

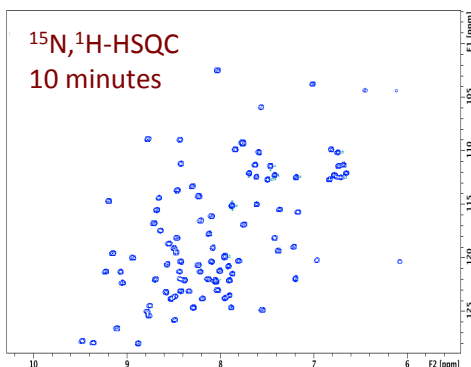
Biological NMR at CMCA

All NMR spectra shown were recorded between May-Sept 2016 using our AV3-HD 600 MHz NMR

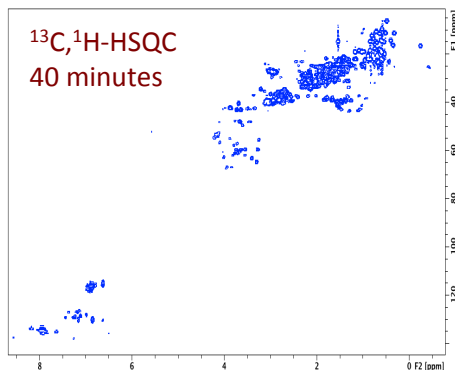
PROTEINS

Isotope labelled protein NMR (^{13}C & ^{15}N) and/or 'exotic' protein labels (e.g. ^{19}F)

$^{15}\text{N}, ^1\text{H}$ -HSQC
10 minutes



$^{13}\text{C}, ^1\text{H}$ -HSQC
40 minutes



0.5 mM ubiquitin sample standard

e.g. of experiments available: protein-observe ligand binding, molecular dynamics, protein reduction potentials

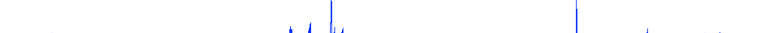
^1H LIGAND-OBSERVE SCREENING

Albumin binding to tryptophan (with sucrose non binder)

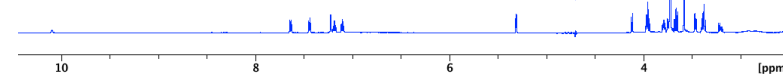
STD NMR – 10 minutes: L-Trp (binding), sucrose is missing



WaterLOGSY – 11 minutes: L-Trp peaks (binding) \uparrow , sucrose (non-binding) \downarrow



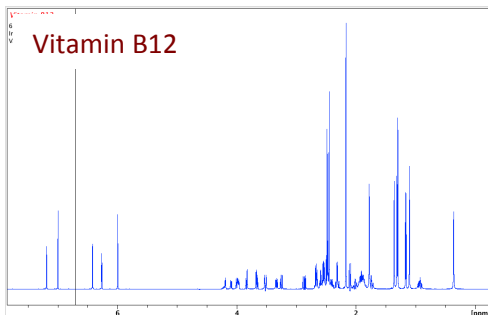
^1H NMR L-Trp + sucrose + albumin



1 mM L-Trp, 5 mM sucrose, 0.02-0.1 mM albumin

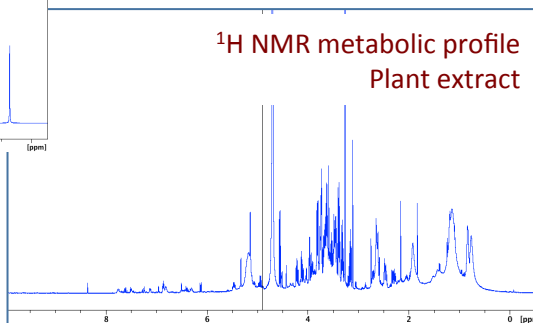
METABOLISM & VITAMIN NMR

Vitamin B12



Targeted or profiled metabolic NMR available using ^1H , ^{13}C , ^{31}P and other nuclei.

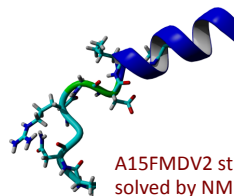
^1H NMR metabolic profile
Plant extract



PEPTIDES

Structural studies

Including transient structures created on binding protein/macromolecular targets



A15FMDV2 structure solved by NMR

Cancer peptide A15FMDV2

