

# Is the Reactivity of M(II)–Arene Complexes of 3-Hydroxy-2(1*H*)-pyridones to Biomolecules the Anticancer Activity Determining Parameter?

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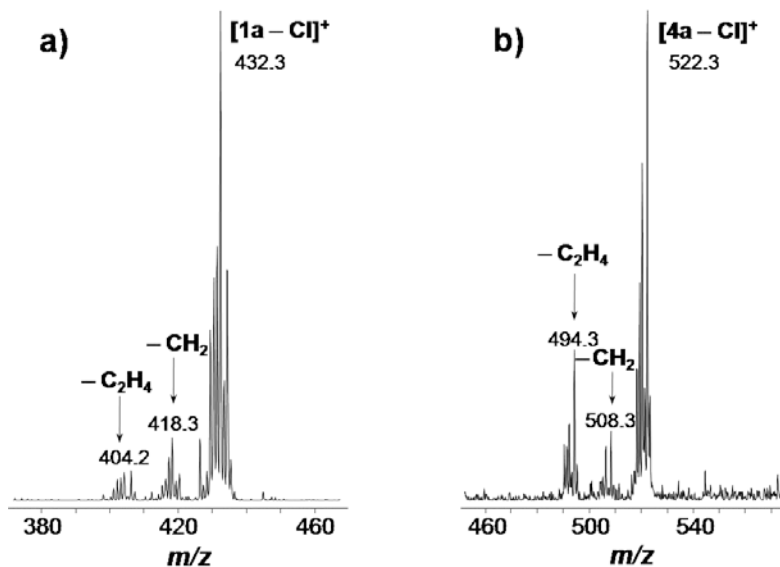
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Mass spectra and data for hydrolysis and amino acid binding studies

Molecular structure of **5a**

Concentration–effect curves of **1a**, **1b** and **4a** in CH1 ovarian cancer cells

