

An Effort Toward Calibrating and Standardizing Measurements of EVs: A Tri-Society Endeavor

Commercial flow cytometers designed to measure lymphocytes are being challenged to measure Extracellular Vesicles (EVs), which are 100 times smaller and 10,000 to 1,000,000 times dimmer than cells. In addition, with a wide variety of instrument designs, assay approaches, and measurement sensitivity, it can be difficult to compare results between instruments, assays, and labs. Recently three societies; International Society of Extracellular Vesicles (ISEV), ISAC, and the International Society of Hemostasis and Thrombosis (ISTH), joined forces to begin to address some of major issues surrounding measuring EVs. This presentation is intended to address the issues of instrument characterization and standardization as part of ISAC's contribution to the tri-society initiative. Key questions to be addressed are:

- 1) What methods are available for characterizing instrument and assay performance?
- 2) What are the benefits/advantages of different approaches for determining instrument and assay sensitivity?
- 3) How can we begin to report results in a way that is meaningful and standardized across multiple labs?
- 4) What tools/standards do we need in order to move forward in making these efforts economical and easier to do?

Discussions will include what is currently available, what is being done by those currently measuring EVs, and what do we need to do this better.