Supplementary Material

Binding Kinetics of Ruthenium Pyrithione Chemotherapeutic Candidates to Human Serum Proteins Studied by HPLC-ICP-MS

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Table 1S. ICP-MS operating parameters.

Parameter	**Type/Value** **Ru speciation analysis**	**Type/Value** **Analysis of total Ru content**
Sample introduction		
Nebuliser	Miramist	Miramist
Spray chamber	Scott	Scott
Skimmer and sampler	Ni	Ni
Plasma conditions		
Forward power	1550 W	1550 W
Plasma gas flow (Ar)	15.0 L min^{-1}	15.0 L min^{-1}
Carrier gas flow (Ar)	0.45 L min^{-1}	1.05 L min^{-1}
Dilution gas flow (Ar)	0.75 L min^{-1}	/
Make up gas flow (Ar)	/	0.10 L min^{-1}
Total carrier gas flow	1.20 L min^{-1}	1.15 L min^{-1}
He gas flow	4.3 mL min^{-1}	4.5 mL min^{-1}
Omega bias	-110 V	-120 V
Cell entrance	-40 V	-40 V
Cell exit	-60 V	-60 V
Deflect	3.8 V	3.0 V
Plate bias	-60 V	-60 V
Sample uptake rate	1.0 mL min^{-1}	0.3 mL min^{-1}
Data acquisition parameters		
m/z of isotopes monitored	^{99}Ru, ^{101}Ru	^{101}Ru
m/z of internal standards*	^{103}Rh	^{103}Rh
Total acquisition time	1080 s	/

*In speciation analysis, internal standards were not used when the ID-ICP-MS procedure was applied

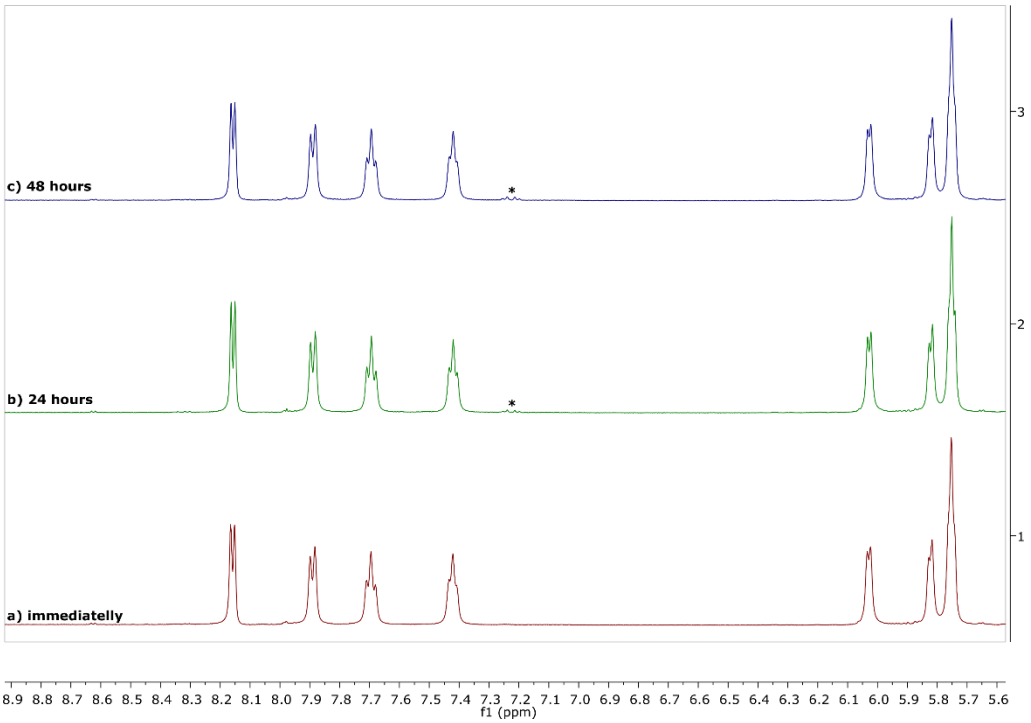

Figure 1. ^{1}H-NMR stability spectra of the chlorido complex (**1**) in 0.3% MeOD-d$_4$/D$_2$O solution containing 154 mM NaCl recorded a) immediately, b) after 24 hours and c) after 48 hours. The release of *p*-cymene is labelled with an asterisk (*).

