PROTEIN AGGREGATION**

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See application file for complete search history.

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(57) **ABSTRACT**

One aspect of the invention is a salt comprising guanidinium groups, as shown in formula I. Another aspect of the invention is a salt comprising guanidinium groups, as shown in formula II. Another aspect of the invention is a salt comprising guanidinium groups, as shown in formula III. Another aspect of the invention is a salt comprising guanidinium groups, as shown in formula IV. Yet another aspect of the invention is a salt comprising guanidinium groups, as shown in formula I, II, III, and IV further comprising independently for each occurrence citrate, phosphate, or sulfate anion. Also disclosed are compositions comprising a protein and a salt comprising guanidinium groups, as shown in formula I, II, III, and IV. Also provided are methods of increasing shelf life of an aqueous solution of a protein and decreasing the amount of protein aggregation in an aqueous solution of a protein.

**19 Claims, 12 Drawing Sheets**