

# Supporting Information

## Synthesis, cytotoxicity and cellular uptake studies of N3 functionalized $\text{Re}(\text{CO})_3$ thymidine complexes

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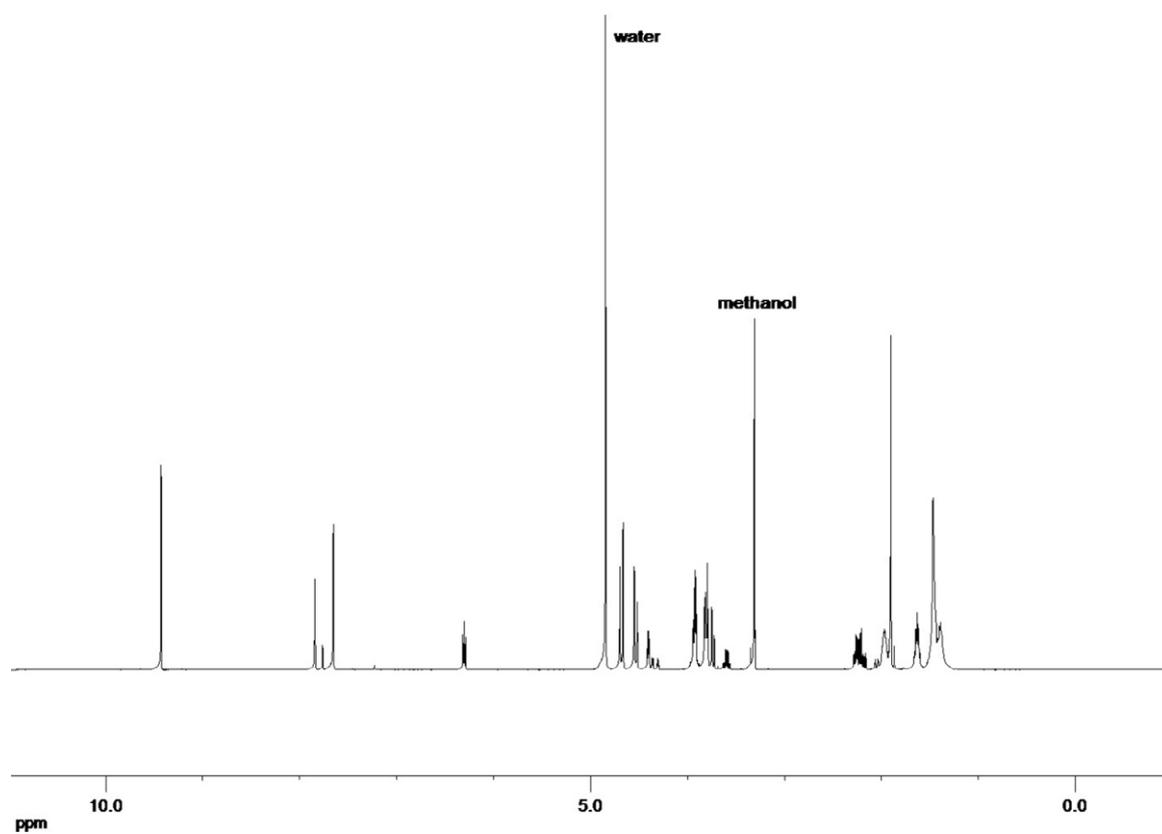
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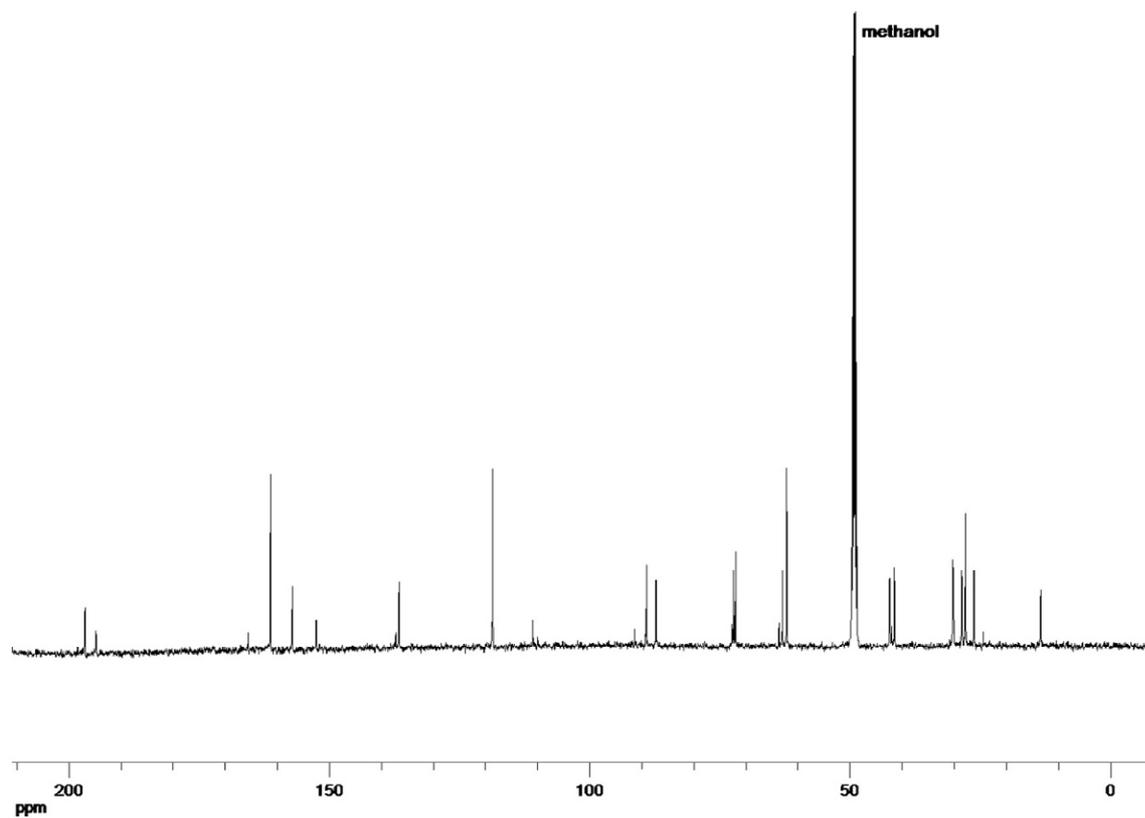
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1. NMR spectra of  $\text{Re}(\text{CO})_3$  complexes.
2. Emission Spectrum for compound 22.
3. Mass spectra for 19-22.
4. Nuclear counterstaining of Nuclear-ID Red and 22 indicating no incorporation of 22 into the nucleus.

