Compounds **23b** and **21b** - from Pyrimidine *N*-oxide + MeOTf in CD3CN. NMR spectra recorded in CD3CN, then solvent swapped to DMSO-*d*6. Supporting Information, pg. S31 – S33.



**NMR Spectra in CD3CN**

NMR Spectrometer: Bruker Avance I 400

Acquisition Software: Bruker Topspin version 2.1

Program used to process software: MestreNova (1H, HSQC, HMBC, COSY)

Topspin (13C{1H})

Reference Frequency for 1H NMR: 400 MHz

Reference Frequency for 13C NMR: 100 MHz

**NMR Spectra in DMSO-*d*6**

NMR Spectrometer: Bruker Avance III 600

Acquisition Software: Bruker Topspin version 3.5.7

Program used to process software: MestreNova

Reference Frequency for 1H NMR: 600 MHz

Reference Frequency for 15N NMR: 60.8 MHz

**Note**: The 1H-15N HMBC NMR spectrum produced from the raw data is mis-referenced in the f2 dimension (1H dimension) and needs to be re-referenced upon opening.

Unprocessed NMR spectra from the above reaction are provided in JCAMP-DX format. Since saving in this format does not allow preservation of correct integration curves (1D NMR spectra) or insertion of spectral traces (2D spectra), the spectra are provided in their original, unprocessed state, with the exception of application of t1 noise reduction to 1H-15N HMBC NMR spectra.