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# Nanoparticles boost therapeutic potential of siRNA drugs

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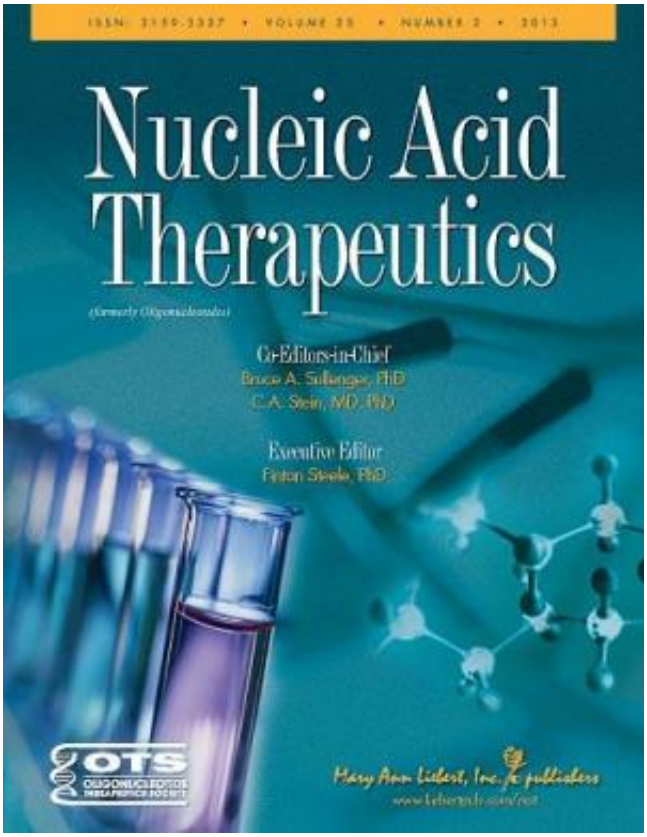


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New classes of drugs that can silence specific genes, such as small interfering RNAs (siRNAs), offer great therapeutic potential. But the specific delivery of siRNAs to target cells to exert their effects remains a significant challenge. A novel nanoparticle-based approach that enables

more efficient delivery of siRNA drugs is presented in *Nucleic Acid Therapeutics*.

Compared to a commonly used lipid-based transport agent, the cSCK nanoparticles described in this article better protected siRNAs from being degraded in the bloodstream and were associated with greater gene silencing efficiency of siRNA drugs.

The study authors, Yuefei Shen, Huafeng Fang, Ke Zhang, and John-Stephen Taylor, Washington University, St. Louis, MO, and Ritu Shrestha and Karen Wooley, Texas A&M University, College Station, TX, attribute the better gene silencing efficiency achieved with cSCKs with improved cell uptake of the siRNAs. They present their findings in the article "Effective Protection and Transfection of siRNA by Cationic Shell-Crosslinked Knedel-Like Nanoparticles (cSCKs)." (http://online.liebertpub.com/doi/full/10.1089/nat.2012.0390)

"The potential of siRNAs as therapeutic agents is immense, but we still have to develop better and more targeted delivery methods for many diseases," says Executive Editor Fintan Steele, PhD, SomaLogic, Inc., Boulder, CO. "The work of Shen and colleagues demonstrates that nanotechnology approaches are rapidly progressing towards the goal of meeting the challenge of delivery."

**More information:** The article is available on the *Nucleic Acid Therapeutics* website (http://www.liebertpub.com/nat).

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