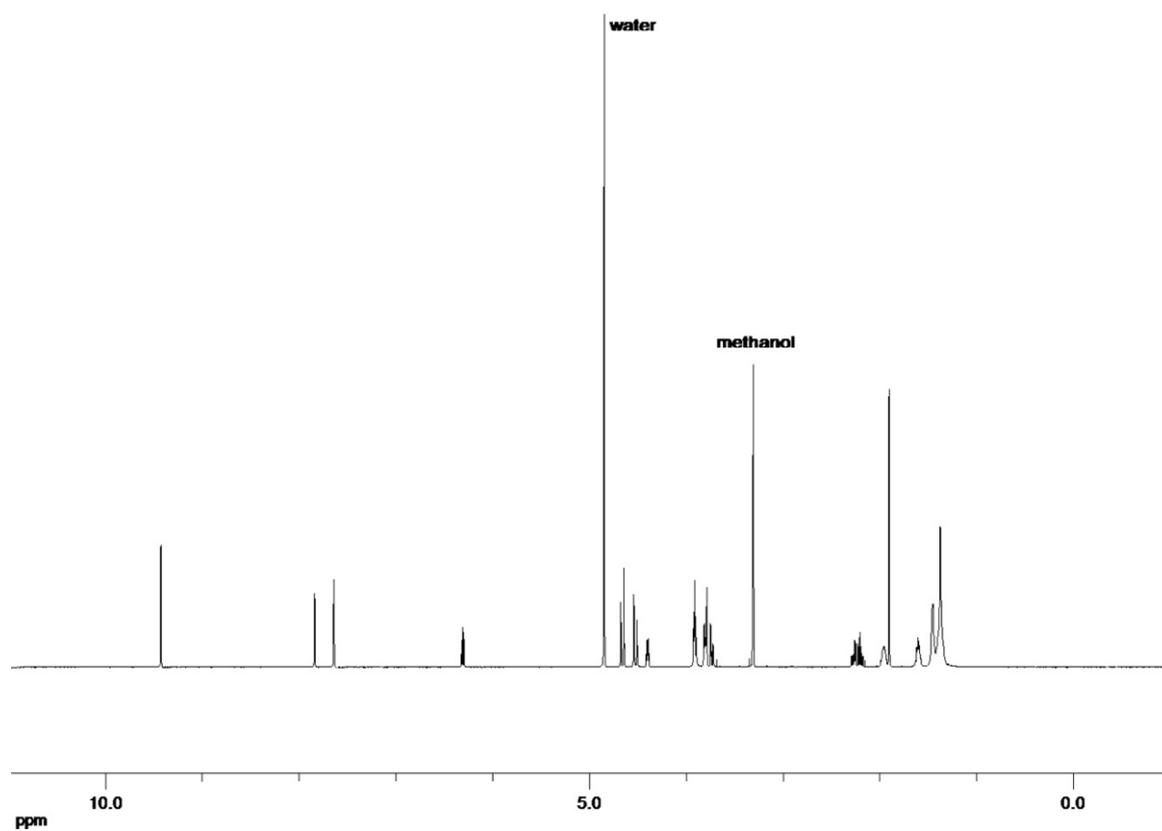
## 1. NMR spectra of $\text{Re}(\text{CO})_3$ complexes



