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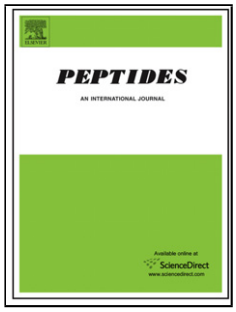

Title: BRADYKININ-POTENTIATING PEPTIDE-10C, AN ARGININOSUCCINATE SYNTHETASE ACTIVATOR, PROTECTS AGAINST H_2O_2-INDUCED OXIDATIVE STRESS IN SH-SY5Y NEUROBLASTOMA CELLS

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BRADYKININ-POTENTIATING PEPTIDE-10C, AN ARGININOSUCCINATE SYNTHETASE ACTIVATOR, PROTECTS AGAINST H_2O_2-INDUCED OXIDATIVE STRESS IN SH-SY5Y NEUROBLASTOMA CELLS

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HIGHLIGHTS

- Bradykinin Potentiating Peptides have neuroprotective activity against H_2O_2-induced oxidative stress in SH-SY5Y.
- BPP-10c exhibited neuroprotective properties by reducing both cell death and oxidative stress markers.
- BPP-10c increased AsS expression, without modifying iNOS levels nor NO synthesis in oxidative stress condition
- BPP-10c neuroprotective activity is related to decrease lipid peroxidation, reduced oxidative stress and maintenance of mitochondrial membrane potential

ABSTRACT

Bradykinin-potentiating peptides (BPPs – 5a, 7a, 9a, 10c, 11e, and 12b) of *Bothrops jararaca* (*Bj*) were described as argininosuccinate synthase (AsS) activators, improving L-arginine availability. Agmatine and polyamines, which are L-arginine metabolism products, have neuroprotective properties. Here, we investigated the neuroprotective effects of low molecular mass fraction from Bj venom (LMMF) and two synthetic BPPs