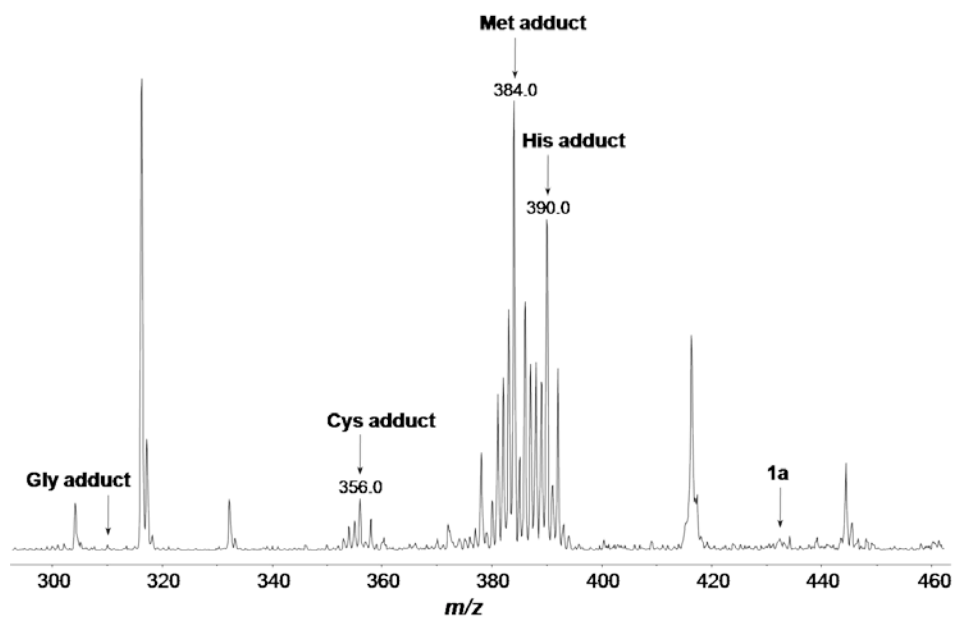
CDK2/Cyclin A kinase assay data



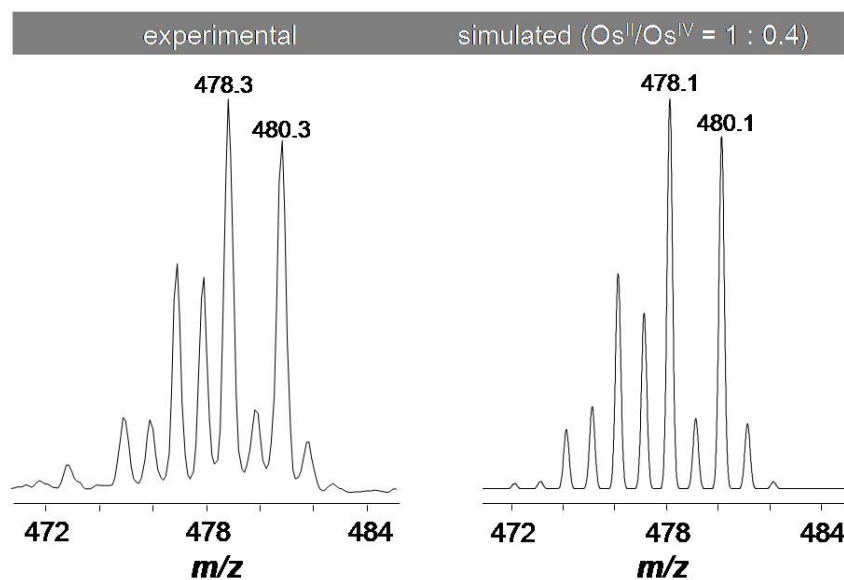
**Figure S1.** Electrospray ionization mass spectra for transesterification and hydrolysis of the ester moieties of (a) **1a** and (b) **4a** in presence of methanol and formic acid.

**Table S1.** In competitive experiments, **1a** and **4a** were incubated with Gly, His, Cys and Met at a molar ratio of 1 : 1 : 1 : 1 : 1 for 19 h and reaction mixtures were analyzed by ESI-MS (all  $m/z$  values contain standard deviations of  $\pm 0.1$ ).

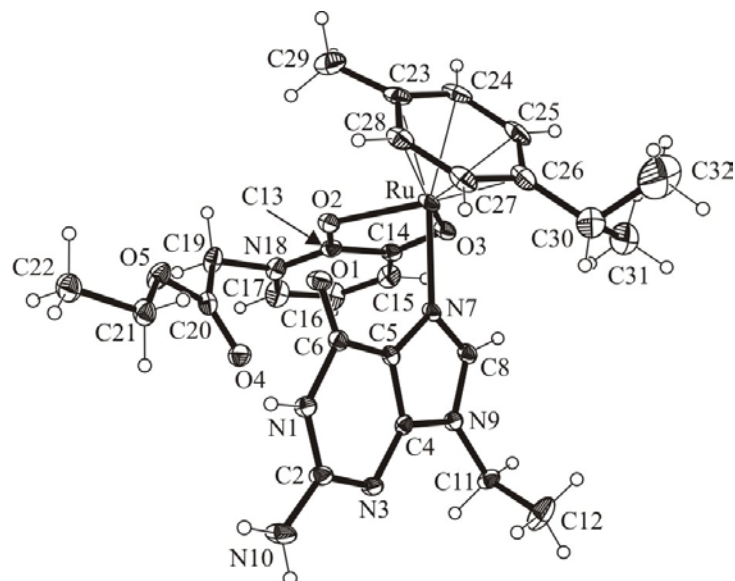
Species	Relative abundance (%)		$m/z$	
	1a	4a	1a	4a
Met adduct	100	100	384.0	474.3
His adduct	66	96	390.0	480.3
Cys adduct	8	57	356.0	446.3
Gly adduct	1	0	310.0	400.2
<b>1a</b>	8	-	432.3	-
<b>4a</b>	-	0	-	522.3



