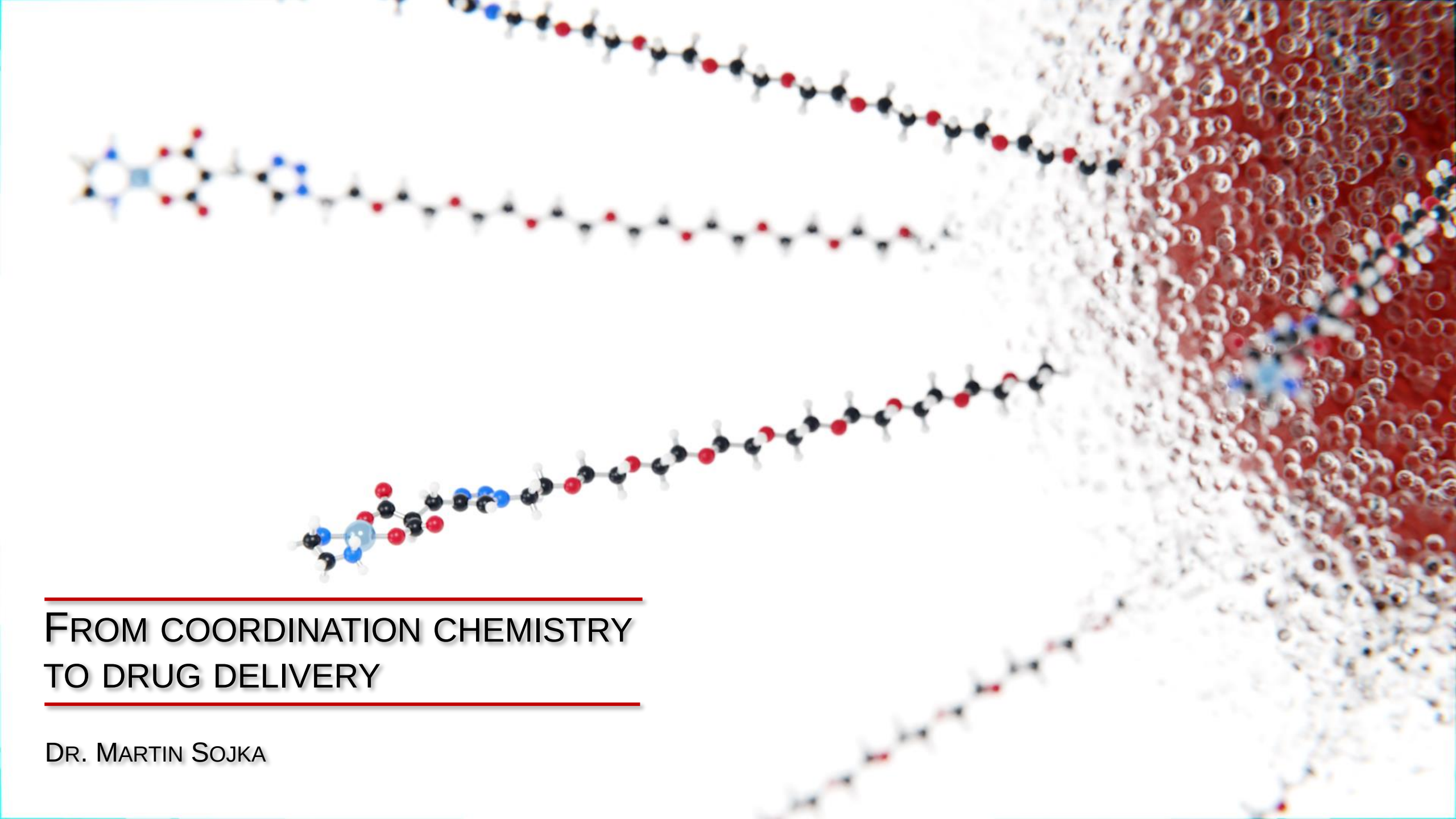
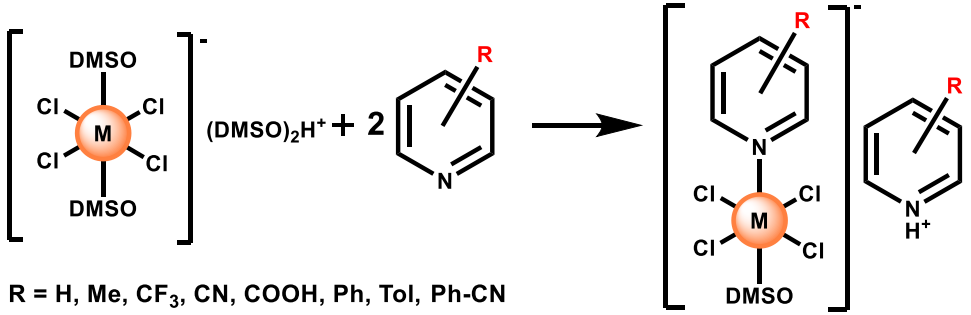


