



New alloferon analogues : synthesis and antiviral properties.

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Streszczenie

We have extended our study on structure/activity relationship studies of insect peptide alloferon (H-His-Gly-Val-Ser-Gly-His-Gly-Gln-His-Gly-Val-His-Gly-OH) by evaluating the antiviral effects of new alloferon analogues. We synthesized 18 alloferon analogues: 12 peptides with sequences shortened from N- or C-terminus and 6 N-terminally modified analogues H-X(1)-Gly-Val-Ser-Gly-His-Gly-Gln-His-Gly-Val-His-Gly-OH, where X(1) = Phe (13), Tyr (14), Trp (15), Phg (16), Phe(p-Cl) (17), and Phe(p-OMe) (18). We found that most of the evaluated peptides inhibit the replication of Human Herpesviruses or Coxsackievirus B2 in Vero, HEp-2 and LLC-MK(2) cells. Our results indicate that the compound [3-13]-alloferon (1) exhibits the strongest antiviral activity ($IC_{50} = 38 \mu M$) among the analyzed compound. Moreover, no cytotoxic activity against the investigated cell lines was observed for all studied peptides at concentration $165 \mu M$ or higher.

Słowa kluczowe

alloferon, antiviral activity, Insect peptides

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