

Title (en)  
ERYTHROCYTES AND THROMBO-ERYTHROCYTES AS TARGET SPECIFIC AGENTS

Publication  
**EP 0558645 A4 19940706 (EN)**

Application  
**EP 92901253 A 19911112**

Priority  
US 61116490 A 19901109

Abstract (en)  
[origin: WO9208804A1] The present invention provides new compounds and methods for promoting platelet aggregation, and controlling bleeding. The present invention is based on the surprising discovery that erythrocytes conjugated to certain peptides and polypeptides containing an R-G-D (Arg-Gly-Asp) sequence (collectively termed herein "RGD peptides") according to the invention, selectively bind to activated platelets but not to unactivated platelets. In recognition of the dual nature of the derivatized erythrocytes, they are termed herein "thrombo-erythrocytes". The thrombo-erythrocytes have no significant change in their rheological properties. In a preferred aspect, the thrombo-erythrocytes have the majority of RGD peptide cross-linked specifically to glycophorin A and glycophorin B on the surface of the erythrocyte. In the thrombo-erythrocytes of the invention, preferably, the N-terminal Arg of the R-G-D sequence should be spaced within 9-50 Angstroms, more preferably 10-40 Angstroms, and most preferably 11-25 Angstroms, from the erythrocyte protein to which the RGD peptide is conjugated. The invention is further directed to erythrocytes modified by replacement of their intracellular contents with a composition comprising a label or agent. Such modified erythrocytes are termed herein "carrier erythrocytes". The carrier erythrocytes have use in delivery of such labels or biologically active agents to specific tissues by conjugation to a targeting agent.

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Citation (search report)

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- [Y] US 4377567 A 19830322 - GEHO WALTER B
- [Y] WO 9007924 A1 19900726 - MICRO VESICULAR SYSTEMS [US]
- [XY] DATABASE WPI Section Ch Week 8739, Derwent World Patents Index; Class B07, AN 87-273787, "PROD. OF MICRO-CARRIERS CONTG.ANTICANCER DRUGS-FROM HUMAN ERYTHROCYTE MEMBRANE GHOST AND IMMUNOGLOBULIN(S)"
- See references of WO 9208804A1

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