# Exosome isolation

## Context

Exosomes are extracellular vesicles (EVs) of diameter within the range of 30-100 nm, that are formed via inward budding of endosomal membranes resulting in formation of multivesicular bodies and released from the cell after fusion of multi-vesicular body with the plasma membrane.

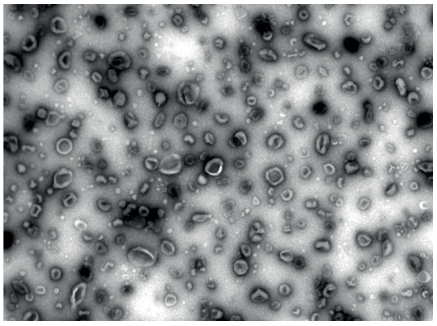
Exosomes are produced by almost all cells *in vivo* and *in vitro*.
They are present in all biological fluids in various concentrations.

## Expertise

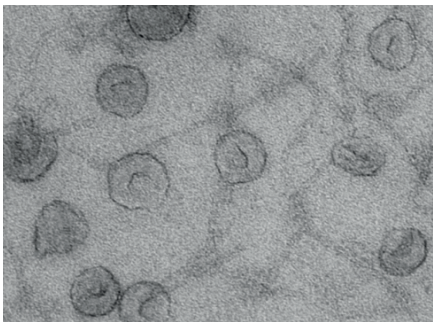
Specific optimization steps in the isolation procedure are necessary due to great variability in the composition of different biological fluids.

Therefore a choice of the purification protocol depends on the biochemical composition and origin of the body fluid or cells considered the characteristics of EV sub-populations and the sample size.

A



B



Transmission electron microscopy with uranyl acetate staining of exosomes derived from bovine milk (A) and *Staphylococcus aureus* (B)

## Fields of Application

- Cell to cell communication
- Immune responses
- Diagnostics / biomarkers
- Anti-tumor therapy
- Vaccines
- Inflammation and parasitic and bacterial infections
- Drug delivery
- Cardiovascular and metabolic diseases, cancer, etc…

## Technical features

- Scientific expertise and technical experience in the research field of extracellular vesicles
- Very high purity of EVs/Exosomes with high recovery rate and functionality
- Absence of Exosome co-precipitation products and contaminants (protein and organic co-aggregates)
- The isolated EVs/Exosomes are suitable for different downstream analysis such as micro RNA/RNA profiling, proteomics, lipidomics and functional studies *in vitro* or *in vivo*.

EXCILONE

Service for single cell and Exosome isolation

EXCILONE

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