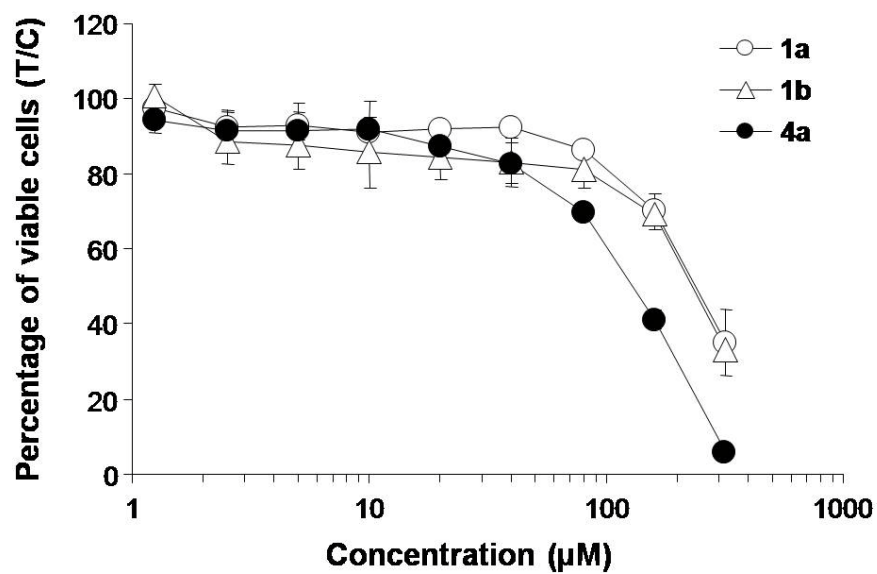
**Figure S2.** ESI mass spectrum for the competitive reaction of **1a** with Gly, His, Met and Cys.



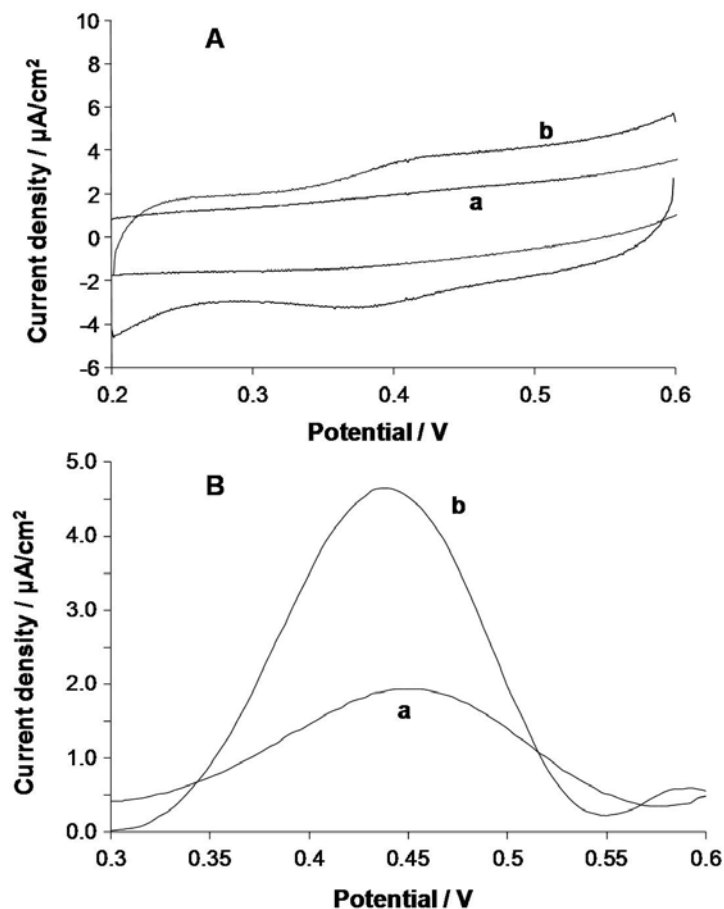
**Figure S3.** Redox processes observed in the mass spectrum of **4a/His**.



