

Abstract

Synthesis of Copper Ion Incorporated Aminoguanidine Derivatives-Based Hybrid Nanoflowers[†]

Sevtap Çağlar Yavuz *, Burcu Somtürk Yılmaz, Nalan Özdemir and Emin Sarıpınar

Department of Chemistry, Faculty of Sciences, Erciyes University, Kayseri 38039, Turkey; bsomturk@erciyes.edu.tr (B.S.Y.), ozdemirn@erciyes.edu.tr (N.Ö.), emin@erciyes.edu.tr (E.S.)

* Correspondence: scaglar@erciyes.edu.tr; Tel.: +90-5445837370

† Presented at the 2nd International Conference on Natural Products for Cancer Prevention and Therapy, Kayseri, Turkey, 8–11 November 2017.

Publish: 15 November 2017

Abstract: Aminoguanidine (AG) was presented more than 100 years ago. During the last 30 years important effects of AG have been discovered which have made this molecule attract a lot of interest. AG has anticancer effect on gastric cancer, and it has positive synergistic effect with hemotherapeutic drugs. It may play important inhibitory roles in angiogenesis of gastric cancer. The anticancer effect of iNOS inhibitors may include inducing cell apoptosis, suppressing cell proliferation and reducing angiogenesis. Furthermore; we conducted a study on the formation, catalytic activity and stability of hybrid nanoflowers (hNFs) containing AG and copper ions. The synthesis of hNFs was accomplished using a modified method. The activities of hNFs were determined by colorimetric and spectroscopic methods using guaiacol as a chromogenic substrate. The hNFs were characterized using SEM, EDX, FT-IR analysis, UV-Vis spectrometry and XRD.

Keywords: anticancer; aminoguanidine derivatives; nanoflower; catalytic activity; stability.



© 2017 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).