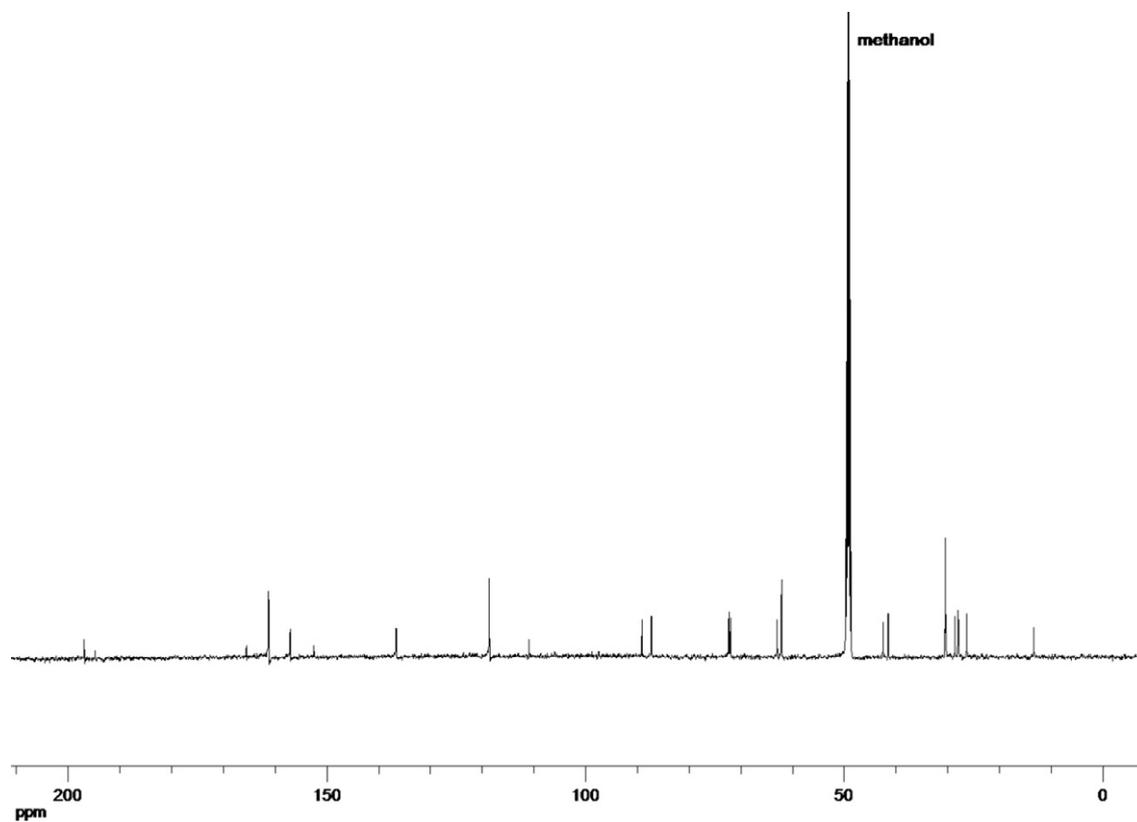
$^1\text{H}$  NMR  $[\text{Re}(\text{CO})_3(15)]\text{Br}$  (19)



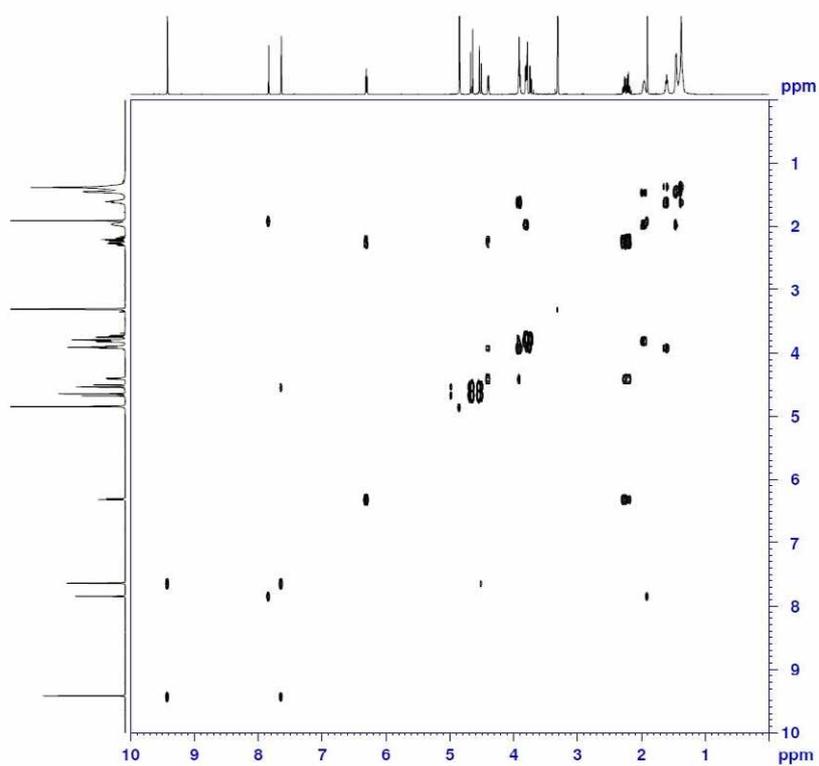
$^{13}\text{C}$  NMR  $[\text{Re}(\text{CO})_3(15)]\text{Br}$  (**19**)



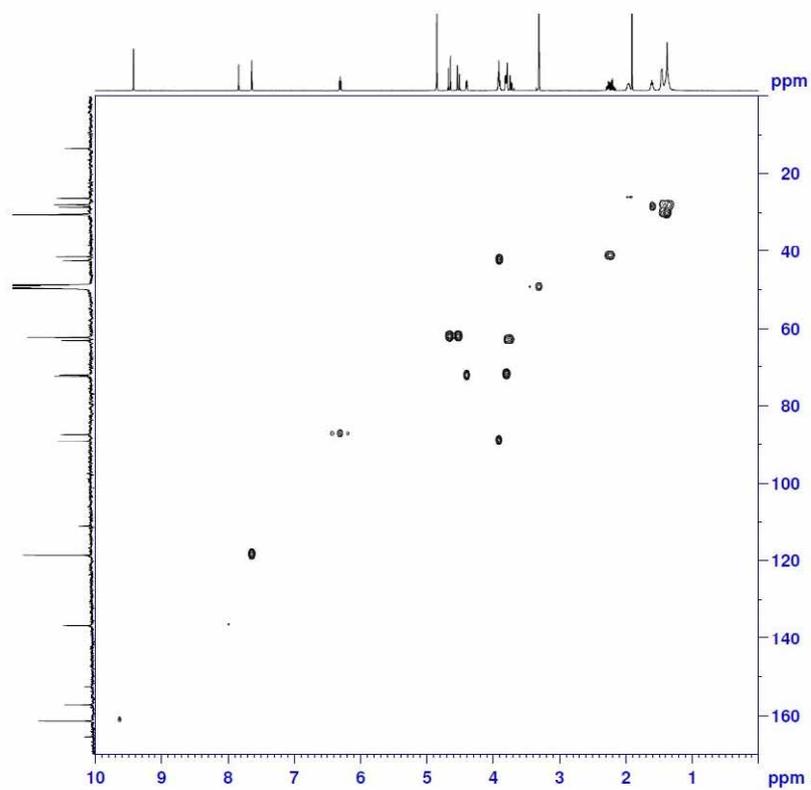
$^1\text{H}$  NMR  $[\text{Re}(\text{CO})_3(16)]\text{Br}$  (**20**)



