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Multitarget Inhibitors as anticancer agents with oncoimmunomodulatory properties**Raquel Gil-Edo***Jaume I University , Spain*

Solid tumours are no longer understood as isolated masses of mutant cells, more and more recent studies show that, it is composed by a dynamic network of tumour and stromal cells, and macromolecules, that all together forms the tumour microenvironment (TME).¹ In last few years, the role of immune system in tumour evolution after the infiltration of immune cells, such as Dendritic Cells (DC), Natural Killer cells (NK), macrophages or T cell among others, in TME has been largely studied. Thereby, Programmed Death Ligand-1 (PD-L1) has become an interesting target in the study of new anticancer treatments as their implication as immune inhibitor checkpoint.² Moreover, it has been demonstrated that immune system also drives to the progression of angiogenesis by overproducing Vascular Endothelial Growth Factor (VEGF), and, furthermore, VEGF by binding its receptor, Vascular Endothelial Growth Factor Receptor-2 (VEGFR2), it is able to inhibit the activation of T cells by mature DC.³ This makes it especially interesting to find a multitarget agent capable to inhibit not only PD-L1 protein but also VEGFR2 receptor. Previous studies developed in our group revealed Aryl Urea^{4, 5} and Aryl Triazole^{6, 7} as good scaffolds for designing multitarget oncoimmunomodulator agents. Recently, we developed some derivatives constituted by diaryl urea moiety connected to another aromatic group by a flexible chain as new multitarget inhibitors and here, we are presenting the results we obtained in preliminary biological studies proving the ability of some compounds, that have been designed and synthesised, in modulating the immune system.

Biography

Raquel Gil-Edo, PhD student at Joining Medicine and Chemistry research group at the department of Inorganic and Organic Chemistry of Universitat Jaume I. Beneficiary of a predoctoral fellowship by Association Española Contra el cancer (AECC) (PRDCA18002CARD). Graduated in Chemistry and specialized in Medicinal Chemistry, developing a project focus on the discovery of new compounds with anticancer and oncoimmunomodulatory activity.