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Polymer-metal conjugates: Versatile scaffolds for the synthesis of new antitumor drugs

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Polymer-metal conjugates have been widely used in several areas such as pollution control, hydrometallurgy, polymer grafts, water- and waste water-treatment, industrial processes, between others. More recently an interest towards these scaffolds has been growing in the area of medicinal chemistry due to their chemical versatility. This is especially relevant for targeted cancer therapy where multifunctional compounds are many times needed in order to increase selectivity towards cancer cells, while decreasing the side effects. In this frame a new family of polymer-metal conjugates comprising macro ligands based on the biocompatible and biodegradable polylactide and polyethylene glycol will be presented. Their anticancer properties will be shown by means of cellular viability, apoptosis, autophagy, proliferation, *in vitro* drug internalization and release studies and ultrastructure analysis of cells. Preliminary *in vivo* studies for the lead polymer-metal conjugate will be also discussed.

Biography

Andreia Valente obtained her PhD in 2010 from the Université de Lille I (France) in the field of Polymerization Catalysis. Since 2013, she is an Assistant Researcher at the BioOrganometallic Group at Faculty of Sciences, University of Lisbon (Portugal), where she develops her independent research based on new polymer-metal complexes as targeted drug-delivery systems in view to cancer therapy. She has published about 20 papers in reputed journals, is a Fulbright awardee, is member of the Royal Society of Chemistry and participates actively in European networks.

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