$^{13}\text{C}$  NMR  $[\text{Re}(\text{CO})_3(16)]\text{Br}$  (**20**)

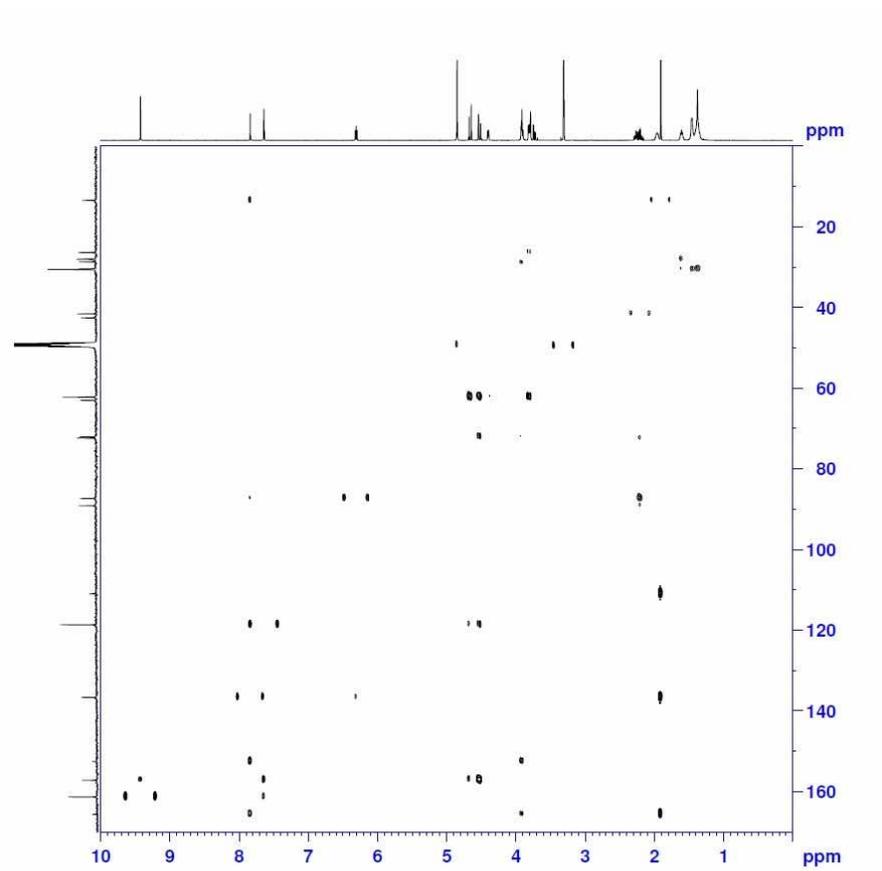


HH COSY  $[\text{Re}(\text{CO})_3(16)]\text{Br}$

