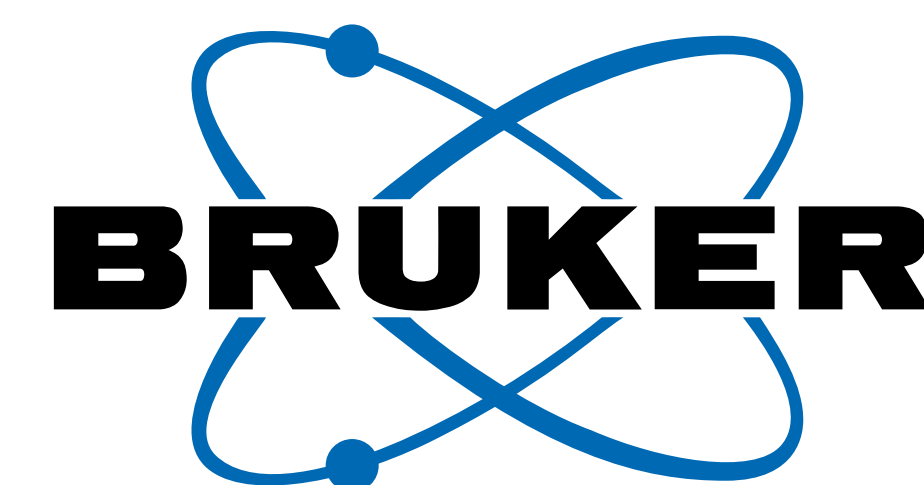


# Routine, Research & Education: Fourier 300HD



## FOURIER 300 goes HD!

Introducing the new Fourier 300HD spectrometer, a proton carbon-only, high resolution NMR with all the features critical for routine NMR for the organic chemist bundled into a convenient package. This state-of-the-art instrument includes:

- Dual  $^1\text{H}$  and  $^{13}\text{C}$  Probe with Z-Gradient and automatic tuning and matching
- Selective excitation capability
- 1D, 2D and multi-dimensional NMR
- Industry standard Topspin 3.5 with IconNMR
- Full computer control of all shims with TopShim™

