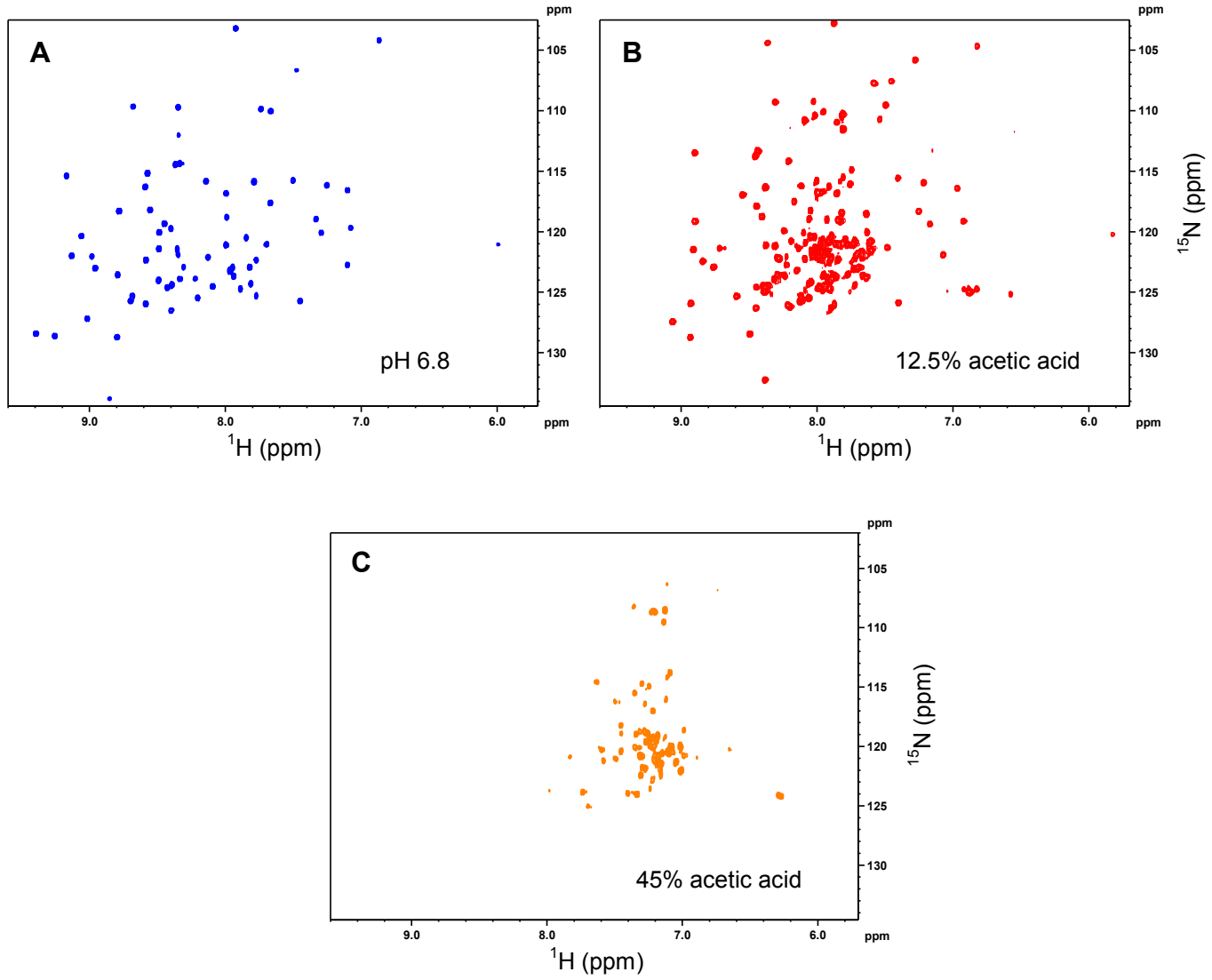


**Supporting Figure 1 –** [$^{1}$H, $^{15}$N]-TROSY spectra of $^{15}$N-enriched monomeric ubiquitin under different conditions: **(A)** 20mM sodium phosphate pH 6.8, **(B)** in 12.5% (v/v) acetic acid, and **(C)** in 45% (v/v) acetic acid. The residue-specific NMR signals corresponding to backbone amides are well spread at pH 6.8 (blue) and still retain the spread in 12.5% acetic acid, pH 2.24 (red), indicating that ubiquitin remains well folded under both conditions. However, in 12.5% acetic acid we observed additional signals which most likely correspond to alternative (possibly partially unfolded) conformations of ubiquitin at this condition. The signals in the spectrum measured in 45% acetic acid, pH 1.85 (orange), are more characteristic of an unfolded protein.