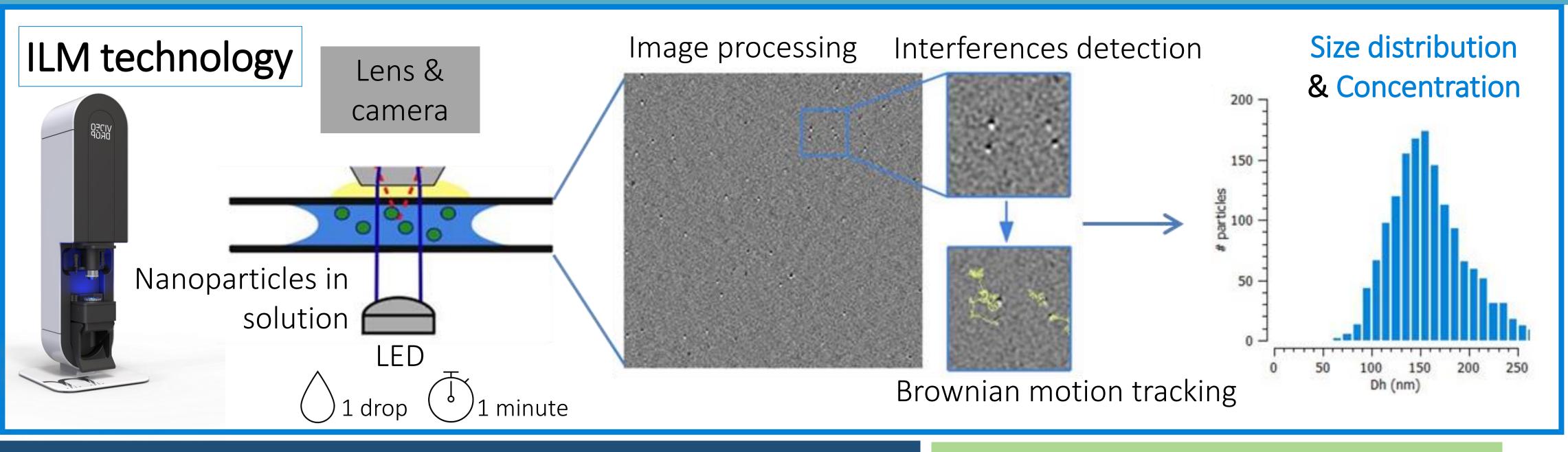
Rapid characterization of human viruses in a droplet using Interferometric Light Microscopy (ILM) in a BSL3

