MPGI STRATEGY IMPROVES AQUEOUS SOLUBILITY IF COLCHICINE SITE INHIBITORS OF TUBULIN POLYMERIZATION

M. González1, Y. Ellahioui 1, L. Gallego-Yerga, A. Vicente-Blázquez1,2, R. Álvarez1, M. Medarde1, R. Peláez1.

 1 Department of Pharmaceutical Sciences, Faculty of Pharmacy, University of Salamanca, Campus Miguel de Unamuno, E-37007 Salamanca, Spain, raquelalvarez@usal.es. 2 Laboratory of Cell Death and Cancer Therapy, Biological Research Center, CSIC, E-28040 Madrid, Spain.

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Antimitotic agents that bind to tubulin at colchicine site have serious drawback because of their low aqueous solubility. [1] MPGI strategy is key in order to design new ligands that include polar amino groups that behave as non-polar residues when bound to tubulin. [2] In this work we have design and synthesized compounds in which the classical trimethoxyphenyl moiety of colchicine site antimitotic ligands is replaced by substituted anilines. [Figure 1] Both physicochemical and biological profile are promising, as alkylamino substituted compounds combine nanomolar cytotoxic potencies with improved aqueous solubilities.



Figure. 1. Scheme of new amino analogs and experiments performed.

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**References**

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