Nucleic acid based supramolecular systems: a route to biomedical applications

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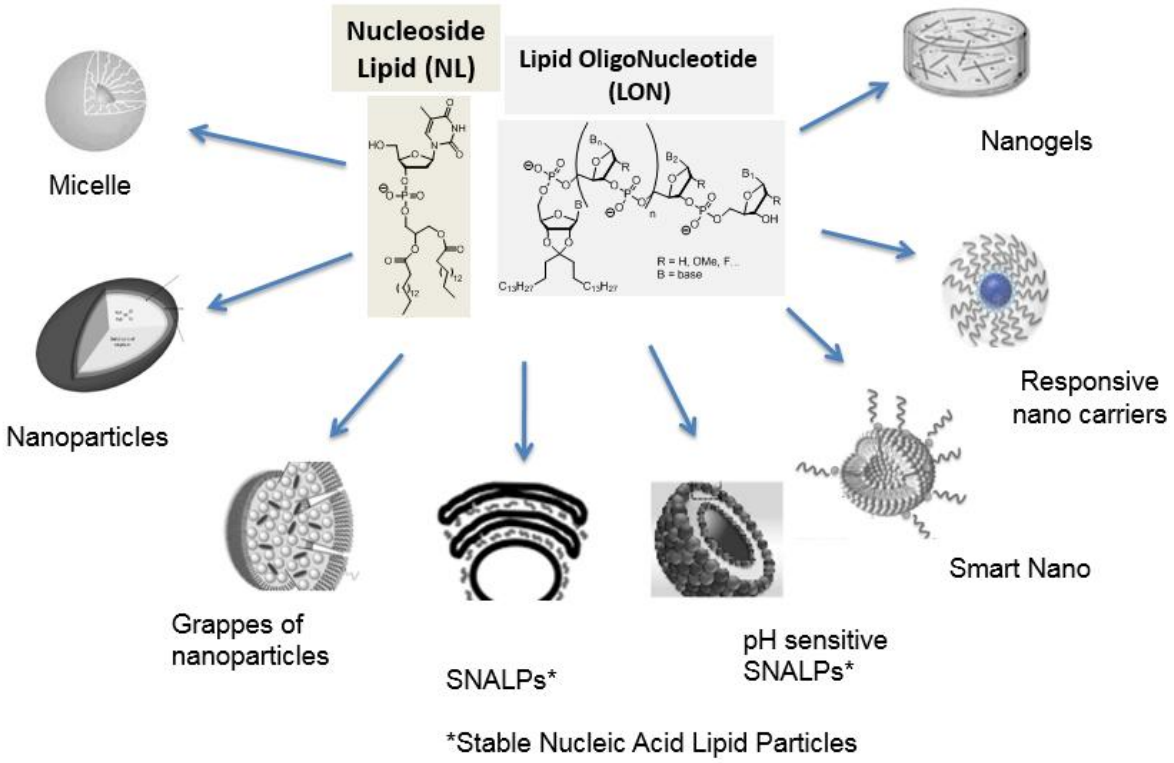
Amphiphilic molecules spontaneously self-assemble in water to form supramolecular assemblies at the nanometer scale. These aggregates are finding more and more applications in the context of biotechnologies and nanomedicine. Our laboratory is primarily concerned with the synthesis and applications of nucleoside- and oligonucleotide-based amphiphiles. Besides being inherently biocompatible, the presence of the nucleic acid-based polar head in their structure brings about new interesting properties to these hybrid molecules. The presentation will mainly focus on Lipid OligoNucleotides (LONs) and their unique self assembling and recognition properties as well as their use as nanocargoes for biomedical applications.



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