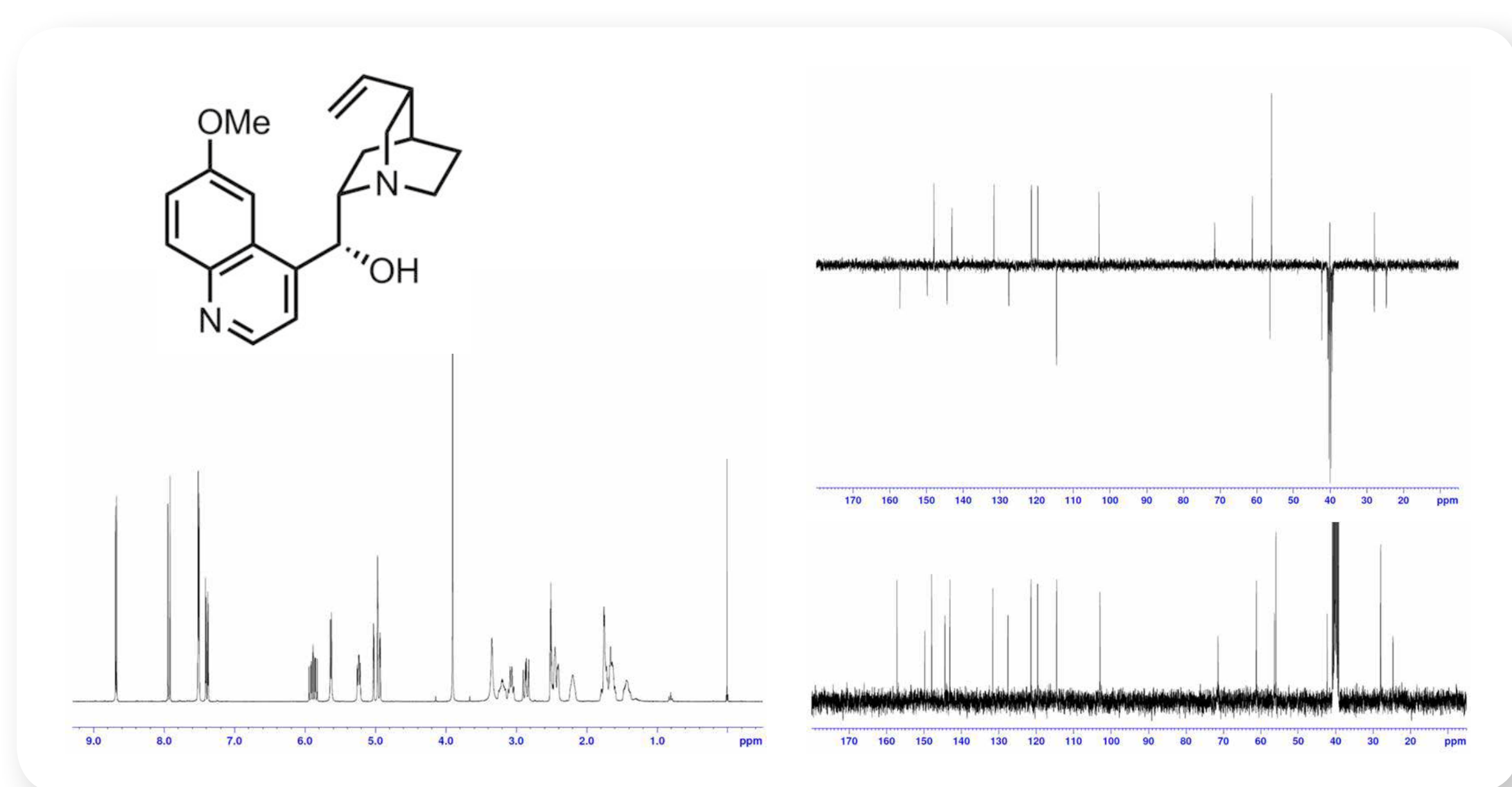


Fig. 1  $^1\text{H}$  spectrum of 50mM Quinine in DMSO- $d_6$  (left). NS = 16. DEPT-Q 135 spectrum (right, top), 15 minutes and 256 scans showing both, protonated and quaternary carbons with multiplicity editing.  $^{13}\text{C}$  observe  $^1\text{H}$  power gated decoupling (right, bottom). Total exp. time 15 minutes (256 scans).