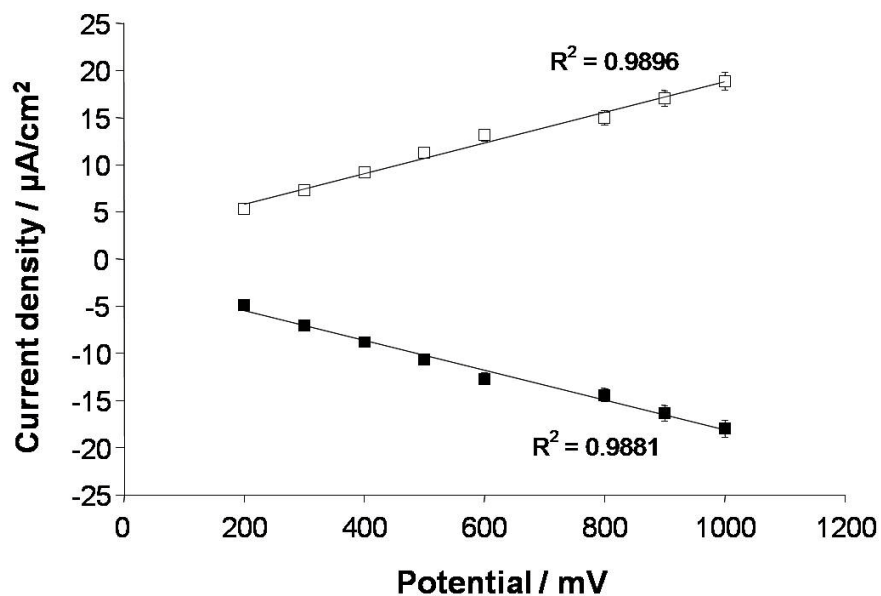
**Figure S4.** ORTEP plot of **5a** at 50% probability level.



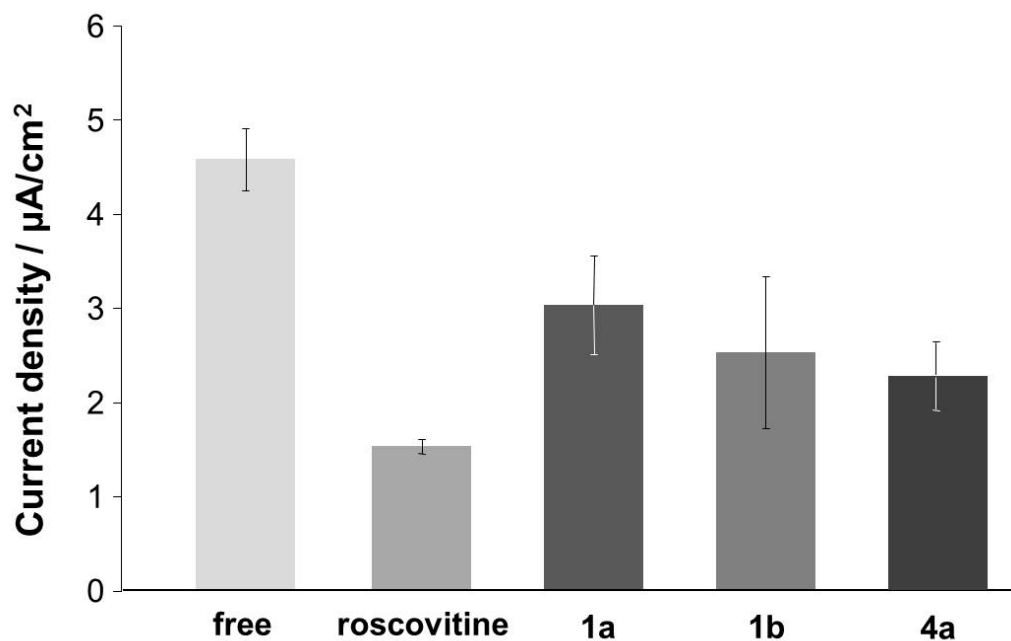
**Figure S5.** Concentration–effect curves of **1a**, **1b** and **4a** in CH1 ovarian cancer cells in the MTT assay (96 h exposure). Values are the means  $\pm$  standard deviations from three independent experiments.



**Figure S6.** Cyclic voltammograms (A) and square-wave voltammograms (B) of 100  $\mu\text{M}$  substrate peptide-modified Au surface electrodes for detection of CDK2/Cyclin A kinase (1  $\mu\text{g}/\text{ml}$ ) phosphorylation reactions. (a) in the presence of roscovitine (20  $\mu\text{M}$ ) and (b) in the absence of roscovitine. Measurements were taken in 0.1 M phosphate buffer solution (pH 7.4) versus Ag/AgCl as reference electrode and Pt wire as counter electrode at 100 mV/s.



**Figure S7.** Plot of anodic and cathodic current density vs. scan rate in CDK2/Cyclin A kinase assay.



**Figure S8.** Plot for dependence of integrated current density in CDK2/Cyclin A kinase assays as a function of inhibitor type (inhibitor concentration = 20  $\mu\text{M}$  in kinase buffer, 100 mV/s, 0.1 M phosphate buffer pH 7.4, triplicate measurements).