

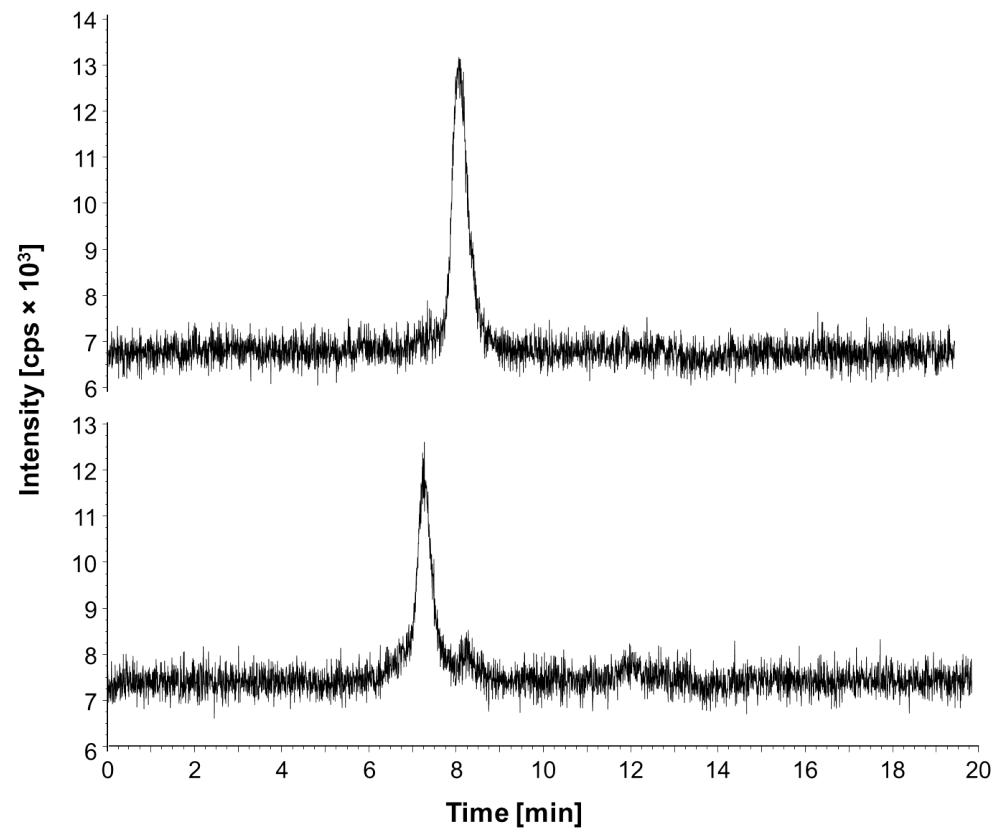
## LC– and CZE–ICP–MS approaches for the *in vivo* analysis of the anticancer drug candidate sodium *trans*-[tetrachloridobis(1*H*-indazole)ruthenate(III)] (KP1339) in mouse plasma

Anna K. Bytzek,<sup>a</sup> Katharina Boeck,<sup>b</sup> Gerrit Hermann,<sup>b</sup> Stephan Hann,<sup>b</sup> Bernhard K. Keppler,<sup>a,c</sup> Christian G. Hartinger,<sup>a,\*</sup> Gunda Koellensperger<sup>b,\*</sup>

