Biological Chemistry

Editor-in-Chief: Brüne, Bernhard

Ahead of print

Cold atmospheric plasma treatment inhibits growth in colorectal cancer cells

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Published Online: 2018-06-27 | **DOI:** https://doi.org/10.1515/hsz-2018-0193

Abstract

Plasma oncology is a relatively new field of research. Recent developments have indicated that cold atmospheric plasma (CAP) technology is an interesting new therapeutic approach to cancer treatment. In this study, p53 wildtype (LoVo) and human p53

effects on colon cancer cells, such as inhibition of cell proliferation, induction of cell death and modulation of p21 expression. In contrast, CAP treatment of murine colon tissue *ex vivo* for up to 2 min did not show any toxic effect on normal colon cells compared to H_2O_2 positive control. In summary, these results suggest that the miniFlatPlaSter plasma device is able to kill colorectal cancer cells independent of their p53 mutation status. Thus, this device presents a promising new approach in colon cancer therapy.

This article offers supplementary material which is provided at the end of the article.

Keywords: apoptosis; cold atmospheric plasma; colorectal cancer; MiniFlatPlaSter

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About the article

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Received: 2018-03-20

Accepted: 2018-05-28

Published Online: 2018-06-27

Conflict of interest statement: The authors have no conflict of interest to declare.

Citation Information: Biological Chemistry, 20180193, ISSN (Online) 1437-4315, ISSN (Print) 1431-6730, DOI: https://doi.org/10.1515/hsz-2018-0193.

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