NMR methods to suppress strong metabolite signals in complex mixtures

Elin Alexandersson, Gustav Nestor, Lena Lundqvist and Corine Sandström

Dept. of Molecular Sciences, Swed. Univ. of Agricultural Sciences (SLU), Uppsala, Sweden

Mixtures of natural products such as plant extracts are usually very complex and can be dominated by highly abundant metabolites such as glucose and fructose. To be able to analyse the metabolites that are present in smaller amounts, extensive sample preparation is often needed. Another approach is to use selective NMR experiments in which one focuses on specific signals in the NMR spectrum of the sample while ignoring all other signals. For this purpose, several band-selective NMR methods have been developed that selectively remove all signals from e.g. glucose while retaining other metabolites, provided that they have at least one signal outside of the glucose frequency range.