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COVER ILLUSTRATION

The cover shows a schematic illustration of a multifunctional envelope-type nano device [MEND, as originally described by Hatakeyama et al. (2011), *Adv Drug Deliver Rev* 63, 152–160]. This and other transfection vectors encompassing nucleic acids and peptides are described in the review article by B. Bechinger on pp. 283–293 in this issue. Such devices are needed for biomedical applications such as personalized medicine or gene therapy, and the design of transfection complexes has to take into account their size, surface properties as well as unspecific and specific interactions. Transport to and into the target cells requires resistance to serum, involves cellular uptake, endosomal escape as well as intracellular targeting, and a number of tools have been developed to enhance these transport processes.



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