



# EVs analysis in the COVID-19 era: insights on serum inactivation protocols towards downstream isolation and analysis

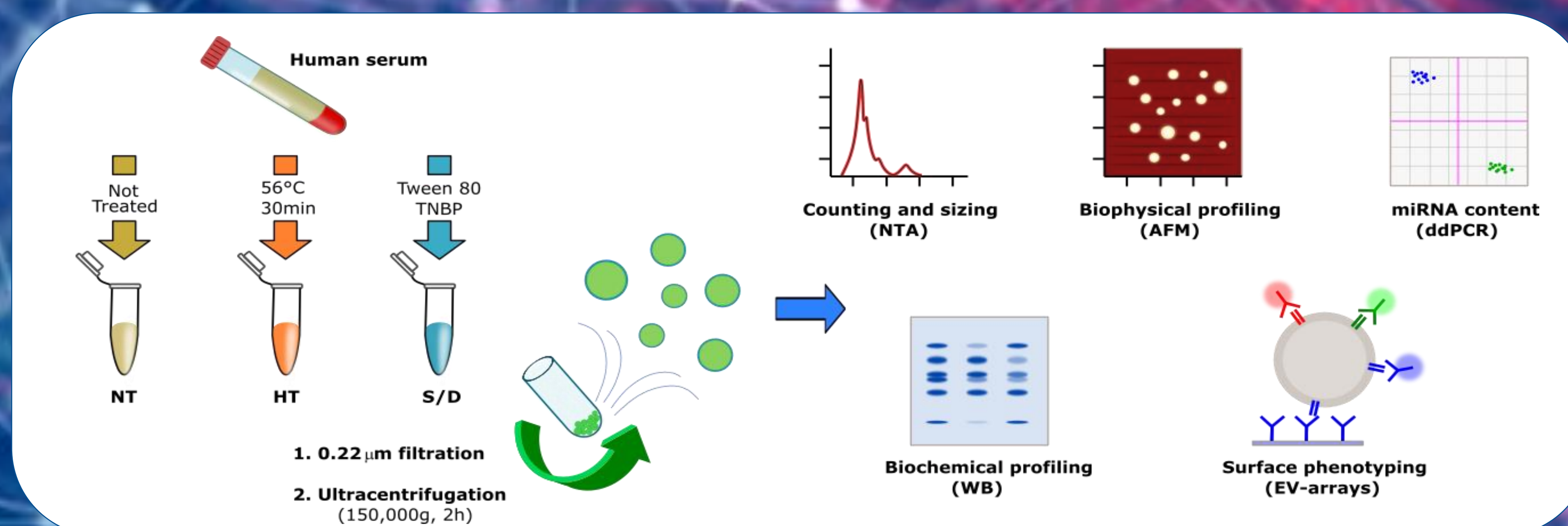
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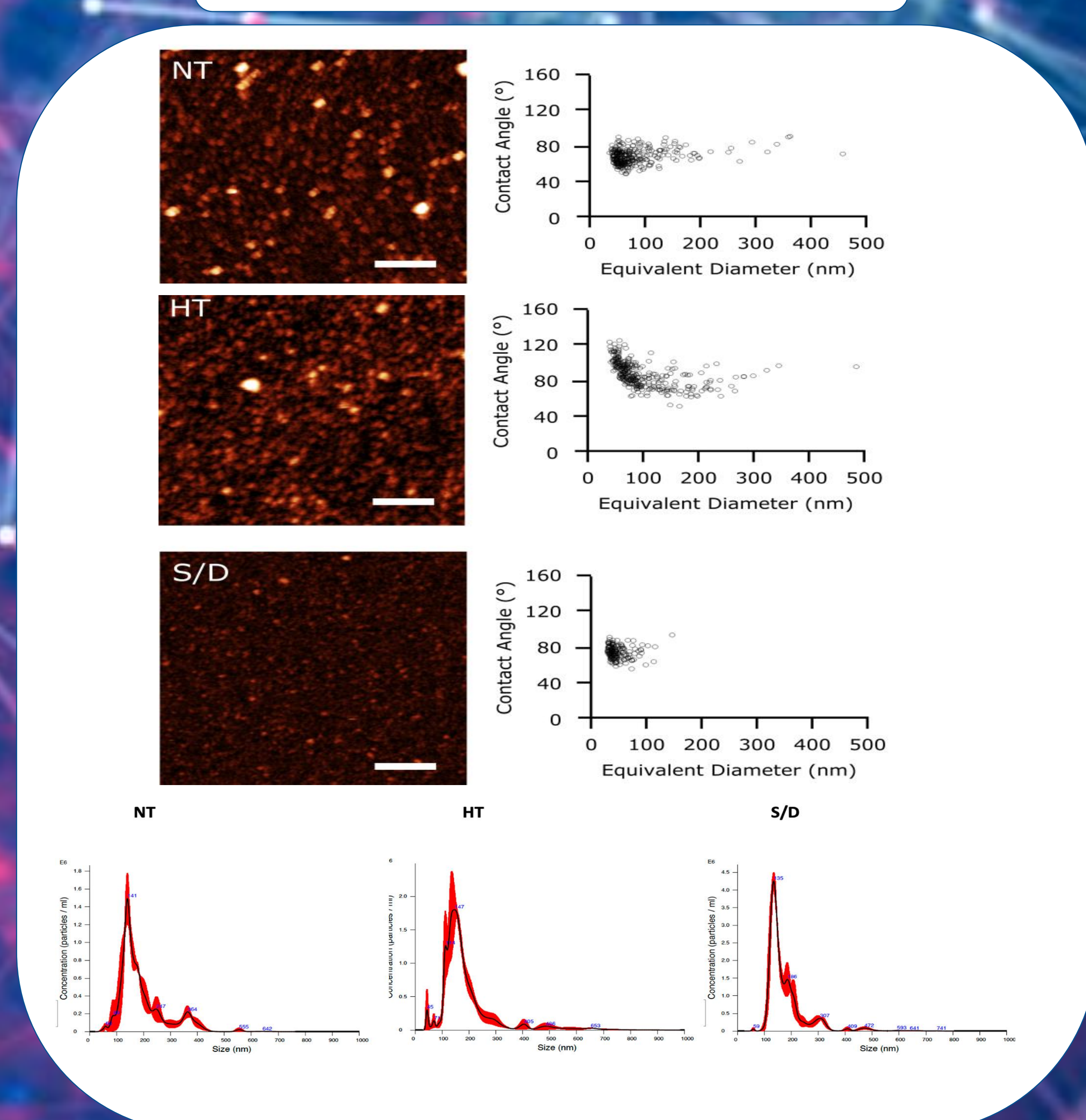
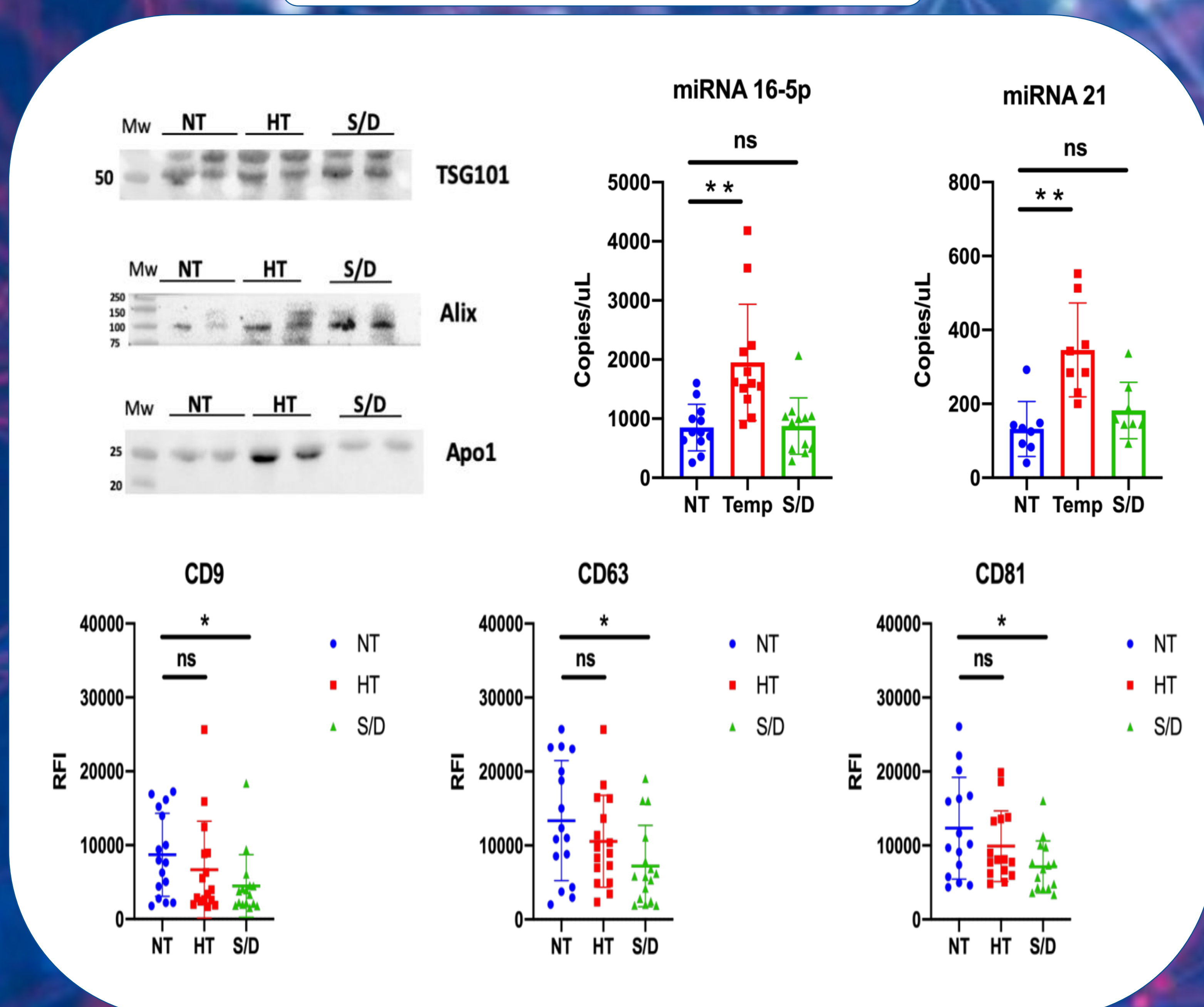
**Introduction:** SARS-CoV-2 inactivation protocols are used prior serum EVs analysis comparing Solvent/Detergent treatment and heat inactivation. After the treatment EVs were isolated by UC, we studied the EVs' behavior under these two different protocols. [1]



**Results and Discussion:** Our analysis evaluated EVs recovery and purity along with biochemical and biophysical profiling by: NTA, Western Blotting, AFM, TEM, miRNA content and antibody microarrays.

## Biochemical Analysis

## Biophysical Profiling



## Conclusion:

- Solvent/detergent treatment is promising for small EVs (< 150nm range), yet a depletion of larger vesicular entities was detected.
- An increase in UC recovery following heat-treatment, however accompanied by a marked enrichment in EVs-associated contaminants.

## References:

[1] Roberto Frigerio, Angelo Musicò, Marco Brucale, Andrea Ridolfi, Silvia Galbiati, Riccardo Vago, Greta Bergamaschi, Anna Maria Ferretti, Marcella Chiari, Francesco Valle, Alessandro Gori\* and Marina Cretich\*, Cells 2021, 10, 544. <https://www.mdpi.com/2073-4409/10/3/544>



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 951768, project MARVEL