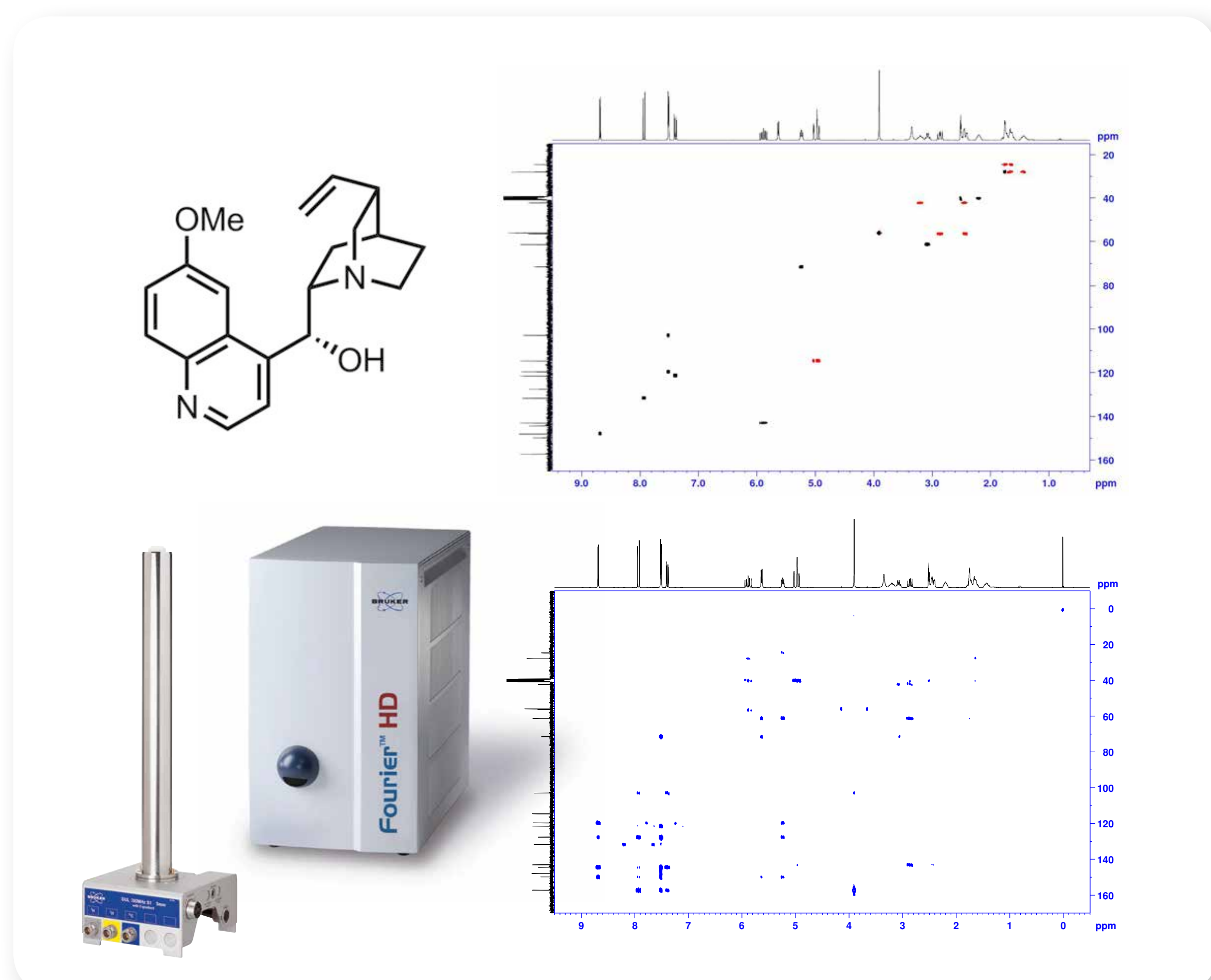


Fig. 2 2D  $^1\text{H}$ - $^{13}\text{C}$  HSQC (top) and HMBC (bottom) of the anti-malaria agent, Quinine. Sample concentration 50mM. 2 scans per increment for the HSQC, 16 scans for the HMBC (11 minutes and 80 minutes, respectively), for a full structure determination with CMCse in just 2 hours.



Fig. 3 Fourier 300HD spectrometer.

## Available Options

- **24 position SampleCase autosampler:** Together with the standard ICON-NMR, ATM, TopShim and remote access this transforms your instrument into a convenient and safe high-throughput machine under full automation.
- **Extended software library:** The structure verification tool CMC-assist and structure elucidation program CMC-se complete your sample to structure process.
- **VT control and VT-gas pre-cooling:** Brings you improved temperature stability at the sample and a VT range of 0°C to +150°C.
- **Need more nuclei?** Upgrades to multi-nuclear capabilities are available at any time at a later stage.

