

Innovative self-assembling dendrimer platforms for siRNA and anticancer drug delivery¹

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The application of nanotechnology to engineer nanocarriers for drug delivery is widely expected to bring breakthrough and create entirely novel nanotherapeutics. Dendrimers are ideal nanovectors for drug delivery by virtue of their uniquely well-defined and precisely controlled structure as well as the multivalent cooperativity confined within nanosized volume. We have recently established self-assembled supramolecular dendrimers as excellent nanocarriers for siRNA and anticancer drug delivery.²⁻⁴ In particular, the self-assembling amphiphilic dendrimers are able to form adaptive supramolecular nanostructures,³⁻⁴ which encapsulate either siRNA or anticancer drug molecules with high loading efficiency for effective delivery to combat drug resistance. Our work provides new perspectives of innovative self-assembling dendrimer platforms for drug delivery in biomedical applications.

References:

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