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**BASTION - FROM BASIC TO  
TRANSLATIONAL RESEARCH  
IN ONCOLOGY**

### **Report from active participation in**

**The Annual Meeting of the International Society of Extracellular Vesicles (ISEV)  
from 22-26 April 2015, Washington DC, United States**

**Małgorzata Czystowska-Kuźmicz**

The International Society for Extracellular Vesicles aims to promote basic, translational and clinical research within the field of Extracellular Vesicles, including Microvesicles and Exosomes; collect, assess and disseminate scientific information on Extracellular Vesicles; be a scientific reference body for other scientific, health and political organizations as well as encourage and provide training and continuous education within the field of Extracellular Vesicles.

The meeting provided a very broad overview of the latest research in the field of extracellular vesicles and exosomes and gave me the opportunity to meet experts in the field from all over the world. Major topics of the meeting involved novel developments in EV isolation and characterization, the role of EV in immune regulation and tumor progression, microvesicles as novel tumor biomarkers and extracellular vesicles in therapeutics.

The organizers invited outstanding speakers, e.g. Prof. James E. Rothman, the Nobel Prize Winner for Physiology and Medicine from 2013, Dr. Francis S. Collins, the Director of NIH and Xandra Breakfield, one of the most prominent researchers in the microvesicle field. Very valuable for my future research was the participation in the Educational Day organized by ISEV and the U.S. National Institutes of Health Extracellular RNA Communication Consortium one day prior to the ISEV2015 meeting. The topics of the workshop were e.g. the isolation and purification of EVs from biological fluids for downstream RNA and protein studies, designing RNA reference standards for exRNA sequencing, validation of small RNAseq data from exosomal RNA using



qPCR based approaches, etc.



**Dr Małgorzata Czystowska-Kuźmicz and Dr. Marta Szajnik during the poster presentation**

During the meeting I also had the opportunity to learn about the newest equipment for vesicle quantification and characterization presented by different companies. Through the established contacts with the representative of the IZON company I will be able to test their qNano instrument for exosome quantification using tunable resistive pulse sensing in Warsaw.

At the poster session, on 23th April, I had presented our results at the poster entitled: “The adenosine pathway in ovarian carcinoma: tumor cells and tumor-derived exosomes express CD39 and CD73 ectonucleotidases, produce adenosine and mediate immune suppression”. We showed that exosomes isolated from the plasma of OvCa carried enzymatically-active ectonucleotidases. They were able to produce biologically active extracellular adenosine, leading to down-regulation of NK cell functions and increased Treg activity in vitro.