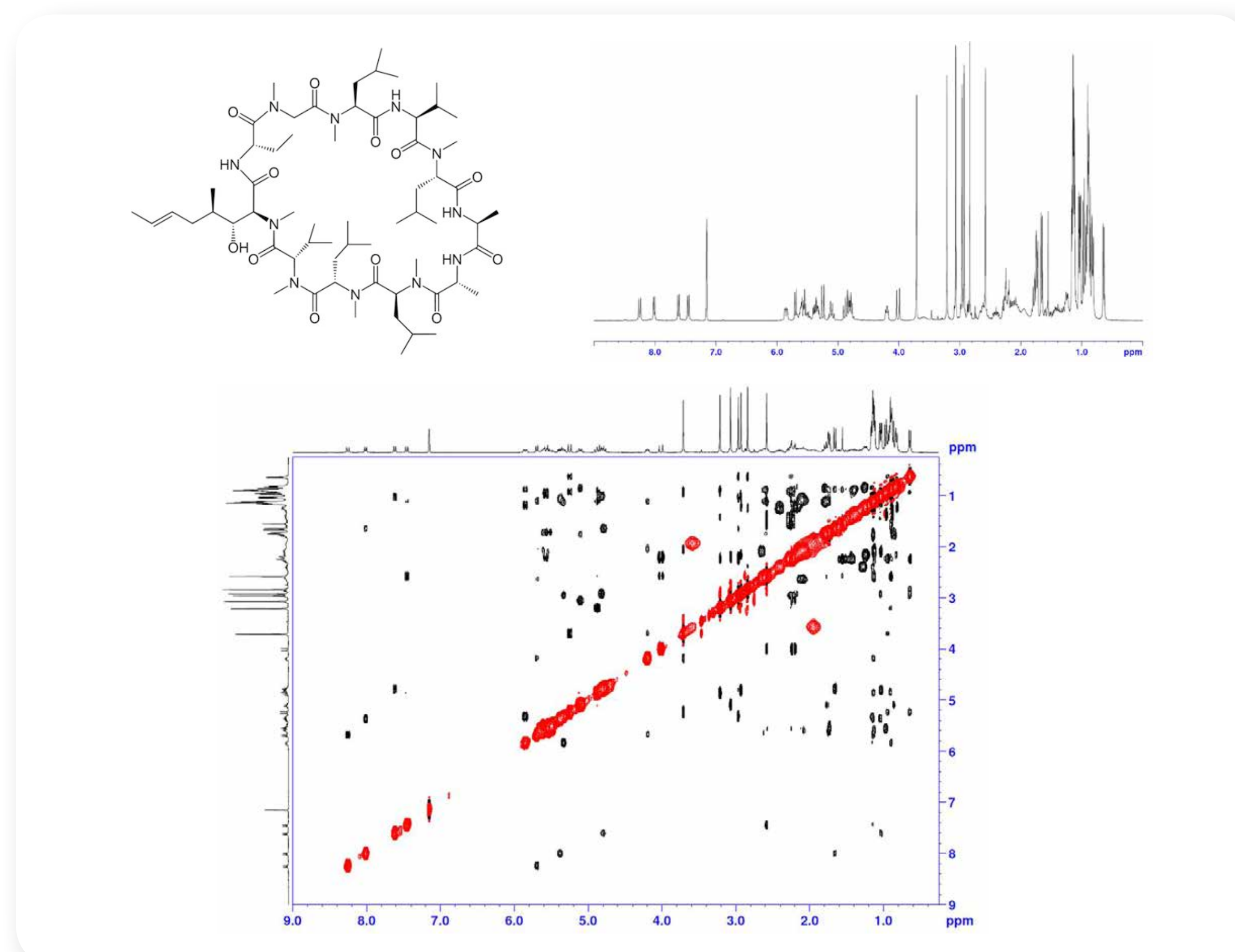


Fig. 4 1D  $^1\text{H}$  spectrum of cyclosporin, an immunosuppressant drug (top). A high quality 2D  $^1\text{H}$ - $^1\text{H}$  NOESY (600ms) mixing is obtained with 2 scans and 20 minutes experimental time.

## Summary

- Fourier 300HD: supercon NMR for tight budgets
- From routine to research NMR
- NMR education
- Small molecule structure verification and elucidation

