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## ABSTRACT SUMMARY

### Author information

#	Name	Last Name	Email	Submitting	Presenting	Corresponding
1	Taibi	Abdelkader	abdelkader.taibi@hotmail.fr			✓
2	Perrin	Marie Laure	marie-laure.perrin@unilim.fr			
3	Albouys	Jérémie	jeremie.albouys@gmail.com			
4	Yardin	Catherine	catherine.yardin@unilim.fr			
5	Sylvaine	Durand-Fontanier	Sylvaine.Durand-Fontanier@chu-limoges.fr			
6	Sylvia	Bardet	sylvia.bardetcoste@unilim.fr	✓	✓	

### Title, content, keywords, and sessions

**Title:** A syngeneic orthotopic graft murine model for studying nsPEF effects on peritoneal carcinomatosis tumors

**Body:** New immunocompetent cancer models are still needed for the identification and preclinical validation of novel therapeutic targets in colorectal cancer. The aim of this study was to evaluate the implantation rate of CT-26, a type of murine colorectal cancerous cells, on the peritoneum site according to the injection site. The tumor graft efficiency was compared in 4 grafting methods according to the PCI score and using bioluminescence imaging in a syngeneic immunocompetent murine strain. Tumoral growth was then followed by bioluminescence, over 15 days post-grafting and nodules that have been exposed to 10 ns pulses were analyzed by histology. In vitro CT-26 cells were also studied by flow cytometry for their sensitivity to nsPEFs and chemotherapeutic drugs (Mitomycin, Oxyplatin): survival, mitochondrial potential and permeabilization. In parallel, peritoneal tumoral tissue was observed by multiphoton microscopy in order to evaluate the tumor microenvironment. We observed in vitro a strong dose-dependent effect of nsPEF on cell viability, cell death (DAPI, Annexin V), calcium signaling (Fluo-4) and permeabilization (Yo-Pro). In vivo nsPEF exposure of PM nodules shows also dramatic cells death and proliferative inhibition, more efficiently and faster than the ones observed after addition of chemotherapeutic drugs (Mitomycin, Oxyplatin).

**Keywords:** nsPEF; Colorectal cancer; in vitro; in vivo; chemotherapy.

**Session(s):**

*none selected*

### Classification

Subject area	Topic	
Medical applications	Cancer therapy	✓

### Other data

Inquiry	Opted for
Please indicate your preferred type of presentation	Poster
If selected for Poster, willingness to participate in interactive poster session	Yes
Applying for Student / Early Career Investigator Award Note: Early Career Investigators must be either under the age of 35 or within 5 years of receiving their doctoral degree (i.e. M.D., Ph.D., etc.) and working in the field of electroporation and pulsed electric fields in biology, medicine and food & environmental technologies.	No
Invitation letter for Visa required (presenting author)	No