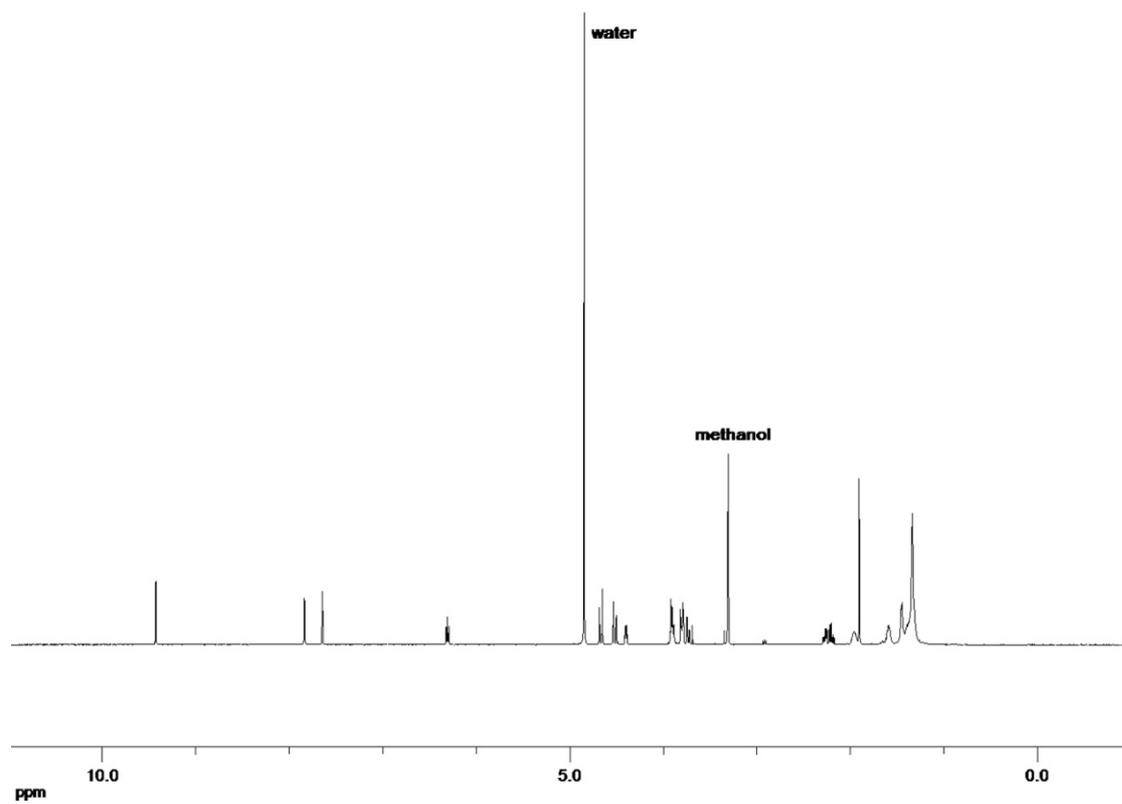


**(20)**

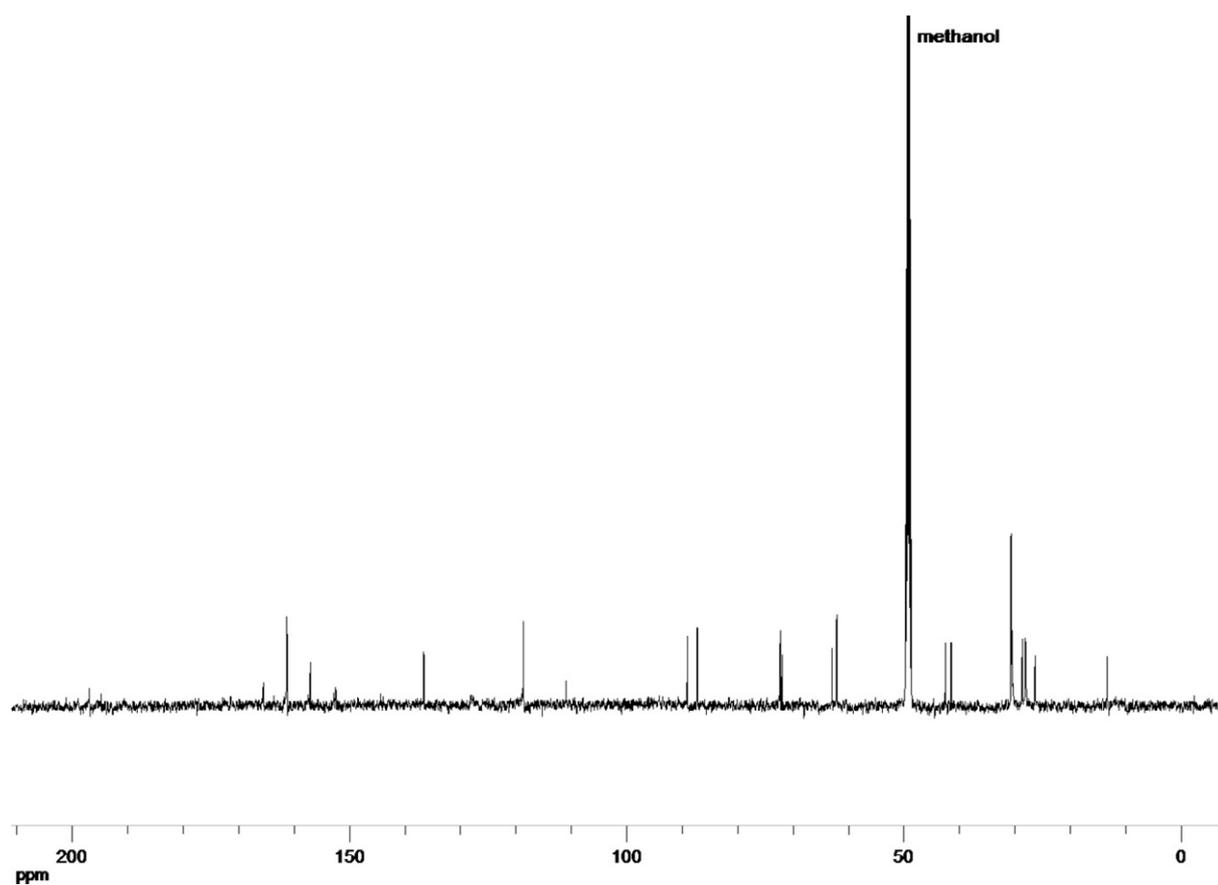
CH COSY  $[\text{Re}(\text{CO})_3(16)]\text{Br}$  **(20)**