# From coordination chemistry to drug delivery

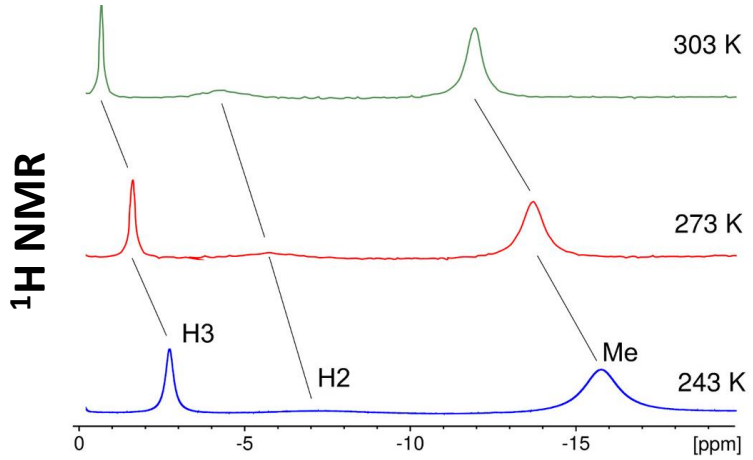
Dr. Martin Sojka

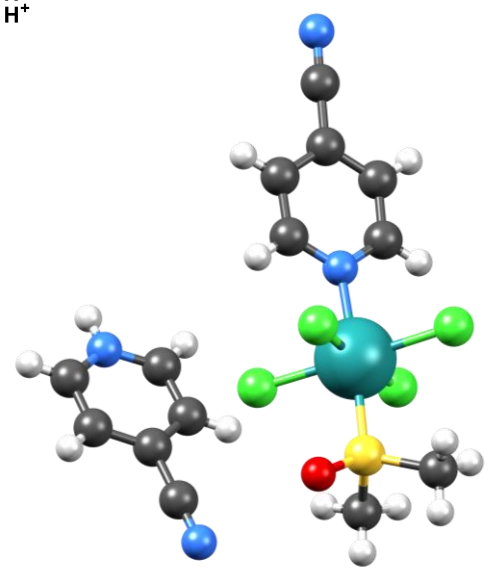
# PUBLISHED WORK

- **NAMI-A Ru(III) and Rh(III) analogs and paramagnetic NMR**

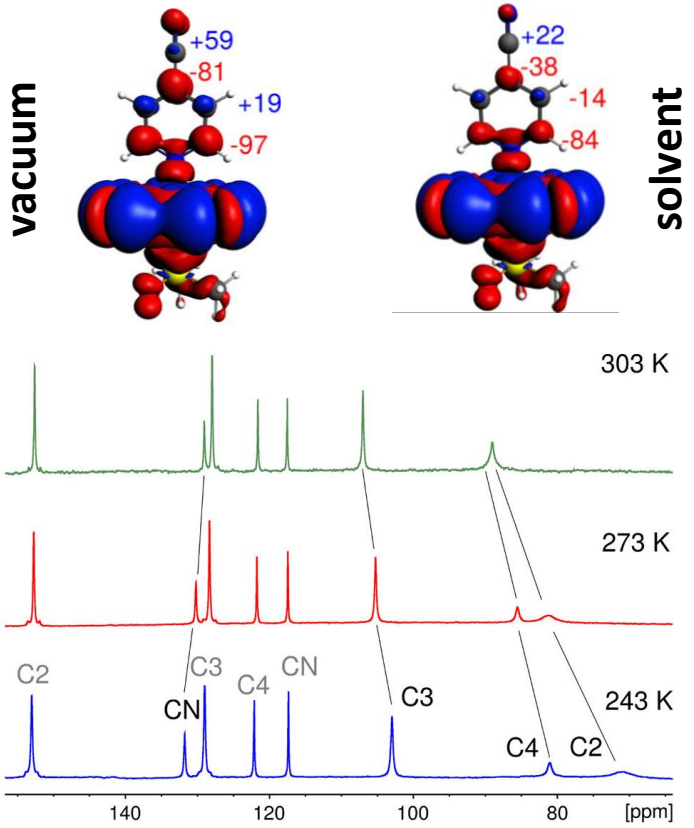



R = H, Me, $CF_3$, CN, COOH, Ph, Tol, Ph-CN
