

Supporting Information Connected to the Dalton Trans paper

Synthesis, single-crystal and solution structure analysis and *in vitro* cytotoxic activity of two novel complexes of ruthenium(II) with *in situ* formed flavanone-based ligands.

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Further discussion on ¹H NMR spectra of **1**

Due to observed broad resonance peaks in the ¹H NMR spectrum at room temperature, the influence of temperature was studied and the changes registered by ¹H NMR. This broadness is presumably the result of fluxional behavior or conformational fluctuations by the phenyl and methoxyl rotation. When the temperature was lowered (293 K to 233 K) some signals became increasingly

sharper but still broad (Figure S1). This is not an undoubtedly indication of the presumed conformational fluctuations.

High field peaks were not observed so the presence of paramagnetic Ru(III) ion is discharged.

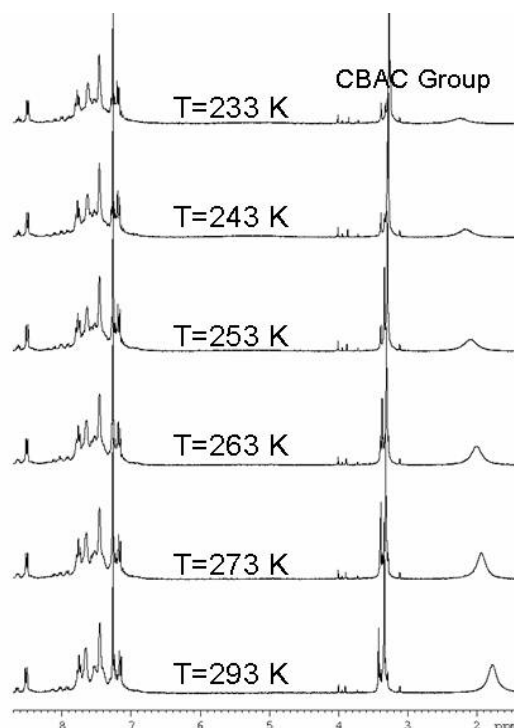


Figure S1. ^1H NMR spectra of **1** as a function of the temperature in CDCl_3 , using TMS as a reference

