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TITLE: Reactivity of hexaruthenium assemblies towards nucleotides and DNA

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CURRENT CATEGORY: Metals in Medicine and Health

ABSTRACT BODY:

Abstract Body: Over the last decades, ruthenium-based anticancer drugs have become the focus of research, since they are known to cause fewer side effects than platinum drugs [1-3].

In recent years, we have designed different hexacationic hexaruthenium assemblies that can encapsulate various guest molecules, which makes them useful for drug delivery to cancer cells [4].

Now, the aim of our work is to assess the behavior of the ruthenium assemblies under physiological conditions, with or without an encapsulated guest molecule, using various NMR techniques.

It is important to determine if DNA is a likely target for the ruthenium assemblies, therefore we monitored the interaction between the assemblies both with isolated nucleotides and DNA strands.

[1]M. J. Clarke, *Met. Ions Biol. Syst.* 1980, 11, 231.

[2]B. Rosenberg et al., *J. Biol. Chem.* 1967, 242, 1347.

[3]G. Süss-Fink, *Dalton Trans.* 2010, 39, 1673.

[4]B. Therrien et al., *Angew. Chem. Int. Ed.* 2008, 47, 3773.

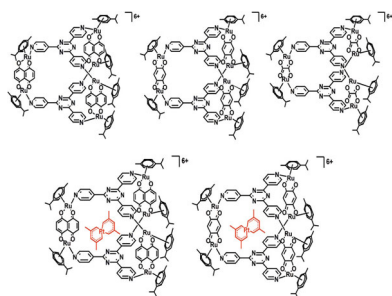


Figure 1. Hexaruthenium assemblies used in the investigation.