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Inhibitory effect of fungal extracts on cell viability of colorectal cancer cell lines

Daniel Roca Lema<sup>1</sup>, Olaia Martinez Iglesias<sup>1</sup>, Alba Casas Pais<sup>1</sup>, Andrea Diaz Diaz<sup>1</sup>, Angelica Figueroa Conde-Valvis<sup>1</sup>, C. Fernandez de Ana Portela<sup>1</sup>, A. Rodriguez-Blanco<sup>1</sup>, M.J. Gonzalez-Muñoz<sup>1</sup>, C. Prego<sup>1</sup>

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## Introduction

Colorectal cancer is the second most common form of cancer in Western countries and accounts for approximately 10-15% of all cancers. The recent changes in social and health requirements have led to the development of functional and nutraceutical foods, a growing research field that aims to provide an added benefit to health by providing, in many cases, medical advantages, including the prevention and treatment of diseases such as cancer.

## Objectives

- Isolation and characterisation of new fungal strains with medical interest
- Study the cytotoxic effect of this fungal extracts in colorectal cancer cell lines

## Method

In our experiment, we worked with different extracts from edible fungi in order to analyse their cytotoxic effect on human tumour colorectal epithelial cell lines. For this purpose, increasing concentrations of several fungal extracts were used to treat colorectal cell lines, afterwards, we studied the cytotoxicity effect after 24, 48 and 72 hours of treatment to determine the half minimal (50%) inhibitory concentration (IC), named IC<sub>50</sub>.

## Results

The results obtained during our experimentation show that some of the fungal extracts affect cell viability and present a variability on cytotoxicity (IC<sub>50</sub>) in a time-dependent manner. Some of these extracts affected the cellular viability after 72 h of incubation but certain extracts showed cytotoxicity 48 h after treatment.

## Conclusions

These results open a promising possibility to further test the possible antitumor action of selected extracts.