

**Erythrocytes as drug carriers.** V.I. Sarbash, A.G. Tikhonova, T.A. Vuimo, A.L. Derbov, Yu.G. Aleksandrovich, A.A. Butylin, V.M. Vitvitsky, F.I. Ataulakhanov. *Ross. Khim. Zhurn.* (*Zhurn. Ross. Khim. ob-va im. D.I. Mendeleeva*), 2007, v. LI, 1.

The review presents methods intended to create new drug forms — pharmacocytes. Pharmacocyte is an erythrocyte artificially loaded with pharmacological preparation. Such special forms of regular pharmacological preparations can provide an efficient cumulative delivery and accumulation of the preparations in particular organs and cells, as well as prolongation of drug action (up to three months) due to circulation of the drug loaded erythrocytes. Principal methods of loading of erythrocytes with chemicals, drugs, proteins, and other substances are considered. These methods are electroporation, pharmacologically stimulated endocytosis, and different osmotic methods, including osmotic hemolysis, stepwise hemolysis, and dialysis. Comparison of different methods shows that the most efficient method of pharmacocyte preparation is dialysis-concentration method developed by authors.