M = Ru, Rh



- Temperature-dependent effect of unpaired electron of Ru(III) on $^{1}H$ and $^{13}C$ NMR shifts

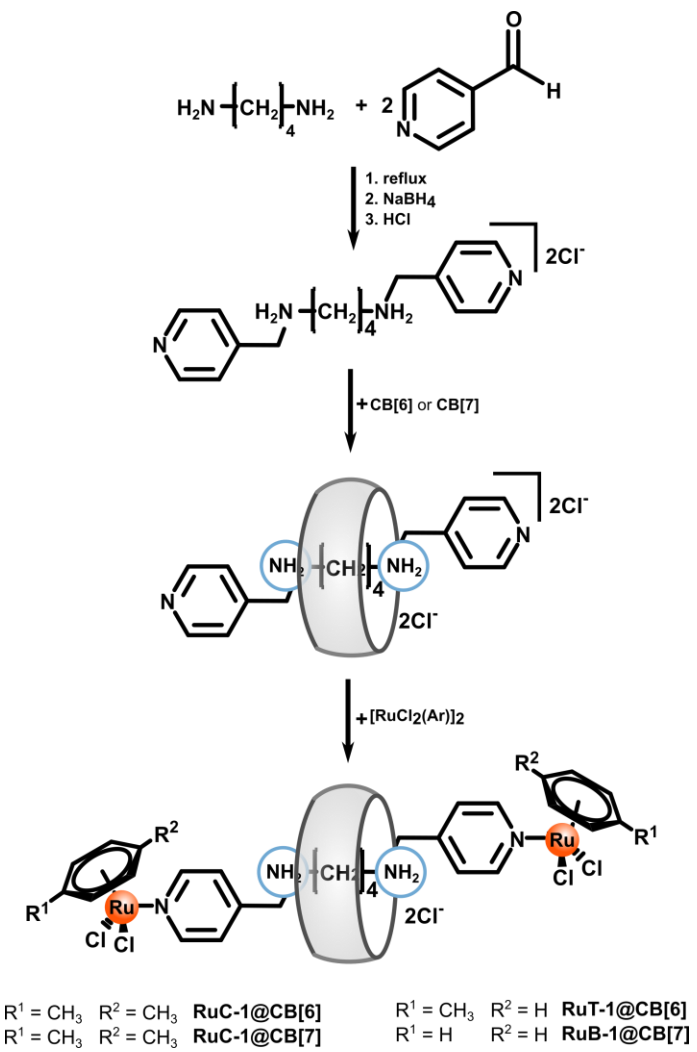




Novotny, J.; **Sojka, M.**; Komorovsky, S., Necas, M.; Marek. R. Paramagnetic NMR Spectra of Ru(III) Metallodrugs. *J. Am. Chem. Soc.* **2016**, 138, 8432.