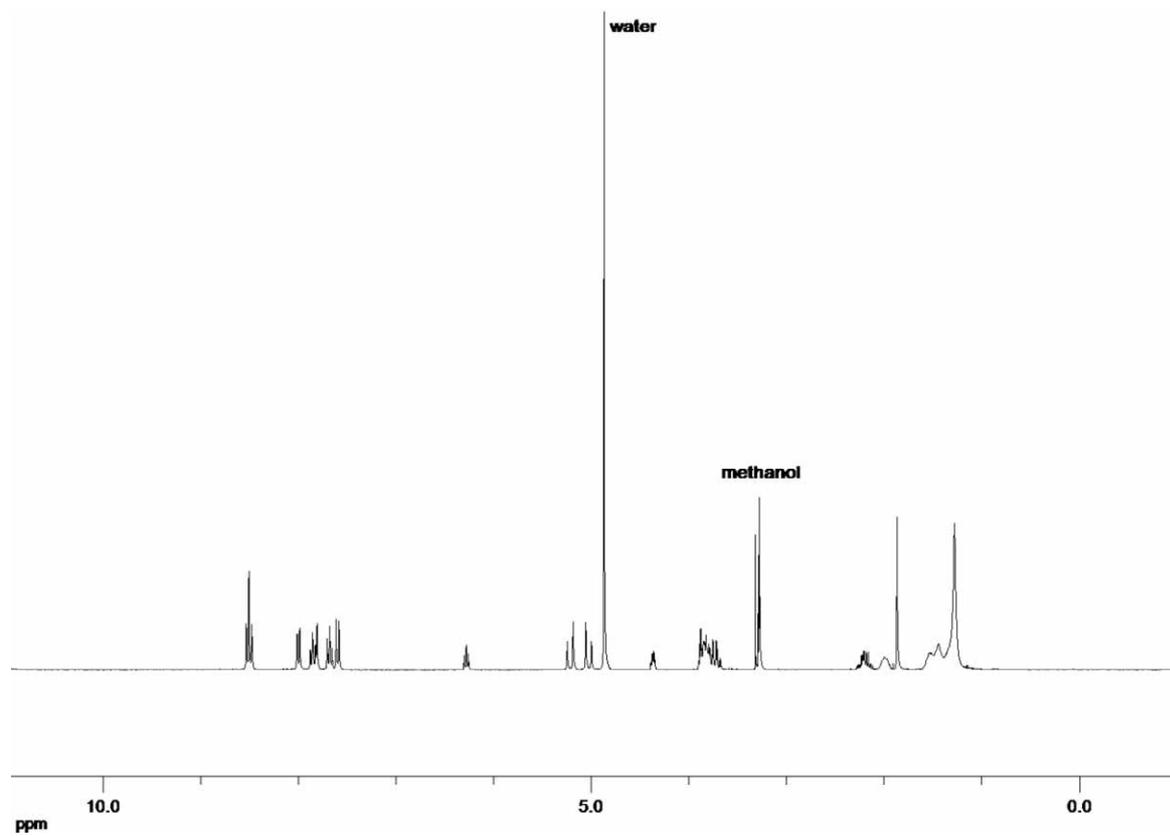
CH long-range COSY  $[\text{Re}(\text{CO})_3(16)]\text{Br}$  (**20**)



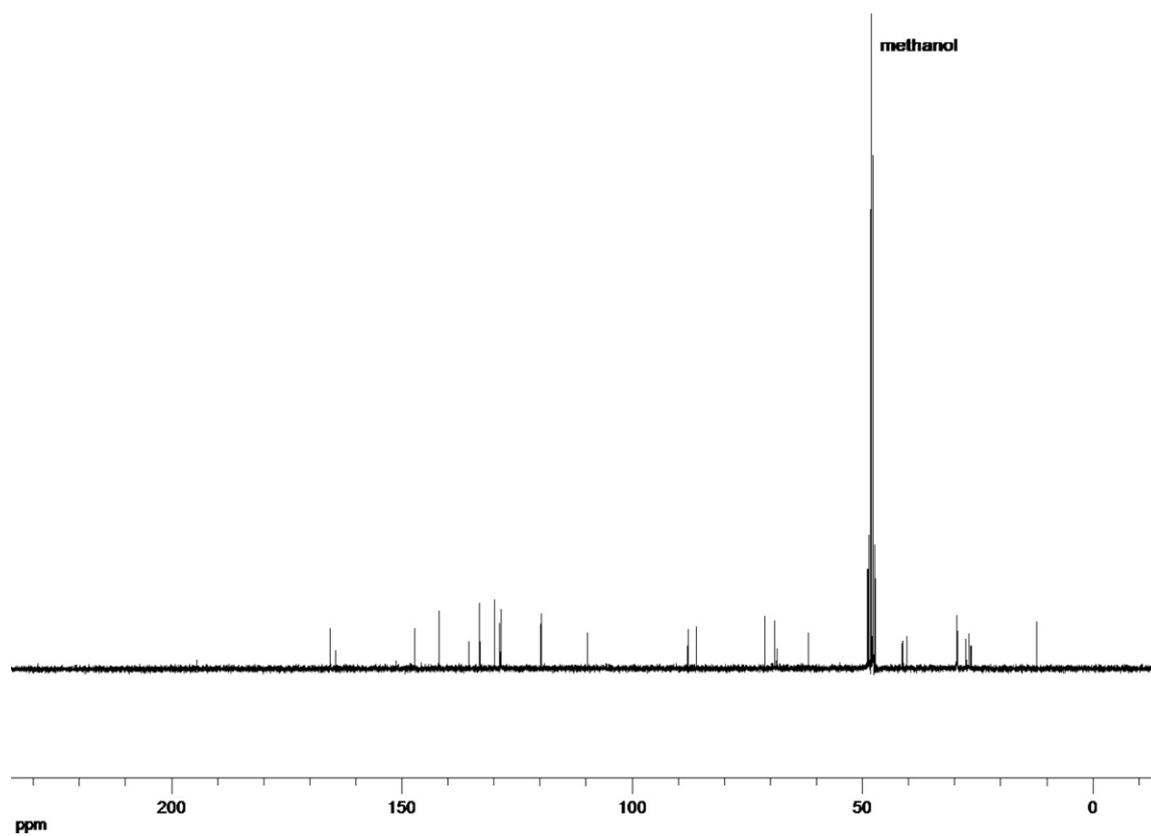
$^1\text{H}$  NMR  $[\text{Re}(\text{CO})_3(17)]\text{Br}$  (**21**)



