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New 1, 2, 5-oxadiazole Pt(II)complex endowed with STAT3 inhibitory properties as promising anticancer agent

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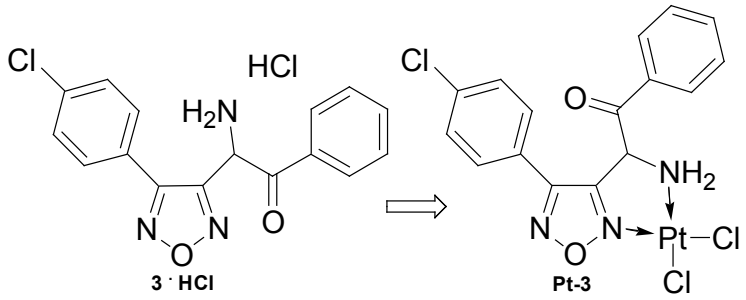
During our ongoing studies, focused on the identification of novel potential anticancer agents inhibiting STAT3 (Signal Transducer and Activator of Transcription 3)1, we synthesized some new 1,2,5-oxadiazole ligands for Pt (II) complexes formation2. In particular ligand 3·HCl exhibited cytotoxicity on HCT116 cells (IC50 = 95.2 μM) and a selective interaction with STAT3 (IC50 = 8.2 μM) respect to STAT1 (IC50> 30 μM). The related platinum complex Pt-3 showed an increased cytotoxic effect (IC50 = 18.4 μM) and a higher interaction with STAT3 (IC50 = 1.4 μM). Noteworthy Pt-3, tested on syngeneic murine Lewis lung carcinoma (LLC) implanted in C57BL/6 mice, exhibited an interesting antitumor activity with fewer side effects than cisplatin.



Biography

Arianna Gelain graduated in Medicinal Chemistry and Technology and achieved her PhD degree in Medicinal Chemistry at University of Milan. She is researcher at Departement of Pharmaceutical Science and assistant professor at faculty of pharmacy. She is co-author of 31 papers, 6 reviews, published in peer reviewed journals and 1 book chapter.

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