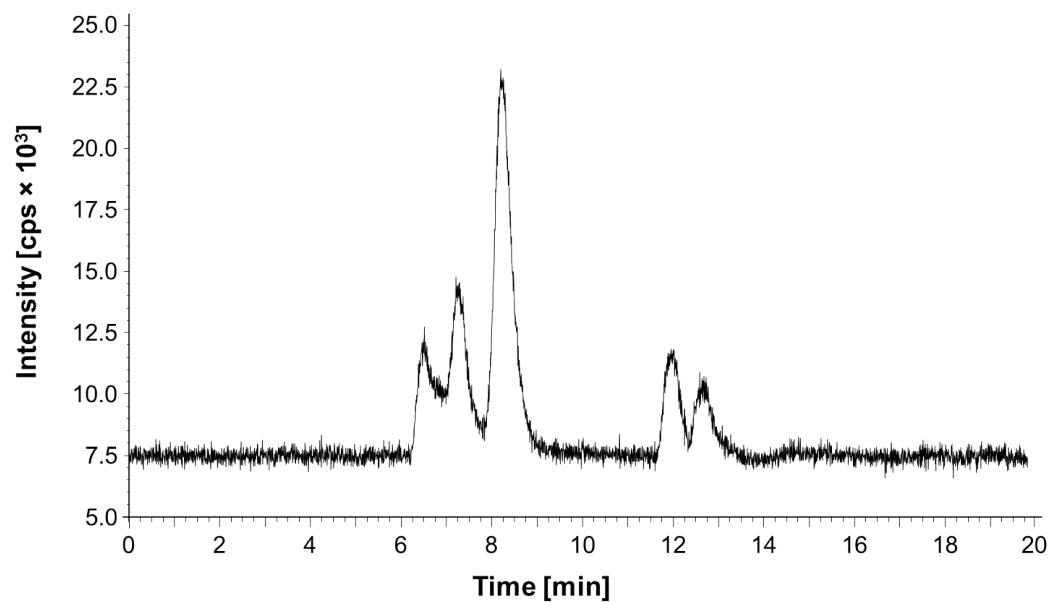
<sup>a</sup> University of Vienna, Institute of Inorganic Chemistry, Waehringer Str. 42, A-1090 Vienna, Austria.

<sup>b</sup> University of Natural Resources and Applied Life Sciences, Muthgasse 18, A-1180 Vienna, Austria.

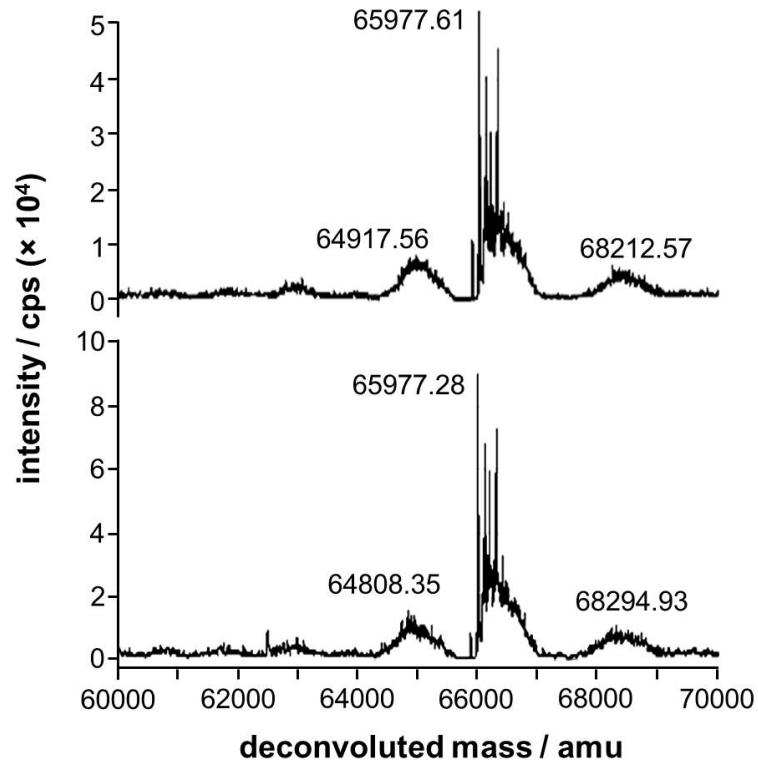
<sup>c</sup> University of Vienna, Research Platform Translational Cancer Therapy Research, Waehringer Str. 42, A-1090 Vienna, Austria.



