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# Book Of Abstracts

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## Anticancer effect of microalgal and cyanobacterial extracts on colorectal cancer cells

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Colorectal cancer is one of the most frequent types of cancer in the European Union and its incidence will increase in the following years due to environmental risk factors and dietary habits [1]. The main objective of this study was to evaluate the anticancer effect of different microalgal and cyanobacterial extracts. The anticancer effect of four raw extracts (REAp, REPP, REPt, RETiso) has been investigated on three different colorectal cancer cell (CRC) lines (HT 29, HCT 116, and T84). The four raw extracts were analyzed for their main pigment: phycocyanin, phycoerythrin, and fucoxanthin. The cells have been treated for 48 hours with the extracts and cell viability was evaluated using the neutral red assay. The IC<sub>50</sub> values of the raw extracts from REAp were  $482.50 \pm 24.73$  µg/mL for HT 29,  $467.50 \pm 14.89$  µg/mL for HCT 116, and  $851.34 \pm 78.26$  µg/mL for T84. A stronger inhibitory effect has been shown when the raw extract from REPP was used as anticancer agent against HT 29, HCT 116, and T84. The raw extracts from REPt and RETiso were tested against HT 29 and HCT 116 CRC cell lines and the following IC<sub>50</sub> values were obtained:  $2.25 \pm 0.20$  µM,  $1.64 \pm 0.10$  µM for REPt and  $3.91 \pm 0.55$  µM,  $2.51 \pm 0.32$  µM for RETiso, respectively.

[1] Zavoral, M. (2014) World journal of gastroenterology, 20 (14).



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