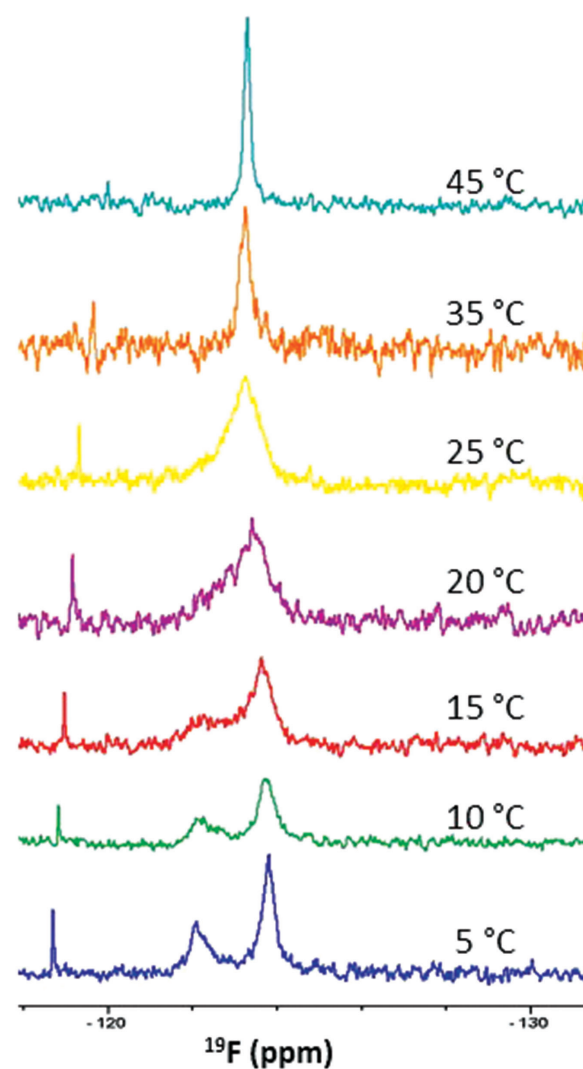




# nmr is science



*19F NMR spectrum of protein peptide binding at different temperatures*

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**Field strength:** 500 MHz

**Why is this your favorite spectrum?**

It shows how temperature can modulate the rate of exchange from slow to fast on the NMR time scale. It is also cool because different techniques can be used to probe the protein-peptide binding interaction depending on the rate of exchange, and therefore the temperature.

This is a  $^{19}\text{F}$  NMR spectrum of an SH3 domain labeled with fluorine on its sole tryptophan. Binding of a proline-rich peptide causes a chemical shift change, and the exchange rate can be modulated with temperature.