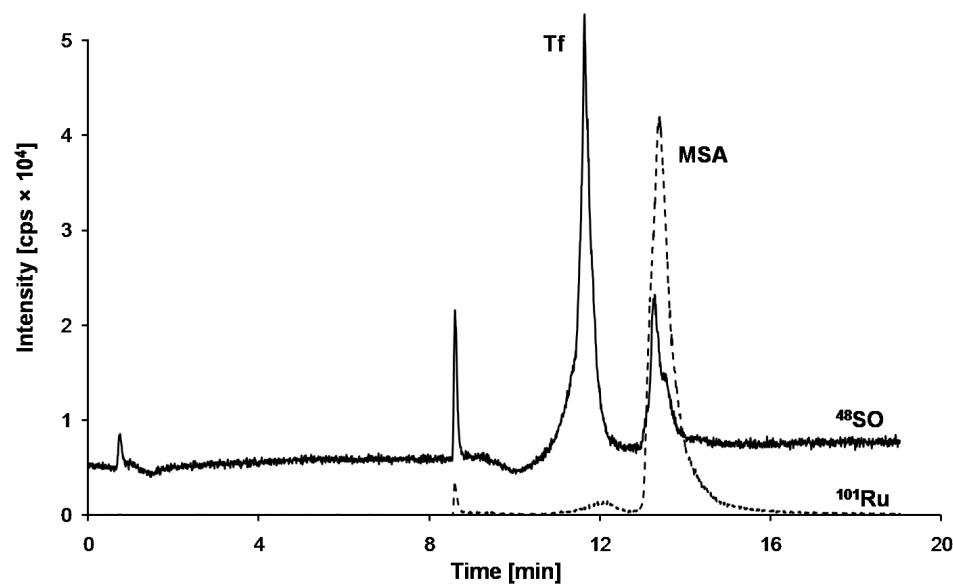
**Figure S1.**  $^{48}\text{SO}$  trace recorded in an offline SEC-SEC-ICPMS run of fractions M60-1\_B (bottom) and M60-1\_C (top)



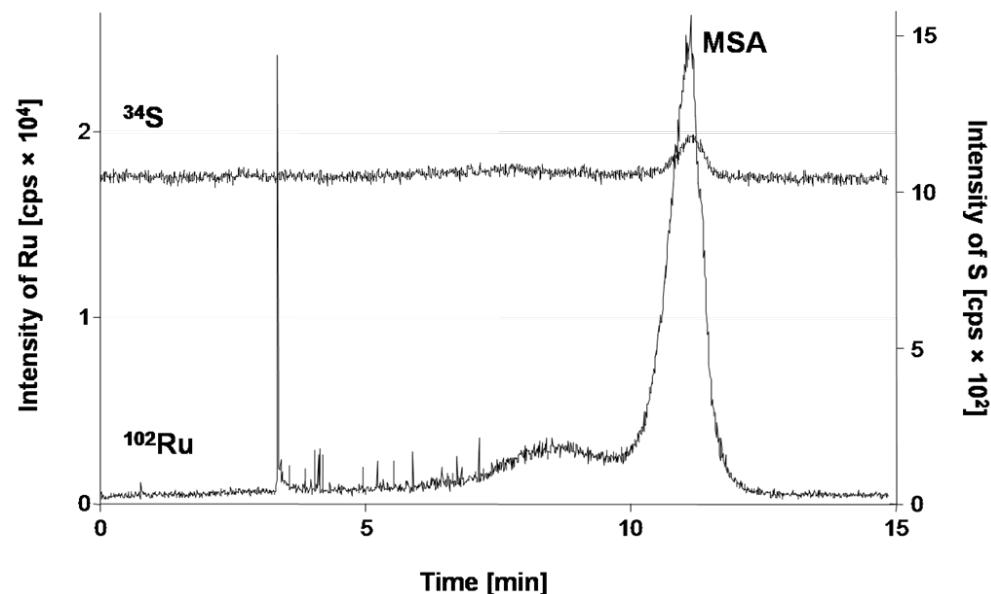
**Figure S2.**  $^{48}\text{SO}$  trace recorded in an off-line SEC-SEC-ICPMS run of fraction M60-1\_A.



**Figure S3.** Deconvoluted masses of intact mouse serum albumin obtained by LC-ESI-TOF-MS determination of fraction M60-1\_A (bottom) and M60-1\_C (top).



**Figure S4.** SEC-IC-ICP-MS determination:  $^{48}\text{SO}$  trace recorded in an HSA/Tf mix standard (concentration 0.45 g/L each, peak at 8 min system peak due to valve switching<sup>26</sup>). The  $^{101}\text{Ru}$  trace shows the SEC-IC-ICP-MS chromatogram obtained for the mouse plasma sample M50-1a.



**Figure S5.** Electropherogram of the mouse plasma sample M40-7a. Shown are the <sup>102</sup>Ru and <sup>34</sup>S traces.

**Table S1.** Comparison of the theoretical and experimentally determined, normalized KP1339/HSA ratios (n = 3).

	KP1339/HSA			
theoretical	0.5	1	2	3
experimental	0.58 ± 0.03	1.09 ± 0.09	2.18 ± 0.28	3.15 ± 0.09