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(54) **METHODS FOR INHIBITING COMPLEMENT ACTIVATION AND USES THEREOF**

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(58) **Field of Classification Search**
CPC **A61K 31/66**
See application file for complete search history.

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(57) **ABSTRACT**
The present invention provides methods for inhibiting complement activation and uses thereof. More specifically, the present invention provides methods for inhibiting complement activation using inorganic polyphosphates of at least 10 phosphate units. The polyphosphates inhibit complement activation by one or more of: binding to the C6 complement protein, C1-esterase inhibitor (C1-inh), factor H or factor B; enhancing the activity of C1-inh; interfering with C1s-mediated cleavage of C2; destabilizing the C5b-6 complement protein complex; interfering with C5b,6 interaction with C7; interfering with binding of C5b-7 to a cell membrane; interfering with integration of C5b-7 into a cell membrane; interfering with binding of C5b-8 to a cell membrane; interfering with integration of C5b-8 into a cell membrane; destabilizing the membrane attack complex (MAC); or reducing the amount of C5b-9 deposited on a cell surface.

6 Claims, 21 Drawing Sheets