

NEW BINUCLEAR PLATINUM COMPLEX WITH PROMISING ANTINEOPLASIC ACTIVITY

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An important parameter in cancer chemotherapy consists in multi-drug resistance (MDR) evaluation. Generally, the MDR phenomenon is characterized by a range of mechanisms, including mutation, over-expression of some proteins that circumvent the drug activity, drug inactivation due to pump efflux over-expressed which promotes high rates of drug elimination from the tumor cell. Several strategies have been studied with order to overcome the resistance, as well as the use of multinuclear complexes systems.² In this work was synthesized and characterized the new binuclear platinum complex; and evaluated its antitumor activity through of *in vitro* assay. The platinum complex was codified as AWM. The complex synthesis showed high yields (99%) and synthetic reproducibility. The *in vitro* assay is shown in Table 1.

Table 1. Results obtained from the cytotoxicity assay of the compounds: cisplatin, oxaliplatin, doxorubicin and AWM, against some strains of human tumor cells.

Compound	% of inhibition									
	NCI-H292	SD**	HEP-2	SD	HT-29	SD	MCF-7	SD	HL-60	SD
CDDP*	100,0	0,33	65,29	1,11	***	***	42,79	0,10	100,0	0,61
Oxaliplatin	35,6	1,5	33,7	3,7	36,1	1,2	12,2	0,6	72,3	2,0
Doxorubicin	94,1	1,9	79,4	2,6	74,7	2,1	92,7	0,6	64,1	1,1
AWM	96,6	0,3	90,7	0,8	44,5	0,2	92,8	1,6	96,5	0,8

* CDDP = cisplatin; ** SD = standard deviation; ***no activity.

The synthetic method of the compound coded as AWM is described in BR1020160001005. According to the results, the AWM complex is promising for antineoplastic treatment.³

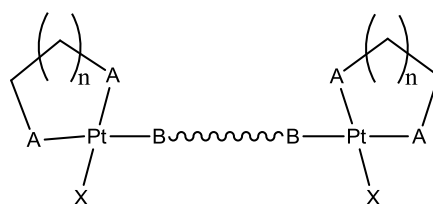


Figure 1. General structural formula of AWM complex.

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2. Manzotti, C., *et al.*, Clin. Cancer Res. 2000, 6(7), 2626-2634.
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