**NMR STUDY OF NANO-BIO INTERFACE**

**Interaction of metallic nanoparticles with biothiols**

The growing interest in utilization of metallic nanoparticles for diagnostics and treatment of various diseases generates the need to examine their interactions with biological systems. Upon contact with biological media, NPs are immediately coated with a layer of adsorbed biomolecules called “corona”. However, detailed knowledge still lacks about the nature and mechanisms behind the nano-bio interactions. One of the possible binding mechanisms is through the thiol groups, considering the high affinity of sulphur for metals. Endogenous biothiols such as cysteine and glutathione are therefore useful as models for studying the mechanism of nano-bio interactions.

Interaction of silver and gold nanoparticles with model biothiols cysteine and glutathione is studied using 1H NMR (nuclear magnetic resonance), with the aim of determining the mechanism and functional groups that participate in the binding.

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