



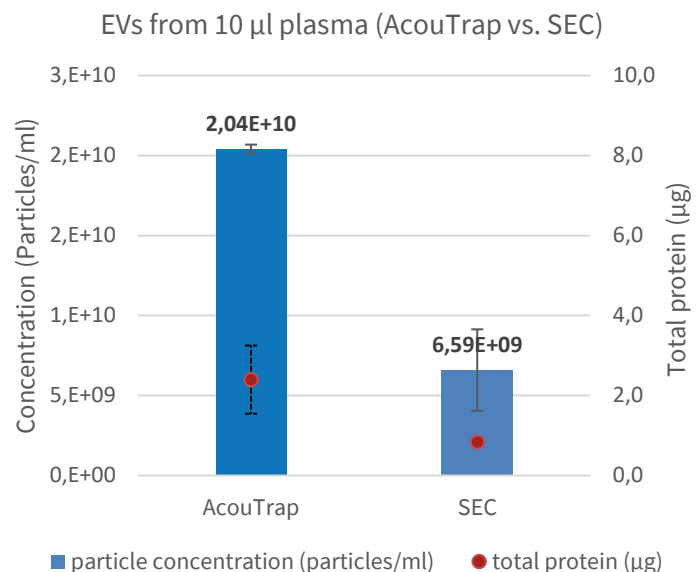
# AcouTrap

## Isolation of Extracellular Vesicles

### HIGH QUALITY PURIFICATION FROM MINUTE SAMPLES

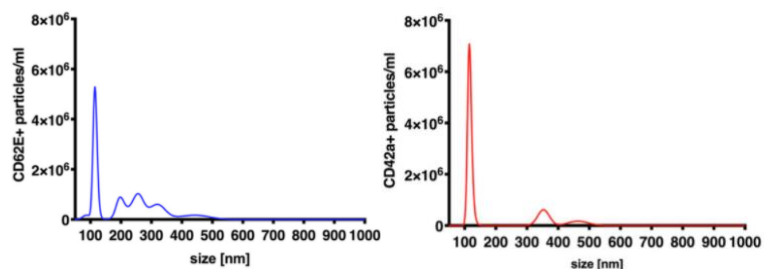
#### Demonstrated Suitable for Biomarker Discovery

- **Rapid and automated** isolation
- Reliable results from **low-volume** biological samples
- **High-quality** samples with demonstrated suitability for
  - Olink proteomics
  - miRNA analysis
  - Mass Spectrometry



#### High Quality EVs

- fNTA confirms endothelial- (CD62E+) and platelet-derived (CD42a+) extracellular vesicles in isolated plasma
- ELISA confirms presence of CD9/CD81/CD63



Data from:

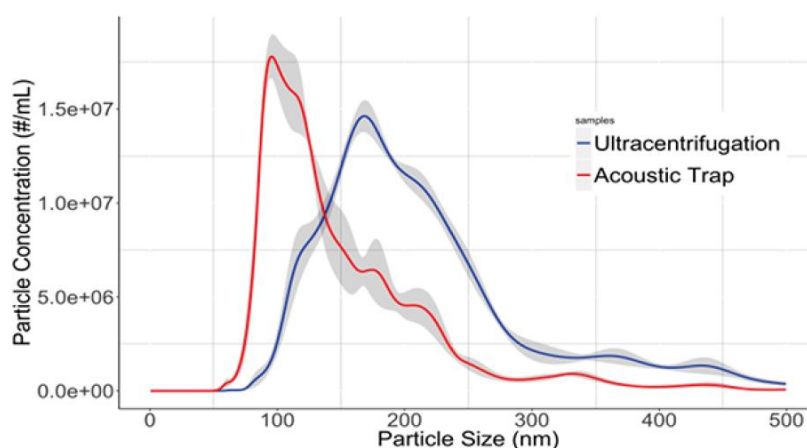
Top: 10  $\mu$ l pooled platelet-poor plasma from healthy donors was processed using AcouTrap (n=2) and a commercially available size exclusion chromatography column (n=3) following the manufacturer's instructions. The resulting samples were measured using NanoSight LM10 and microBCA.

Bottom: Bryl-Górecka et al. Mol. Nutr. Food Res. 2020. [Bilberry Supplementation after Myocardial Infarction Decreases Microvesicles in Blood and Affects Endothelial Vesiculation](#): Post enrichment, EVs were stained with anti-CD62E or anti-CD42a and analyzed in NanoSight equipped with 488 nm blue laser.

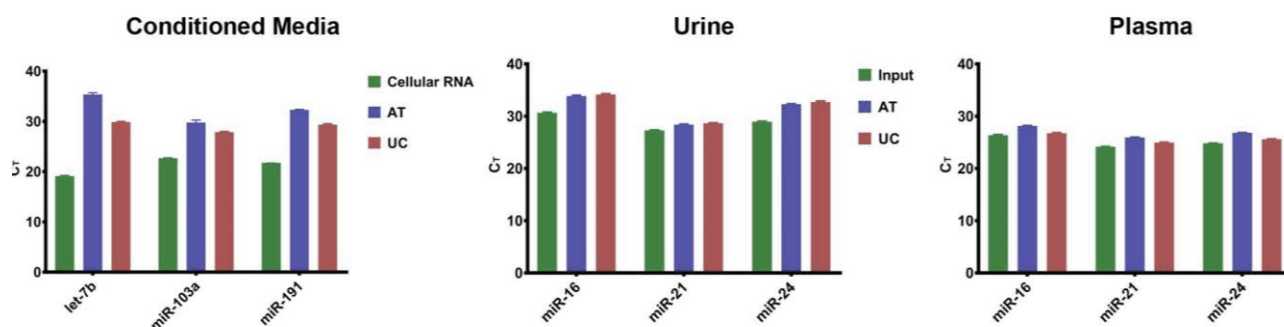


## Comparison to Centrifugation

- **Proteomic profile:** LC-MS shows significant overlap (80%) between plasma samples processed using AcouTrap and differential centrifugation
- **Size distribution:** size distribution from NTA of 300  $\mu$ L plasma isolated either using AcouTrap or ultracentrifugation



- **miRNA content:** qRT-PCR shows similar miRNA levels in AcouTrap (AT) and ultracentrifugation (UC) samples from different sources



Data from:

Top: Rezeli et al. Anal. Chem. 2016, 88. [Comparative Proteomic Analysis of Extracellular Vesicles Isolated by Acoustic Trapping or Differential Centrifugation](#). Plasma was processed either using AcouTrap or differential centrifugation and label-free LC-MS quantification was used to assess proteomic profiles.

Middle and bottom: Ku et al. Anal. Chem. 90, 2018 [Acoustic Enrichment of Extracellular Vesicles from Biological Fluids](#): Samples were processed and assessed for EV size by nanoparticle tracking analysis, NTA (Top) and Ct values of EV-specific miR markers (Bottom).