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Marguerie de Rotrou

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[54] NOVEL PEPTIDES HAVING PLATELER AGGREGATION INHIBITORY ACTIVITY

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[56] References Cited

U.S. PATENT DOCUMENTS

4,683,291 7/1987 Zimmerman et al. 530/330
4,792,525 12/1988 Ruoslahti et al. 530/330
4,857,508 8/1989 Adams et al. 514/18

FOREIGN PATENT DOCUMENTS

0164654 12/1985 European Pat. Off. .
0220957 5/1987 European Pat. Off. .
2608160 12/1986 France .

OTHER PUBLICATIONS

Boucaut, J. C., et al., "Biological Active Synthetic Peptides as Probes of Embryonic Development: A Competitive Peptide Inhibitor of . . . ", Chemical Abstracts, vol. 102, p. 428, No. 21570a (1985).
Chen, W. T., et al., "Regulation of Fibronectin Receptor Distribution by Transformation, Exogenous Fibronectin, and Synthetic Peptides", Chemical Abstracts, vol. 106, p. 353, 1987.
Ruoslahti, R. et al., *Falk Symposium*, 43 (Modulation Liver Cell Expression), pp. 239–244, 1987.
Alberts, B. et al., *Molecular Biology of the Cell*, Garland Publishing, Inc., pp. 59, 1983.
Pierschbacher, M. et al., *Journal of Biological Chemistry*, 262(36): 17294–17298, 1987.
Dayoff, M., Atlas of Protein Sequence and Structure, vol. 5: 89–99, 1972.
Proc. Natl. Acad. Sci. U.S.A., vol. 82, pp. 8057–8061, Dec. 1985, Plow et al.

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[57] ABSTRACT

The subject of the invention is peptide derivatives corresponding to formula

$$X^1\text{-}X^2\text{-Gly-Asp-}X^3\text{-}X^4 \quad (I)$$

in which:

X^1 represents a hydrogen atom, a N-protecting group, an amino acid residue or a N-protected amino acid residue,

X^2 represents a residue of L-Arg or D-Arg, L-Orn or D-Orn, N-aminocarbonyl -L-Orn or N-aminocarbonyl-D-Orn, or L-Lys, or D-Lys,

X^3 represents a residue of L-Trp, D-Trp, L-Leu, D-Leu, L-Ile, D-Ile, L-Phe, D-Phe or a chain of 2 or 3 of these residues, and

X^4 represents a -OH group, $-NH_2$ group, $-OR^1$ group in which R^1 represents an alkyl radical of C_1 to C_4, a NHR^2 group in which R^2 represents an alkyl radical of C_1 to C_4, or an amino acid residue.

These derivatives are useful in therapy on account of their platelet aggregation inhibiting activity.

5 Claims, No Drawings