NEW CYTOTOXIC TERPENYLNAPHTHOHYDROQUINONES FROM MYRCEOCOMMUNIC ACID

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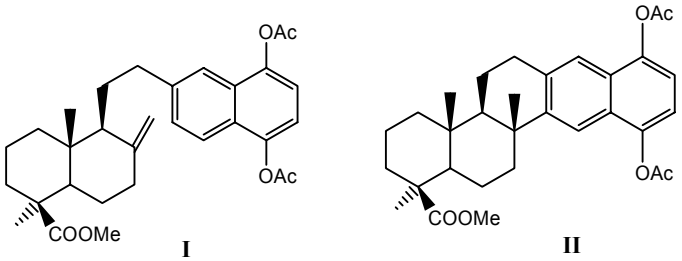
Every year many compounds showing interesting cytotoxic properties are isolated from marine sources. Many of these cytotoxic natural products are constituted by a quinonic or hydroquinonic moiety attached to a terpenoid skeleton, as it is the case of Avarol and Avarone [1].

Our research group has used these compounds as models for the design of new cytotoxic terpenylquinones and has chosen myrceocommunic acid (easily available from berries of *Juniperus oxycedrus*) as starting material for the synthesis of numerous analogues. We have studied the influence of both the terpenic and the quinonic residues on the cytotoxicity of these derivatives. Some of them have shown a very interesting potency and selectivity [2].

Among them, the terpenylnaphthohydroquinones **I** and **II**, obtained by Diels-Alder cycloaddition between methyl myrceocommunate and *p*-benzoquinone followed by oxidation, reduction and acetylation, were selected for introducing further modifications on the terpenic and quinonic moieties. Such transformations included oxidation to corresponding quinones, isomerizations, oxygenated functionalities, etc. accompanied by differents rearrangements in the decaline core.



I **II**

The synthesised analogues have been evaluated against several neoplastic cell lines and the evaluation results, mostly in the micromolar range, will be presented.

Acknowledgements: Financial support came from Junta de Castilla y León (SA 068/04).

[1] L. Milani, in *Marine Natural Products: Chemical and Biological Perspectives*, Vol. 1, Academic Press, New York, 1978.
[2] J.M. Miguel del Corral, M. Gordaliza, M.A. Castro, M.M. Mahíques, P. Chamorro, A. Molinari, M.D. García-Grávalos, H.B. Broughton, A. San Feliciano, *J. Med. Chem*. **2001**, *44,* 1257-1267.