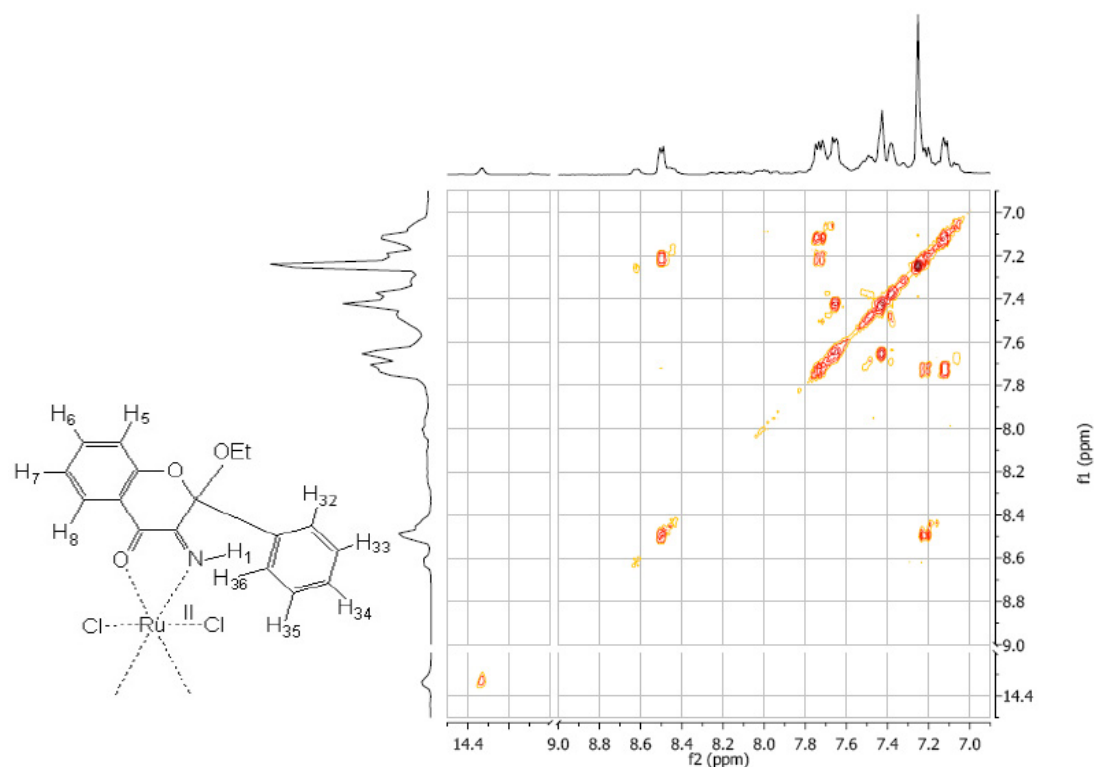


Figure S2. 2D ^1H -COSY spectrum of **2** recorded in CDCl_3 , using TMS as internal standard. Aromatic region only.