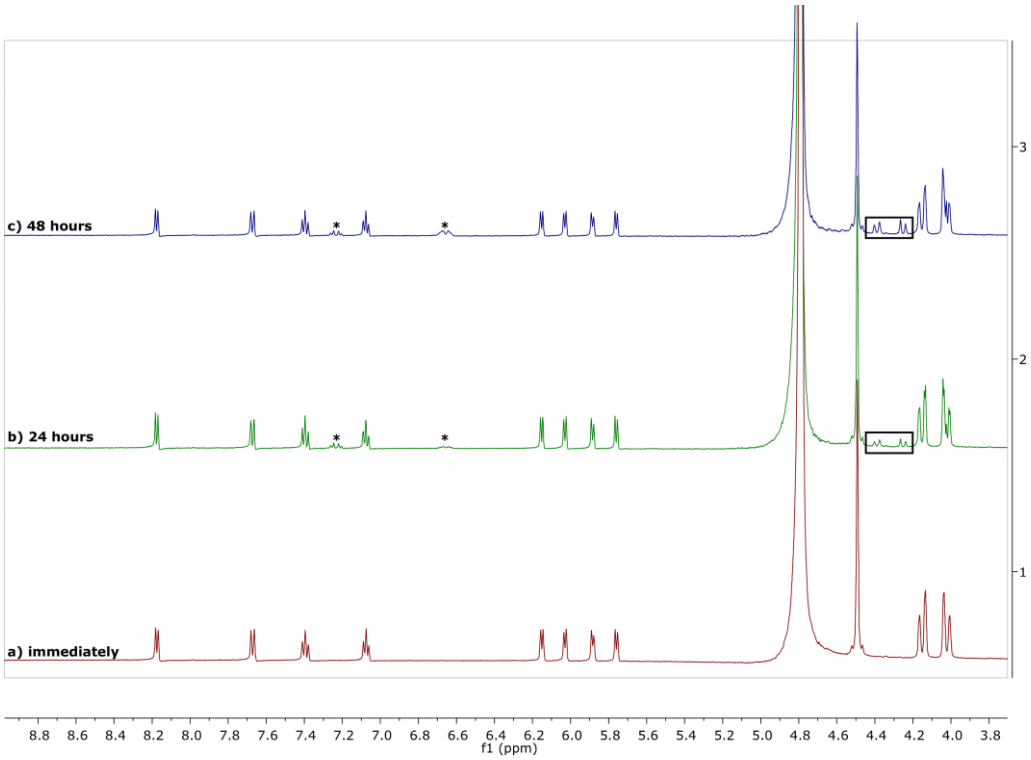

Figure S2: ^{1}H-NMR stability spectra of the pta complex (**2**) in D$_2$O solution containing 154 mM NaCl recorded a) immediately, b) after 24 hours and c) after 48 hours. The release of *p*-cymene is labelled with an asterisk (*) and ptao with squares.

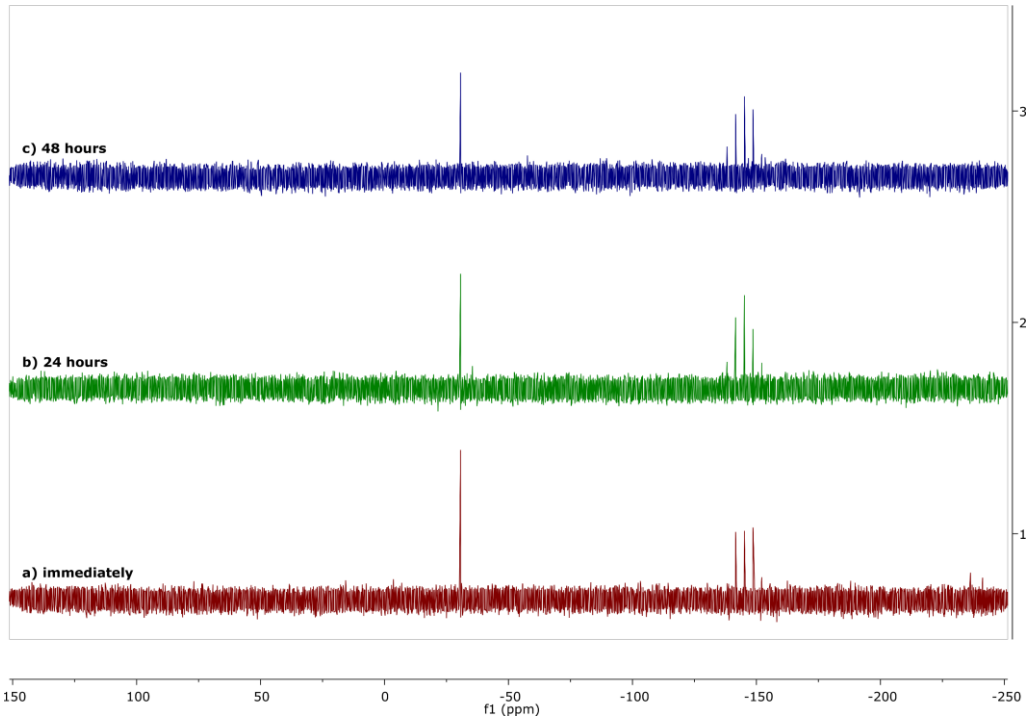

Figure S3: ^{31}P-NMR stability spectra of the pta complex (**2**) in D_2O solution containing 154 mM NaCl recorded a) immediately, b) after 24 hours and c) after 48 hours.