$^{13}\text{C}$  NMR  $[\text{Re}(\text{CO})_3(17)]\text{Br}$  (**21**)

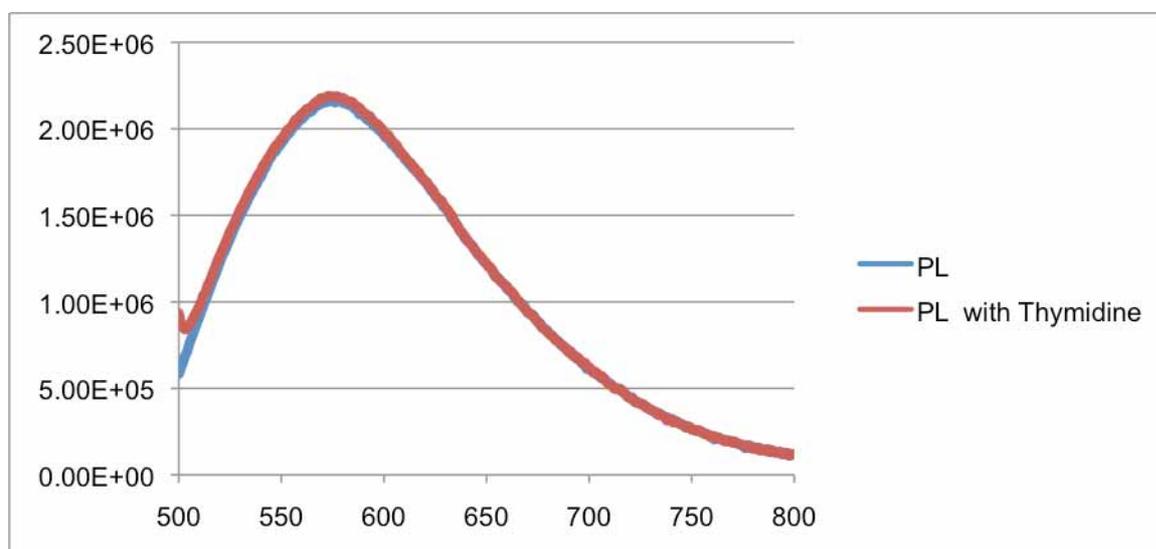


$^1\text{H}$  NMR  $[\text{Re}(\text{CO})_3(18)]\text{Br}$  (**22**)



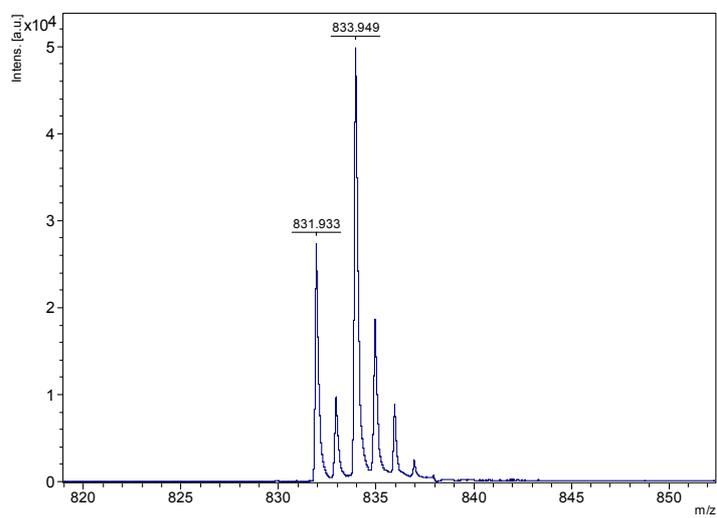
$^{13}\text{C}$  NMR  $[\text{Re}(\text{CO})_3(18)]\text{Br}$  (**22**)

## 2. Emission Spectrum for compound 22.

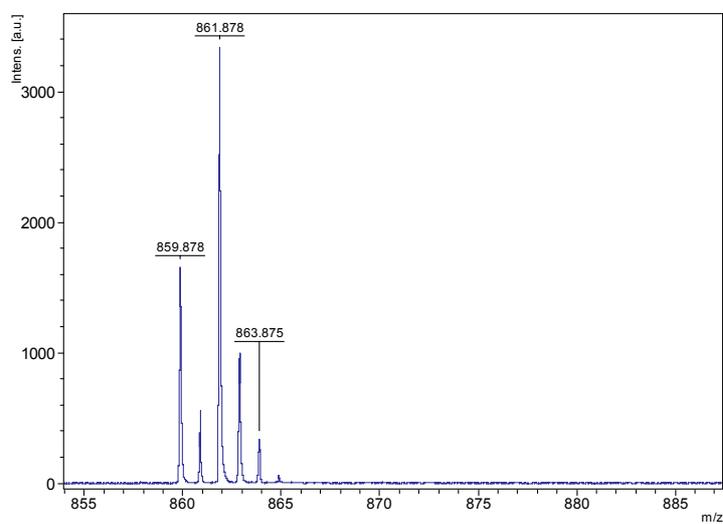


Emission profile of  $[\text{Re}(\text{CO})_3(18)]\text{Br}$  (**22**) excited at 488 nm (blue) and 100-fold dT challenge (red).

