

application to biomedical studies of high resolution magic-angle-spinning NMR spectroscopy: our working in progress.

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Introduction

Biomedical metabolomics studies generally involve analysis of biofluids or cell or tissue extracts. We reported our methodological approaches and preliminary results in the evaluation of metabolomic profile of primary and secondary liver tumors, of a Dataset of urinary samples of type1diabetic children and of CSF of patients with Multiple Sclerosis suspected.

Method

In the different liver tumors (hepatocellular carcinoma, colorectal metastases and secondary lung carcinoma) proton NMR spectra have been obtained from aqueous soluble metabolites in extract of neoplastic tissues and compared with samples of surrounding uninvolved tissue. Dataset of urinary samples of type1diabetic children under ten years has been compared with those of coetaneous healthy subjects; a few microliters of untreated CSF of patients with demyelinating diseases has been collected and analyzed. Statistical analysis looking for specific disease metabolic markers has been performed

Results and conclusion

The most performing pulse techniques to study these different clinical problems will be reported. The most interesting results will be presented. The most effective approaches in the analysis of biofluids or tissue extracts will be described.