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(54) **ENHANCED SUBSTRATES FOR THE  
PROTEASE ACTIVITY OF SEROTYPE A  
BOTULINUM NEUROTOXIN**

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(57) **ABSTRACT**

Substrates of botulinum toxin serotype A (BoNT A), kits comprising the substrates, and methods of using the substrates are disclosed. BoNT A cleaves SNAP-25 and the substrates that are based upon a portion of SNAP-25. Various amino acid modifications to the sequence of the peptide based on SNAP-25 are performed. Fluorescence labels that act as donors and acceptors may be added to the substrate to aid in the study of BoNT A.