Erythrocytes as Drug Carriers in Medicine
Proceedings of the Sixth Meeting of the International Society for the Use of Resealed Erythrocytes, held July 25 – 28, 1996, in Irsee, Germany

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The sixth meeting on the use of resealed annealed red blood cells was held in Irsee, Germany by the International Society for the Use of Resealed Erythrocytes (ISURE) on July 25–28, 1996. Although earlier meetings focused on the technology toward development of methods and standardization for efficient, consistent encapsulation, most of the present studies now are directed toward the application use of these carrier blood cells. Basic studies now have been directed toward exploration of commercial applications. Indeed, clinical trials were initiated to evaluate the dose-response curves employing L-asparagenase in human patients. Also, studies have shown the use of thrombolytic agent in erythrocyte carriers with the use of human red blood cells to provide a new conceptual approach in thrombolytic therapy to prevent thrombosis in individuals with higher risk factors. For example, with the use of carrier red blood cells, the thrombolytic agents will have a greater potential of acting on clot formation without systemic activation and thus lower the risk of hemorrhage, which is always prevalent in the thrombolytic therapy. Erythrocyte carrier systems are still quite unique and useful as specific targeting agents with a prolonged, sustained action with minimal immunologic or other toxic effects. The stability of this carrier system provides greater applications, especially of enzymes and proteins, by minimizing immunologic reactions and enhancing stability. Each of these studies are directed to minimize the toxicity so that higher doses such as IL2 can be used and it permits the use of more toxic prodrugs such as 3'-azidothymidine homodinucleotide as an anti-HIV drug. The focus of erythrocyte carriers now appears to be in the area of applications—especially, commercial area, which is the logical sequence as this area of endeavors matures.
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