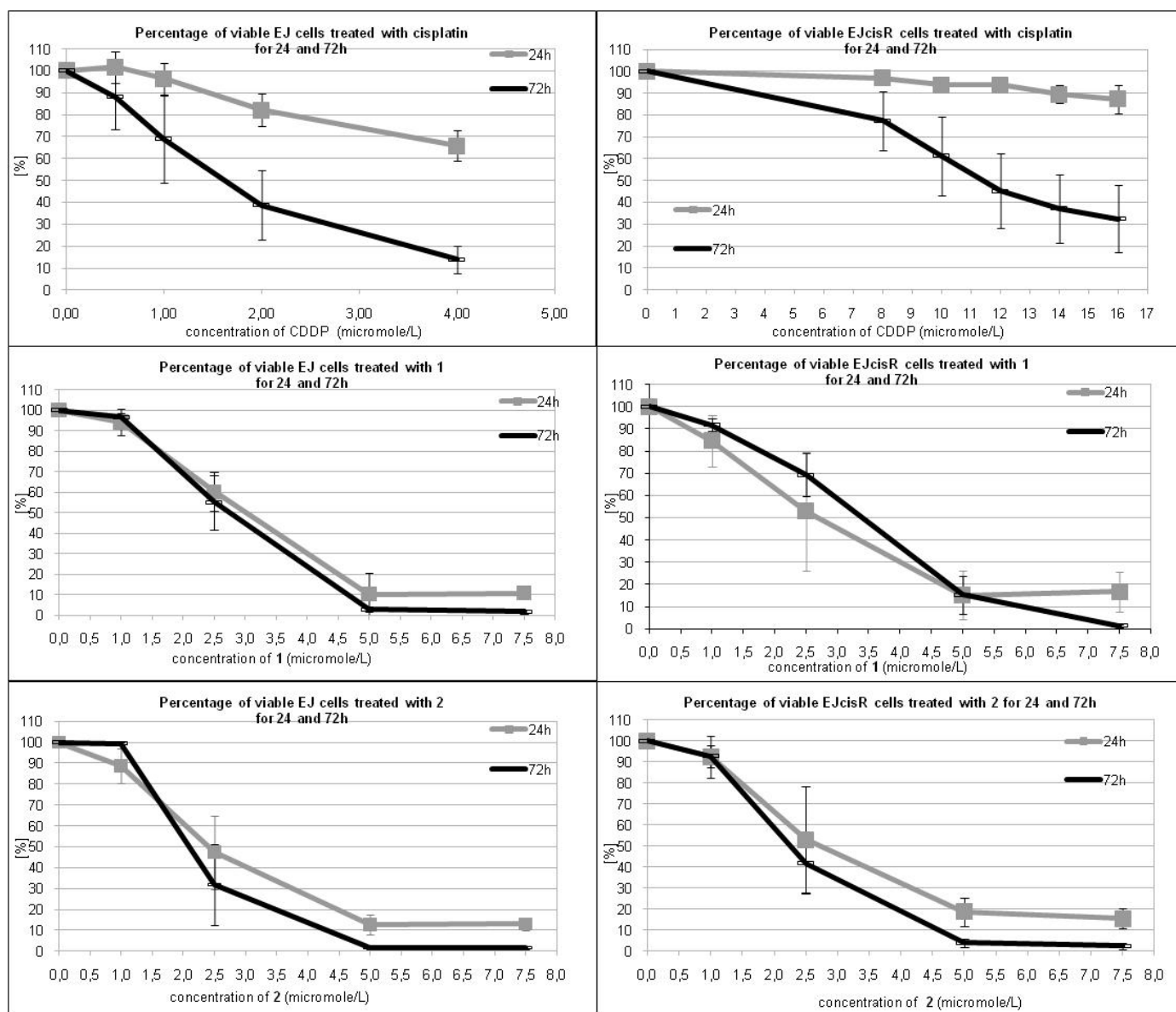


Figure S3. Antiproliferative (cytotoxic) activity of **1**, **2** and cisplatin (CDDP) towards human bladder carcinoma cell lines: EJ and EJcisR after 24 h and 72 h of treatment. Results obtained by means of MTT assay and shown as mean value $\pm$ SD

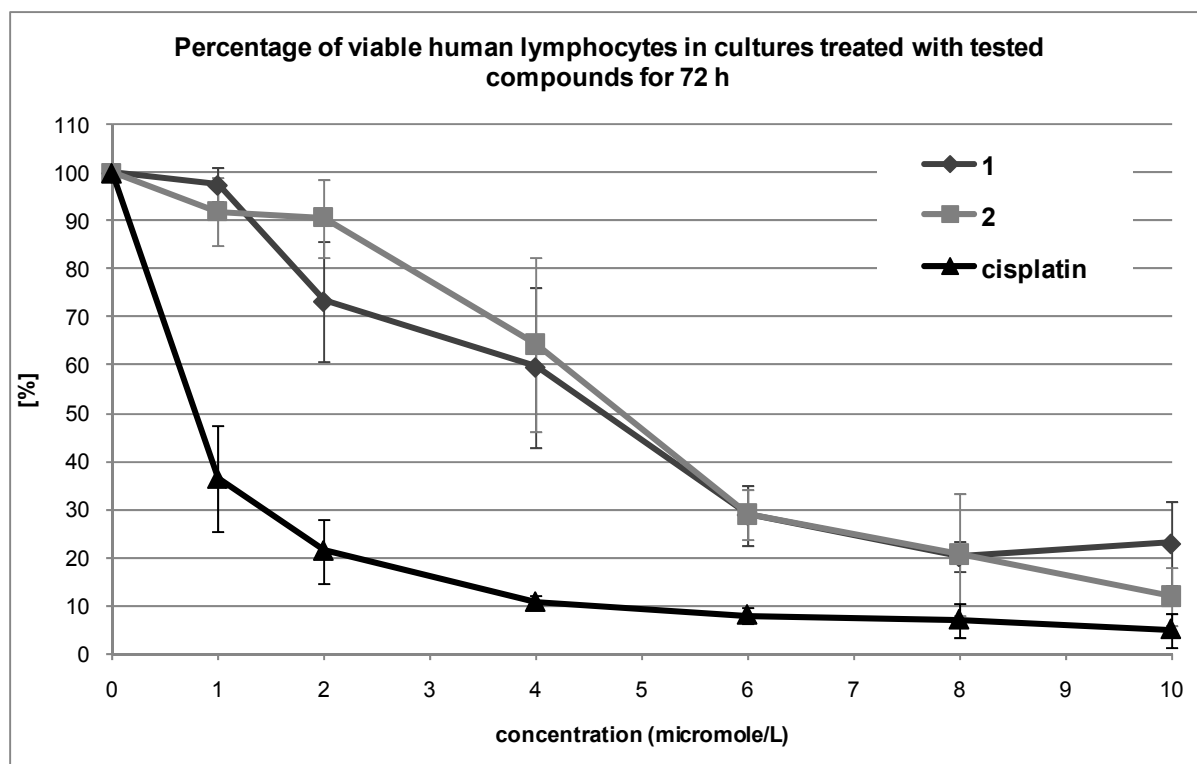


Figure S4. Antiproliferative (cytotoxic) activity of **1,2** and cisplatin (CDDP) towards human lymphocytes after 72h of treatment. Results obtained by means of MTT assay and shown as mean value $\pm$ SD of three experiments.