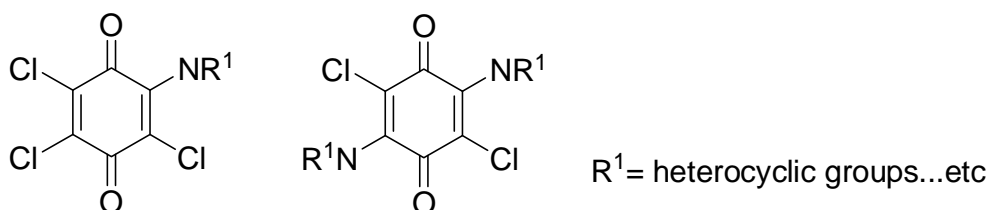


## Synthesis of novel N- substituted p-benzoquinones as biologically active compounds

Quinones are widely used as anticancer, antibacterial or antimalarial drugs as well as fungicides.<sup>[1-2]</sup> Antitumour activities of 1,4-benzoquinones and their nitrogen analogues have known from literature.<sup>[3-5]</sup> Some of the S-substituted and cyclichthioquinone compounds were synthesized by our research group before.<sup>[6]</sup>

The novel N-substituted 1,4-benzoquinone compounds were synthesized and characterized by spectral methods such as microanalysis, FT-IR, <sup>1</sup>H-NMR, <sup>13</sup>C-NMR, MS and CV.



### References:

1. Anthony, R. A.; Greg, G. O.; Udo, B.; Peter, S.; Larry, W. R. *Chem. Res. Toxicol.* 1996, 9, 623.
2. Brien, J. O'P. *Chem. Biol. Interact.* 1991, 80, 1.
3. Yoshimoto, M.; Miyazawa, H.; Nakao, H.; Shinkai, K.; Arakawa, M. *J. Med. Chem.* 1979, 22, 491.
4. Driscoll, J. S.; Hazard, G. F.; Wood, H. B.; Goldin, A. *Cancer Chemother. Rep. Part 2* 1974, 4, 1
5. Lin, A. J.; Pardini, R. S.; Cosby, L. A.; Lillis, B. J.; Shansky, C. W.; Sartorelli, A. C. *J. Med. Chem.* 1973, 16, 1268.
6. İbis, C.; Ozsoy Z. G. *Heteroatom Chemistry* 2010, 21, 446-452.