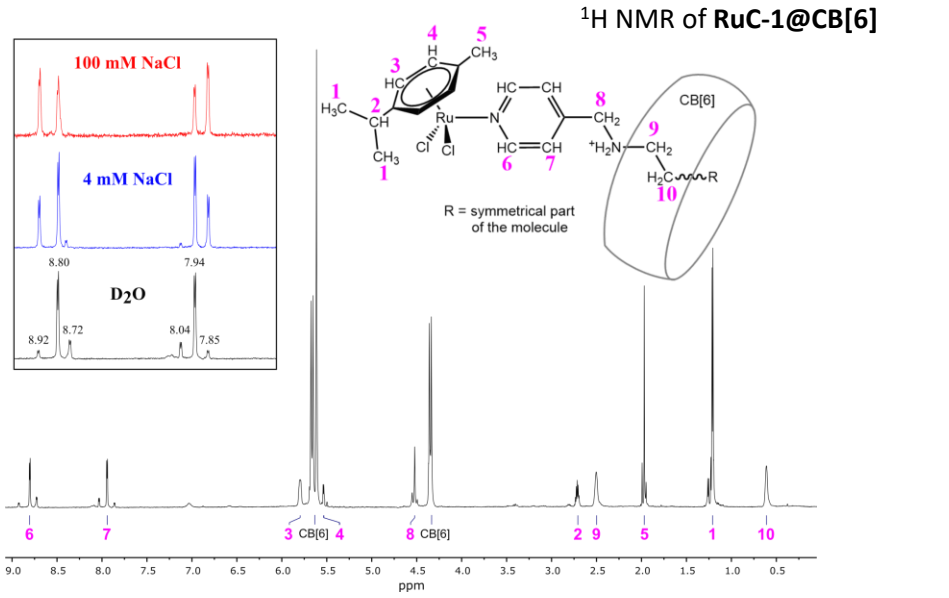
Novotny, J.; Prichystal, D.; **Sojka, M.**; Komorovsky, S., Necas, M.; Marek. R. Hyperfine Effects in Ru(III) Complexes. *Inorg. Chem.* **2018**, 57, 641.

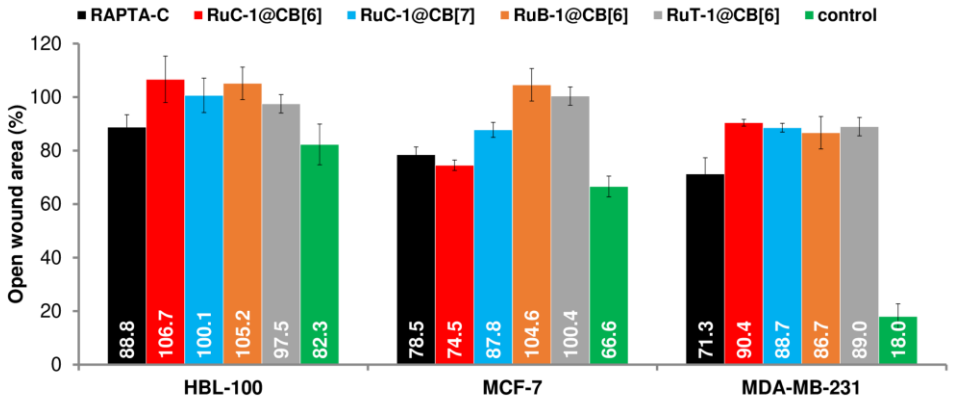
# PUBLISHED WORK



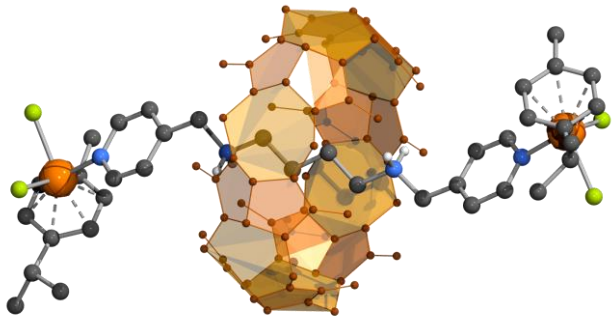

$R^1 = CH_3$ $R^2 = CH_3$ **RuC-1@CB[6]**
$R^1 = CH_3$ $R^2 = CH_3$ **RuC-1@CB[7]**
$R^1 = CH_3$ $R^2 = H$ **RuT-1@CB[6]**
$R^1 = H$ $R^2 = H$ **RuB-1@CB[7]**

