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## *In vitro* antiproliferative activity of two organs from Tunisian medicinal plant of the genus *Centaurea* on several cancer cell lines

Amal Ben Cherifa<sup>1,2</sup>, Ben Lamine Jihene<sup>1</sup>, Diego M Fernandez-Aroca<sup>3</sup>, Ricardo Sanchez-Prieto<sup>3</sup>, Oussama Ahrazem<sup>3</sup> and Achour Lotfi<sup>1</sup><sup>1</sup>University of Monastir, Tunisia<sup>2</sup>University of Gabes, Gabes, Tunisia<sup>3</sup>University of Castilla-La Mancha-Albacete, Spain

In all regions of the world, the history of people shows that medicinal plants have always occupied an important place in medicine, the composition of perfumes, culinary preparations, and in cooking. Plants have formed the source of sophisticated traditional medicine systems that have been in subsistence for thousands of years and continue to offer mankind with new remedies. China, the birthplace of herbal medicine, India, the Middle East, especially the Arabo-Muslim world, Egypt, Greece and Rome represent civilizations in which aromatic and medicinal plants had an important place. Tunisia is one of the countries with large variations in climate from north to south, located at the shores of the Mediterranean, is a rich repository of various plant resources. Many of Tunisian medicinal plants have been experimentally validated. The genus *Centaurea* comprises approximately 700 species; these species are used for the treatment of several diseases, such as, diabetes, hypertension, etc. Some of these species showed antimicrobial, analgesic, anti-inflammatory and anticancer activities. Cancer chemoprevention with natural phytochemical compounds is an emerging strategy to prevent, impede, delay, or cure cancer. The aim of this study was to screen for anticancer properties of Tunisian medicinal plant of the genus *Centaurea*. Organic extracts of two organs from Tunisian plant were tested for their effect on cell viability against several cancerous cell lines to determine their abilities as putative anticancer agents. The anticancer activity was tested on three different cancerous cell lines (A549, H1299 and HCT116). These three lines were treated with the organic extracts at different concentrations. The inhibition percentages as a function of the concentrations were determined. Results showed that the tested extracts were very active against the three cell lines with different degree of sensibilities. These results are of the greatest importance, however, further studies are necessary for the chemical characterization of the bioactive compounds and more investigation on their pharmacological properties is needed.



### Biography

Amal Ben Cherifa is pursuing her PhD in Biological Sciences at the Faculty of Sciences of Gabes, Tunisia, under the direction of Professor Lotfi Achour at the Laboratory of Bio-Resources, Integrative Biology and Valorisation (Biolival). She did her internship at the University of Castilla-La Mancha. During her thesis, she tested phytochemical composition and biological activities of a Tunisian medicinal plant.

amalbencherifa@hotmail.fr