

Report on the visit of Aleksandra Dudek within the framework of
“BASTION”

- I. Visitor: Aleksandra Dudek,
- II. Host: prof. Jakub Golab, Medical University of Warsaw, Poland

Dates: 17.06.2013 – 05.07.2013

Aleksandra Dudek is a 3rd year PhD student at the Cell Death Research and Therapy Laboratory, KU Leuven, Belgium. Between June 17th and July 5th, 2013, she visited the Department of Immunology, Center for Biostructure Research, Medical University of Warsaw, Poland. This visit was coordinated under the twinning agreement between the Medical University of Warsaw and the KU Leuven in WP1 (Task 1.1).

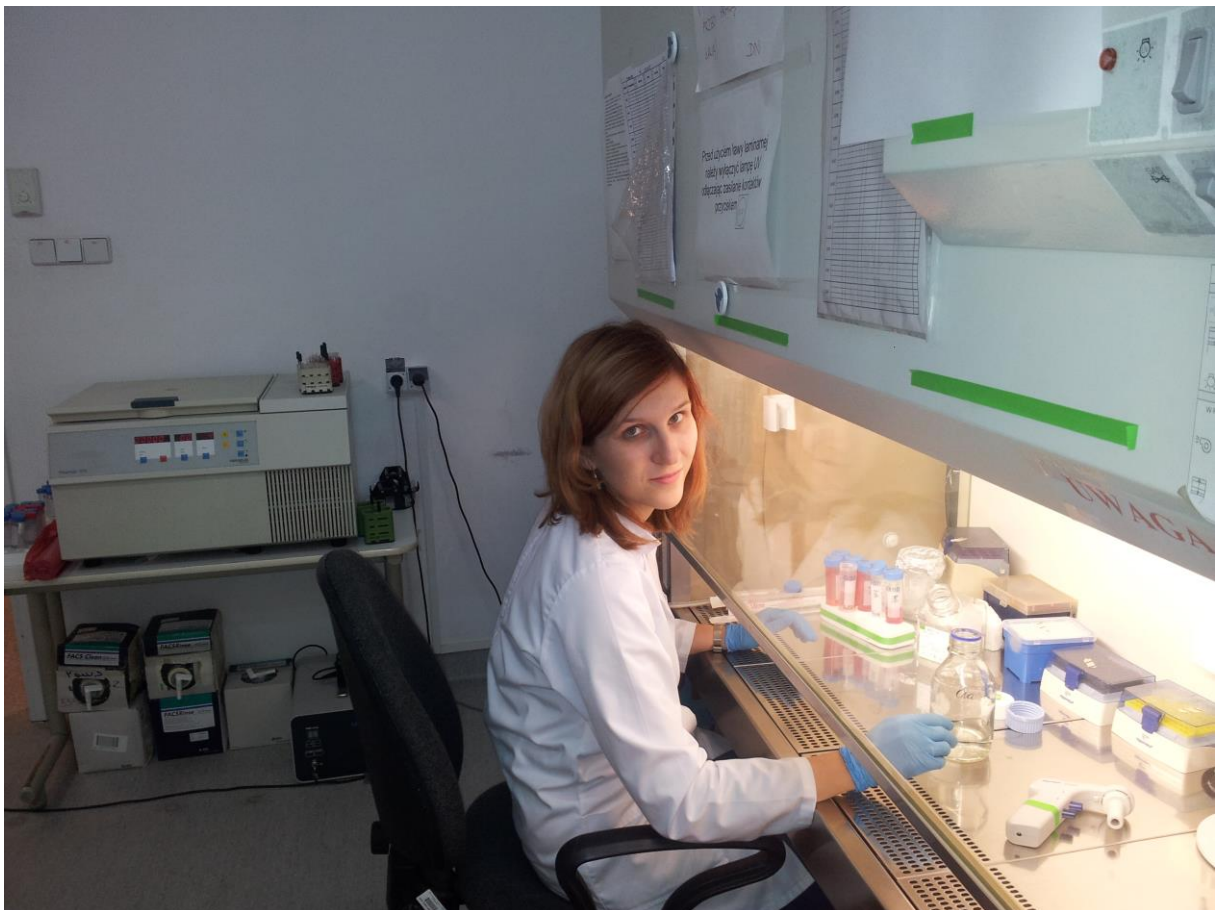
During her PhD, Aleksandra studies key molecular and immunological parameters underlying the process of immunogenic cell death (ICD) elicited by various chemotherapeutics, using metastatic melanoma as cellular/ *in vivo* model. ICD is a concept exploiting the double targeting of tumour, whereby the ICD-inducing treatment combines a direct induction of cancer cell death with the simultaneous stimulation of anticancer immune response triggered by the dying cancer cells. At the molecular level, currently, ICD is characterised by the ‘emission’ of damage-associated molecular patterns (DAMPs) during various phases of the apoptotic cell death process. Once exposed on the cell surface, these endogenous molecules (i.e., DAMPs) are able to evoke anticancer immune response. A widely used method to investigate the stimulation of anticancer immune response by the dying cancer cells is the mice prophylactic vaccination model. Initially (1st step) syngeneic mice are vaccinated with the treated cancer cells, followed by (2nd step) a challenge with the live version of the same tumour cells. If the treated cancer cells (the vaccine) are able to incite a long lasting protective anticancer immune response, this will prevent the establishment and growth of the same tumour upon re-challenging.

The main purpose of the visit was to investigate the immunogenic properties of murine melanoma cells treated with various anticancer therapies in mice vaccination experiment. The Department guided by prof. Golab has an immense experience in various mice experiments,

thus it was a great opportunity for Aleksandra to acquire skills in mice handling and performance of the mice vaccination experiment.

Department of Immunology, Medical University of Warsaw has as well a wide expertise regarding the cytokines' roles in stimulation of anticancer immunity. Thereby, during Aleksandra's visit, she was shown how to measure cytokines by cytokine bead array (CBA) and performed few analysis on the crucial samples from *in vitro*-treated, dying cancer cells : dendritic cells co-cultures.

Furthermore, during the visit future collaborative experiments were discussed. Definitely, not only this scientific visit to the laboratory of prof. Golab resulted in important advances in the PhD project of Aleksandra Dudek, but as well will have a consequence in the very close collaboration in the topic of immunogenicity of cancer cell death in the future.



Aleksandra Dudek in the laboratory of the Department of Immunology, MUW