

# Cold Atmospheric Plasma on mouse intestinal epithelial organoids

**Commonly used acronym:** CAP on mouse intestinal organoids

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## PARTNERS AND COLLABORATIONS

### Organisation

**Name of the organisation** Université Libre de Bruxelles (ULB)

**Department** IRIBHM

**Country** Belgium

## SCOPE OF THE METHOD

<b>The Method relates to</b>	Animal health
<b>The Method is situated in</b>	Basic Research
<b>Type of method</b>	In vitro - Ex vivo
<b>Species from which cells/tissues/organs are derived</b>	mouse
<b>Type of cells/tissues/organs</b>	Intestinal stem cells

## DESCRIPTION

### Method keywords

Cold atmospheric plasma

gut organoids

cytotoxicity

apoptosis

reactive oxygen species  
transcriptomics  
epithelium

### Scientific area keywords

Gastro-enterology

### Method description

Using the *ex vivo* culture system, we investigated the impact of an endoscopic helium plasma jet application on mouse ISCs at the morphological, cellular and transcriptomic levels. Moreover, we explored the potential selectivity of CAP application on tumor versus normal organoids originating from the same genetic background.

### Lab equipment

### Method status

Published in peer reviewed journal

## REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION

### References

Cell Death Discovery (2022) 8:66 ; <https://doi.org/10.1038/s41420-022-00835-7>

### Associated documents

[Cold Atmospheric plasma on organoids Hadei et al 2022.pdf](#)

### Other remarks

Collaborators for the published method:

- Department of Gastroenterology, Hepatopancreatology and Digestive Oncology, Laboratory of Experimental Gastroenterology, C.U.B. Hôpital Erasme, Brussels, Belgium.
- Bio-, Electro- and Mechanical- System (BEAMS), Biomed Group, Ecole polytechnique de Bruxelles, Brussels, Belgium.

Coordinated by Chemistry of Surfaces, Interfaces, and Nanomaterials, ChemSIN cp 255, Faculty of