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(54) **PREVINS AS SPECIFIC INHIBITORS AND THERAPEUTIC AGENTS FOR BOTULINUM TOXIN B AND TETANUS NEUROTOXINS**

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This patent is subject to a terminal disclaimer.

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Related U.S. Application Data

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(52) **U.S. Cl.** **514/2**; 514/15; 530/300; 435/7.1; 435/320.1; 435/325; 424/239.1; 536/23.5

(58) **Field of Classification Search** 514/15, 514/2; 435/7.1, 320.1, 325; 536/23.5; 424/239.1; 530/327, 300

See application file for complete search history.

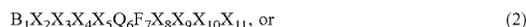
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(57) **ABSTRACT**

The compounds of the invention are generally described by the formula:



and the salts, esters, amides, and acyl forms thereof. Each position represented by a letter indicates a single amino acid residue: B is a basic of polar/large amino acid or a modified form thereof; X is a small or hydrophobic amino acid or a modified form thereof; X* is a small or polar/large amino acid or a modified form thereof; Z is a polar/large or hydrophobic amino acid or a modified form thereof; Z* is Proline or a polar/large of hydrophobic amino acid or a modified form thereof. As described below, one or more of the peptide linkages between the amino acid residues may be replaced by a peptide linkage mimic.

These compounds may be used as molecular building blocks to create compounds that are optimized for inhibiting the protease activity of Botulinum b and tetanus toxins.

10 Claims, 8 Drawing Sheets