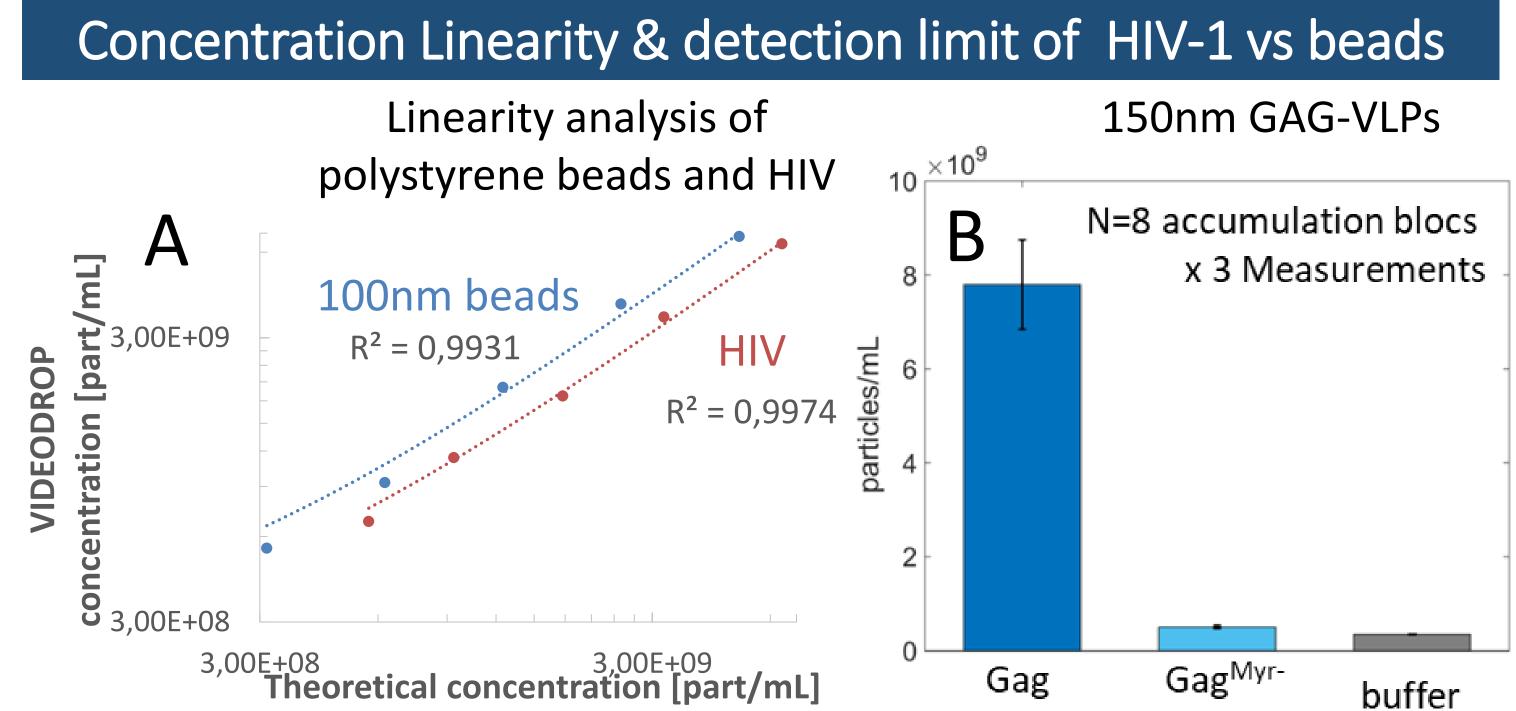
Kaushik Inamdar, Marie Berger, Rayane Dibsy, Mathilde Hénaut, Matthieu Greffet, Sébastien Lyonnais & Delphine Muriaux

