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ABSTRACTS
PART II

Abstracts 702.1 – 981.11
The Structural Modification of Nucleosides by Non-enzymatic Glycation: A Study Based on The in vitro Interactions of Glyxal and Methylglyoxal with DNA Purines and Pyrimidines

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Characterization of adducts formed between Dirhodium(II) carboxylates and DNA

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Dirhodium (II) carboxylates have anti-tumor properties and their significant evidence that double stranded DNA is the biological target of these compounds. This study focused on characterization of the products formed after reacting various dirhodium carboxylates with double stranded salmon testes DNA in a phosphate buffer. Unbranched dihydrogen was removed from the reaction mixture through centrifugation, and the [Rh] was confirmed using graphite furnace atom absorption spectroscopy (GFAAS), and [DNA] by UV-Vis spectrophotometry. The Rh-DNA adducts were excised from the DNA by two-step acidic digestion with DNAse I followed by S1 nuclease digestion. Terminal phosphates were removed with alkaline phosphatase, and the Rh-DNA adducts were purified using high performance liquid chromatography (HPLC). Mass Spectroscopy, HPLC, and Rh-GPA were used to characterize the purified Rh-DNA adducts.

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Interactions Between Coomassie Blue Dye and DNA in the Bradford Assay

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The Bradford Assay is well known for its ability to detect and quantitate protein in solution with a great degree of sensitivity. During the assay Coomassie Blue dye is allowed to bind to the protein for a specific measured period of time, and then the samples are analyzed by UV spectrophotometry. Construction of a standard curve reveals extinction coefficient that correlates absorbance of light at 595 nm to the concentration of protein in the test solution. For relatively well studied although its exact mode of interaction with certain DNA is still a question of controversy. In this study, CuTMPyP4 and its Cu(I) derivative with various G-DNA strands were used to characterize the purified Rh-DNA adducts.

Interactions between Coomassie Blue Dye and G-DNA (500.1-500.2)

Three selective and sensitive fluorescent dyes for quantification of DNA and RNA

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Quantification of DNA or RNA is often confounded by contamination or inefficient purification. In addition, limited sensitive samples may often force scientists to forgo quantitative order to avoid the potential of contamination. Here we descri