$^1$H NMR of **RuC-1@CB[6]**

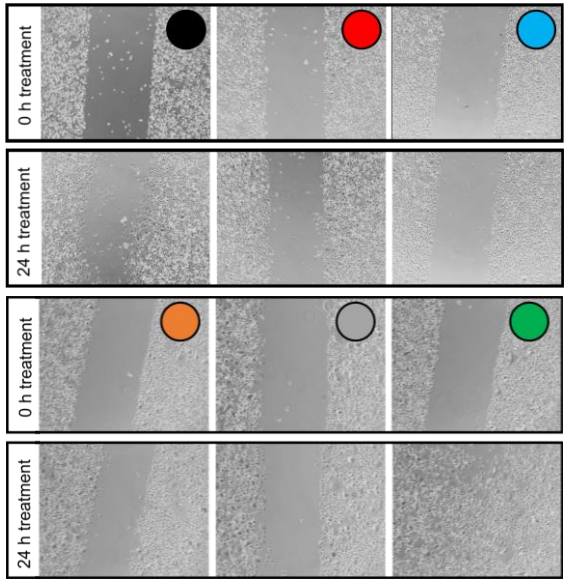



- **Supramolecular Ru metallodrugs**

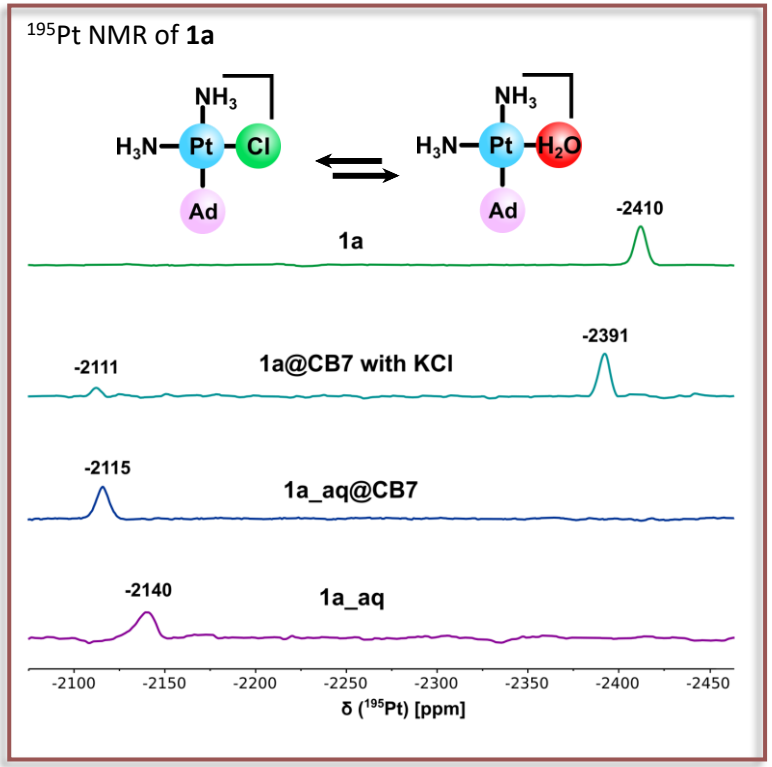


X-ray of **RuC-1@CB[6]**

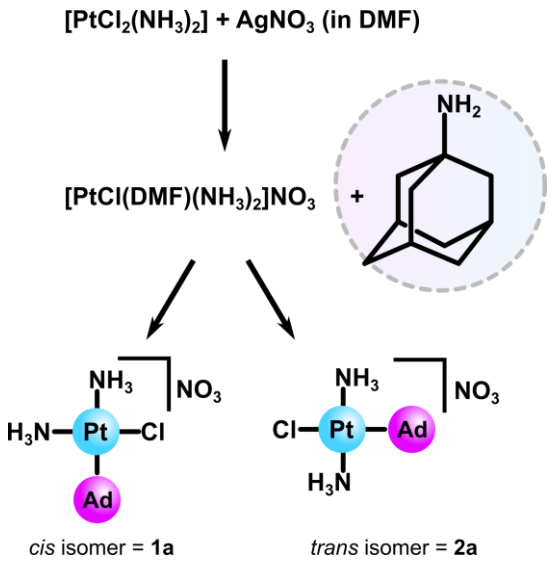


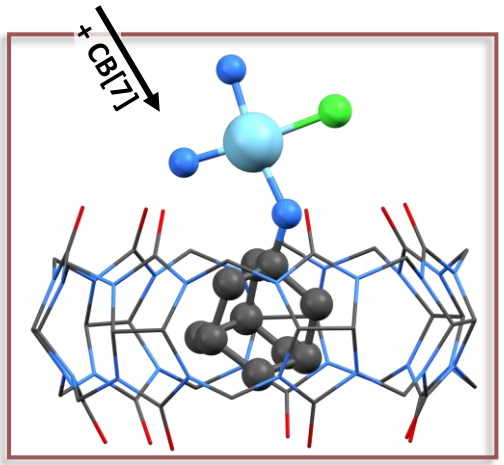

**Sojka, M.**; Fotu, M.; Fialova, J.; Masarik, M.; Necas, M.; Marek, R. Ru antimetastatic rotaxanes. *Inorg. Chem.* **2019**, 58, 10861.

