

Thematic course: Peptide inhibitors of platelet aggregation. Part 1.

Peptide inhibitors of platelet aggregation: mathematical modeling, synthesis and evaluation of the specific activity of the new compounds *in vitro*

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Abstract

We applied software *Algokomb* to perform mathematical modeling of polypeptide molecules of GPIIb/IIIa receptor's antagonists. One of the modeled compounds has been synthesized by the standard protocol of strategy FastMoc 0.25. The peptide synthesis has been conducted by solid-phase method of the strategy FastMoc 0.25 using the automatic peptide synthesizer. The purification has been done by preparative chromatography. The structure of the compounds has been confirmed by ¹H NMR and LCMS. The evaluation of the specificity of the synthesized compound has been made *in vitro* and has shown dose-dependent reduction of ADP-induced platelet aggregation.