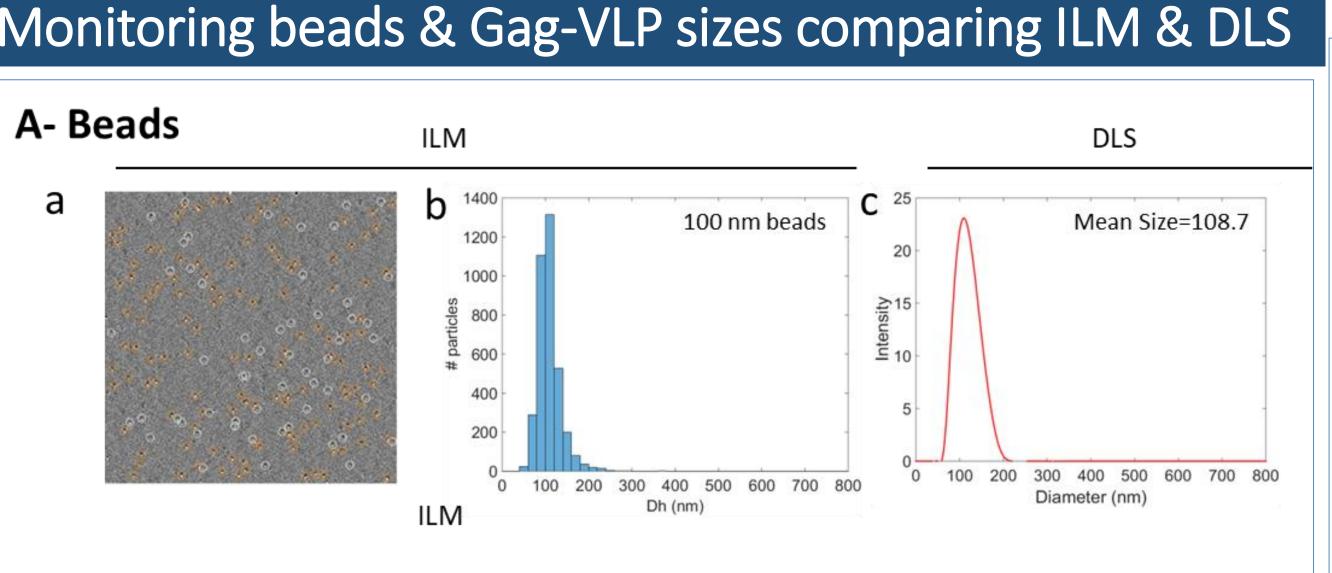
Cemipai myriade



Size=152 nm







Size=151nm

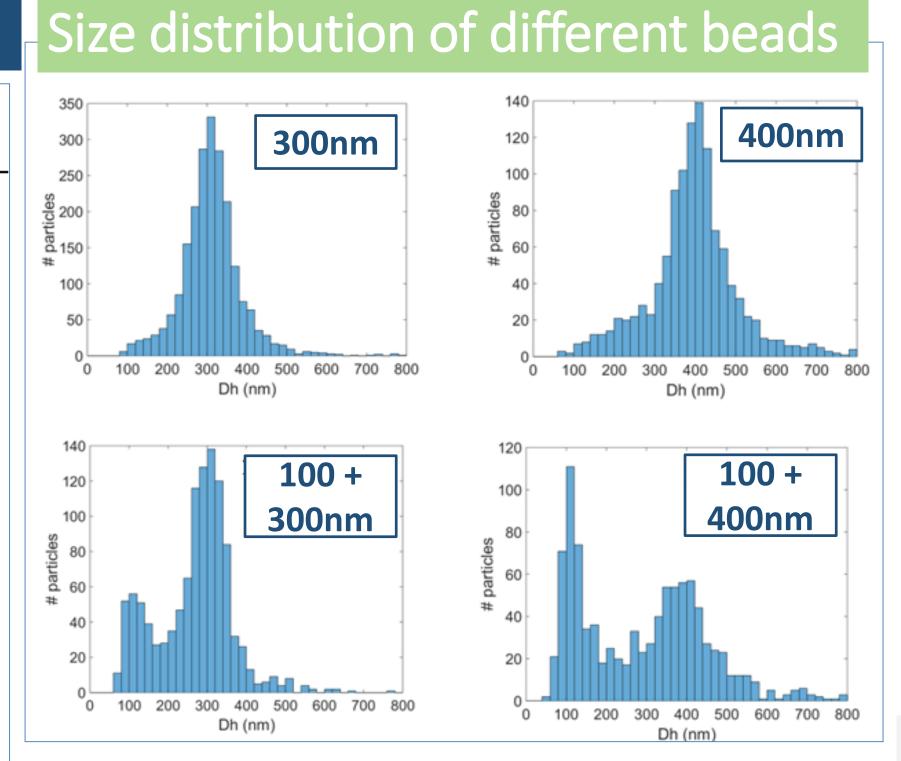
 $[C] = 8.48 \times 10^9$

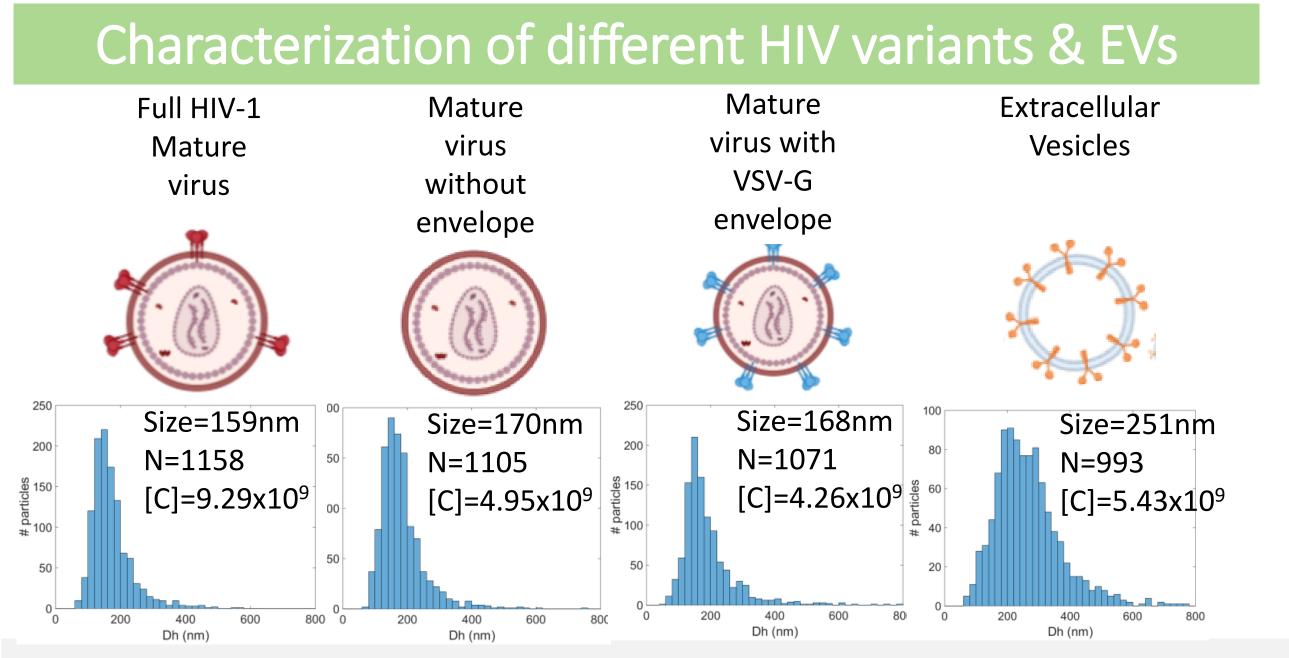
n=1970

B- HIV-1 Gag-VLP

Virus-Like

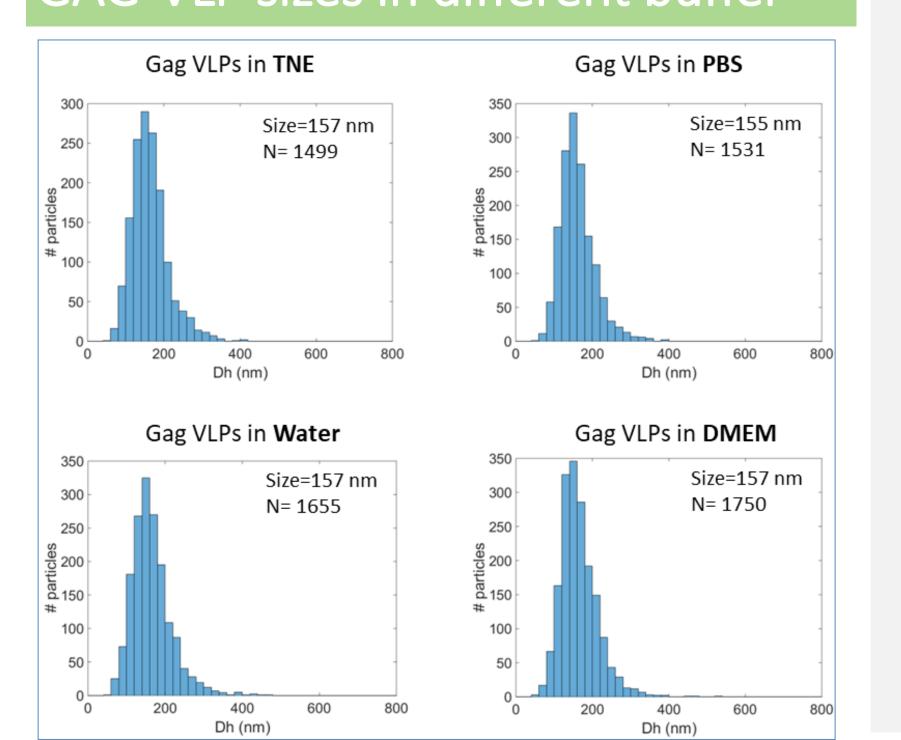
