Bio-inspired manufacturing strategies for Platelet Analogues

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Abstract

Blood transfusion is an important method in clinical treatment. The lack of blood donors and risk of contamination caused by blood transfusion has become a worldwide problem. Technology of mimicking platelets is imperative, with the greatest potential to significantly improve hemostatic action and break barriers of time and space. So that, many scientists have devoted to the research of artificial human hematopoietic cells. Imitations of the natural form and function of platelets are still limited by many reasons until now. In this review, we mainly focus on the constructive progress of platelet analogues based on its innate hemostatic abilities in the past 20 years. It hopes to convey a more comprehensive understanding of design elements, advanced technologies and major challenges in this domain.

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