

## Development of biomedical applications of the PICO digital immunoassay in Extracellular Vesicle (EV) detection



Extracellular vesicles (EVs) are small particles secreted by all living cells and present in all human fluids. As they reflect the status of their cell of origin, there is a growing interest to use them as the diagnostic tools, with potential application in cancer and infection diagnostics. However, common laboratory techniques cannot handle the complexity of these particles. With this interest, at PICO BioScience GmbH we have developed PICO, a novel digital immunoassay that can characterize the surface markers on the EVs at single vesicle resolution, allowing the discrimination of healthy and disease subpopulations.

While the method is already functional, specific markers identifying tissues of origin and specific disease status are still unknown. For this reason, we have currently several multidisciplinary projects ongoing in which we collaborate with clinical experts, aiming to develop new diagnostic tools that are more informative and less invasive for the patients.

If you have a biotechnology or biomedical background and would like to join us in one of these projects, we will be opening several Master Thesis opportunities in early 2026.

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