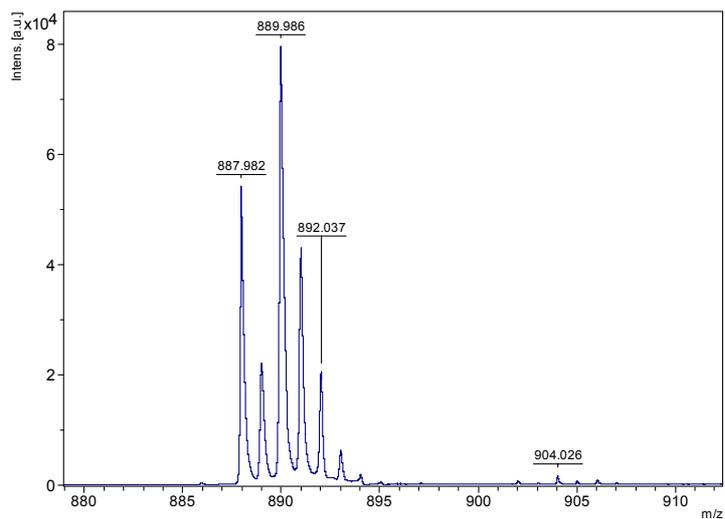
### 3. Mass spectra for 19-22.



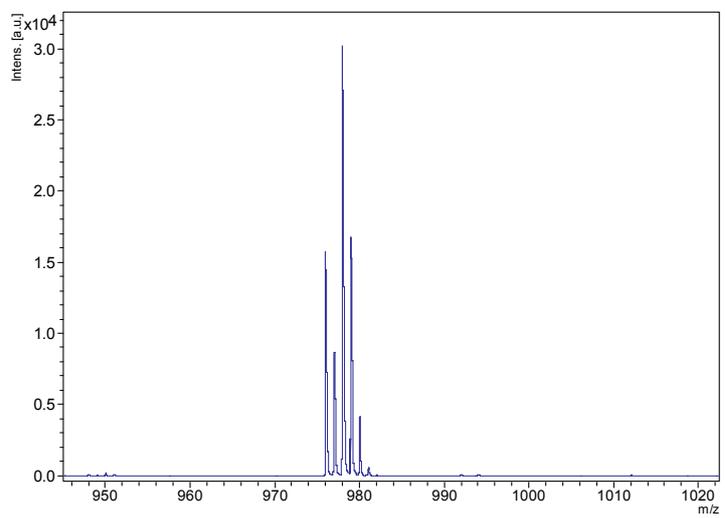
Mass spec  $[\text{Re}(\text{CO})_3(15)]\text{Br}$  (**19**)



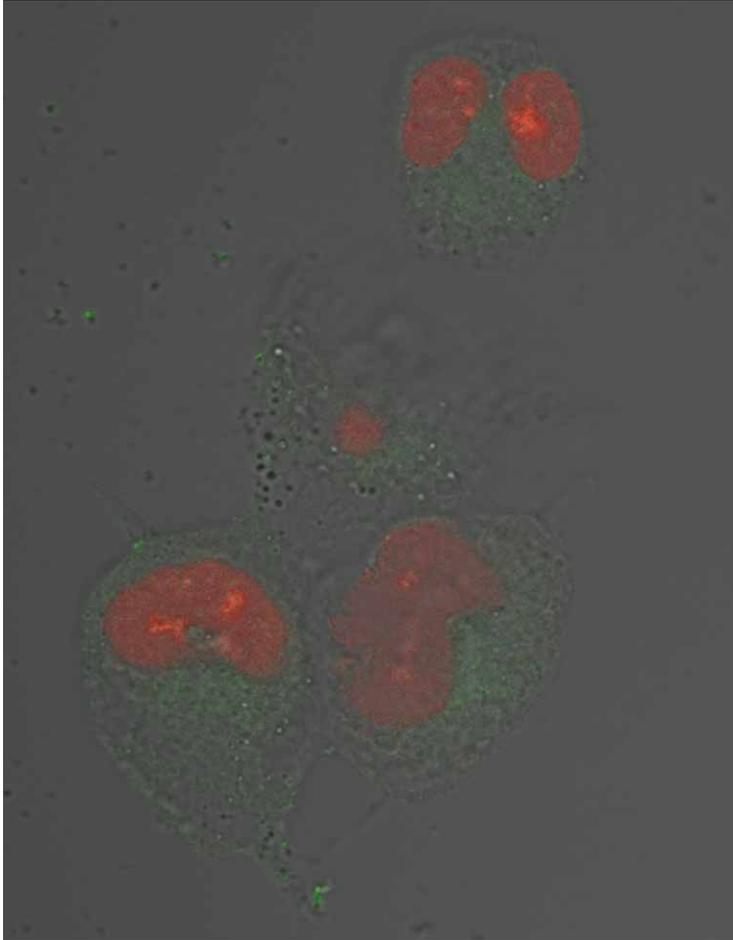
Mass spec  $[\text{Re}(\text{CO})_3(16)]\text{Br}$  (**20**)



Mass spec  $[\text{Re}(\text{CO})_3(17)]\text{Br}$  (**21**)



Mass spec  $[\text{Re}(\text{CO})_3(18)]\text{Br}$  (**22**)



**4.** Nuclear counterstaining of Nuclear-ID Red and **22** indicating no incorporation of **22** into the nucleus.