# PUBLISHED WORK

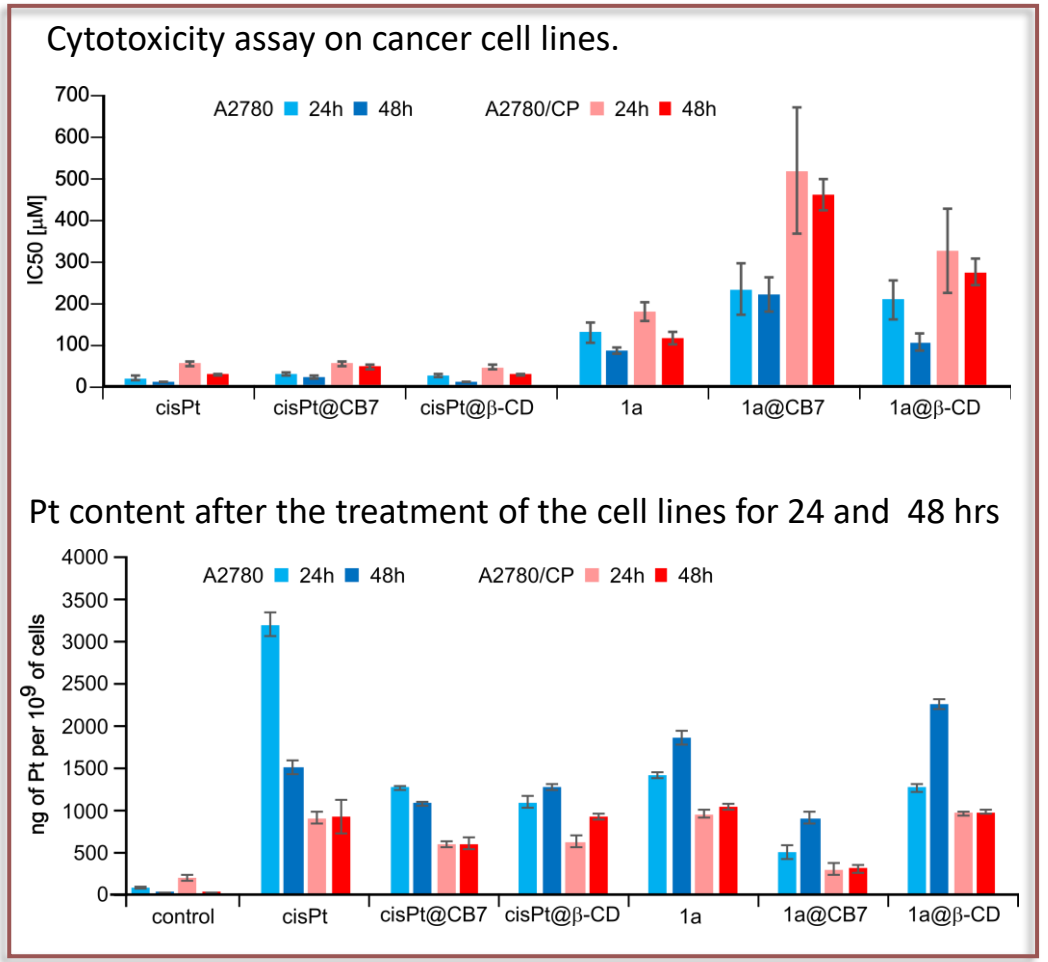



| ITC Binding Constant ($M^{-1}$) of **2a** | |
|---|---|
| $\beta$-CD | CB[7] |
| $4.69 \pm 0.13 \times \mathbf{10^4}$ | $7.26 \pm 0.40 \times \mathbf{10^{10}}$ |




- **Supramolecular Pt(II) metallodrugs**




**Sojka, M.**; Chyba, J.; Paul, S. S.; *et al.* Supramolecular Pt anticancer agents. *Inorg. Chem.* **2021**, 60, 17911.

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UNIVERSITAT DE BARCELONA


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**Sojka, M.**; Fotu, M.; Fialova, J.; Masarik, M.; Necas, M.; Marek, R. Ru antimetastatic rotaxanes. *Inorg. Chem.* **2019**, 58, 10861.

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# THANK YOU FOR YOUR ATTENTION!