150 nm



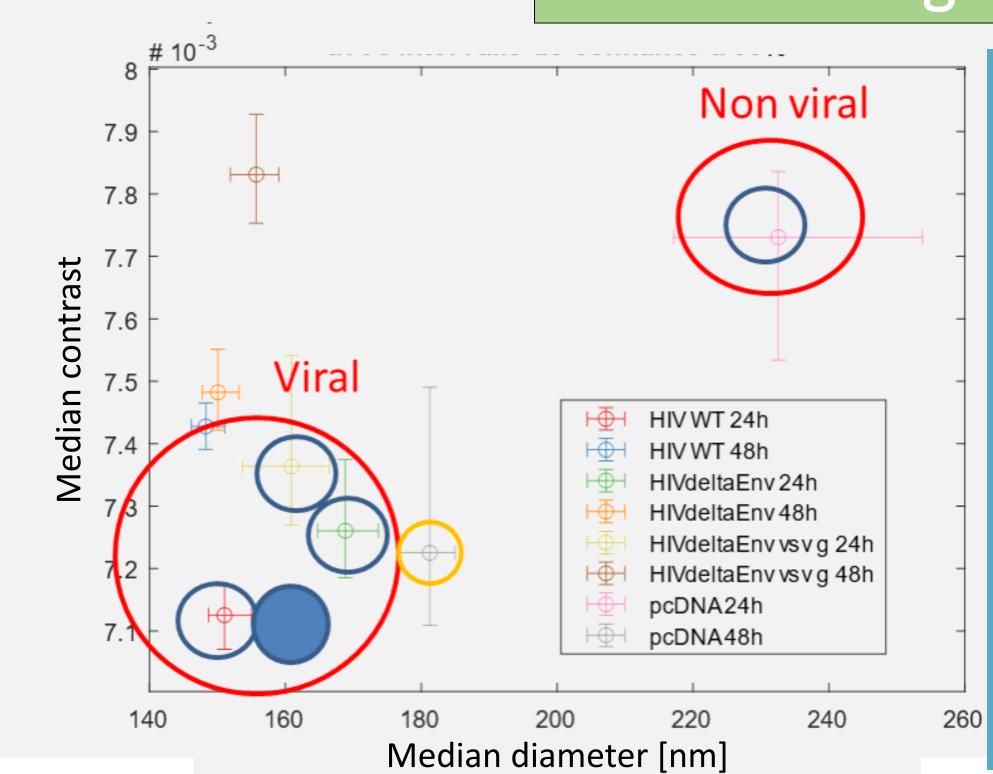








Can we distinguish viruses from EVs?



Preliminary results show that ILM is not able to distinguish HIV-1 from viral particles derived from HIV-1. But it shows promising differences with EVs analysing the size and the contrast.

This could open of new path of research in distinguishing nano-objects without any labelling, a useful tool to monitor virus-like particle production and characterization, such as for vaccins or lentiviral vectors, or for viruses detection.