

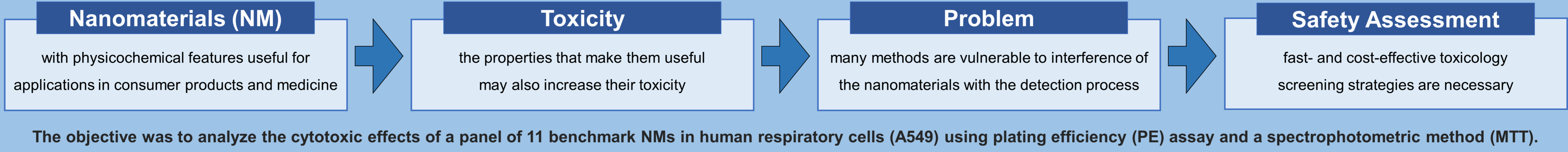
Evaluating the cytotoxic potential of a panel of manufactured nanomaterials using the plating efficiency assay



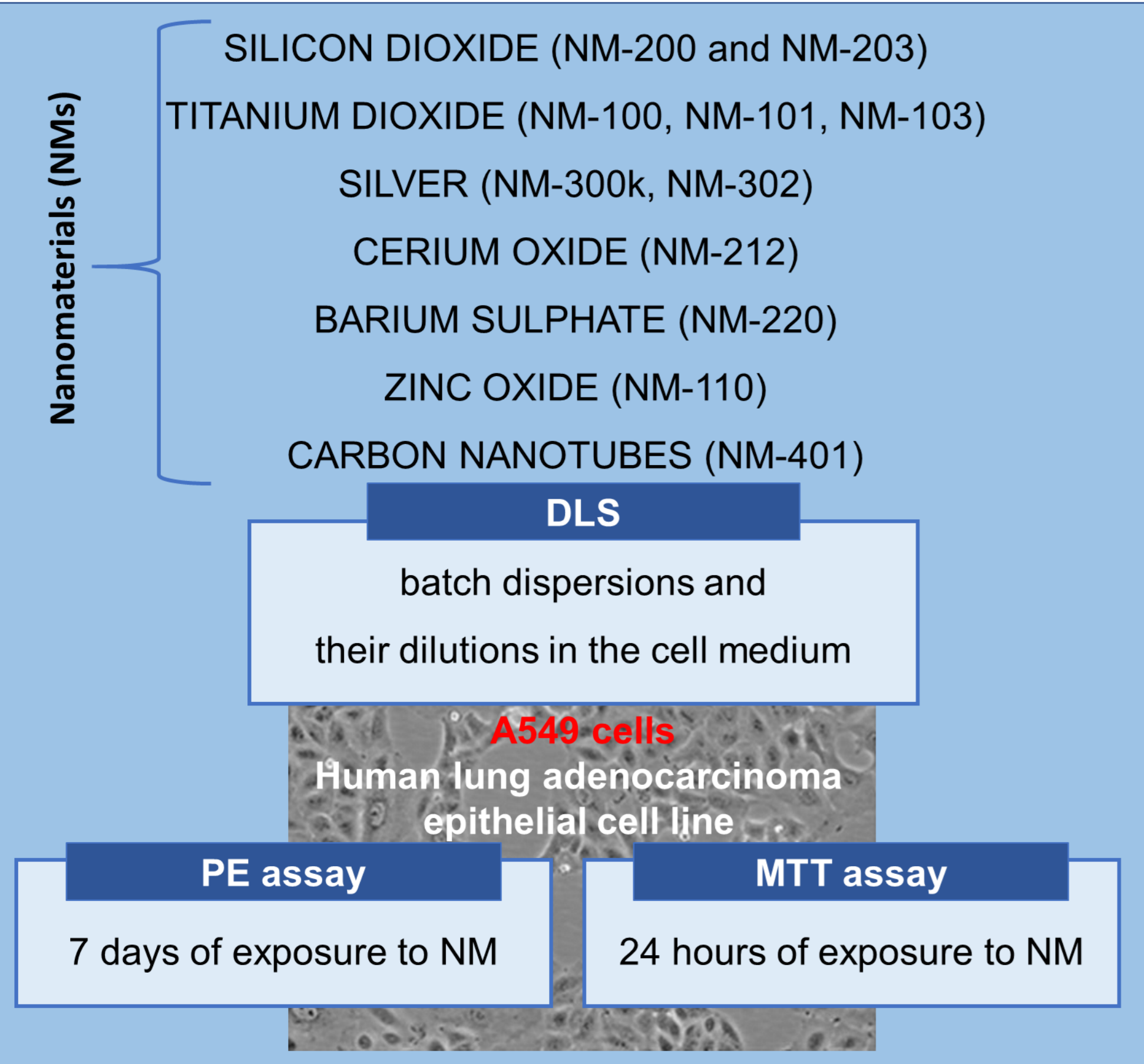
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INTRODUCTION

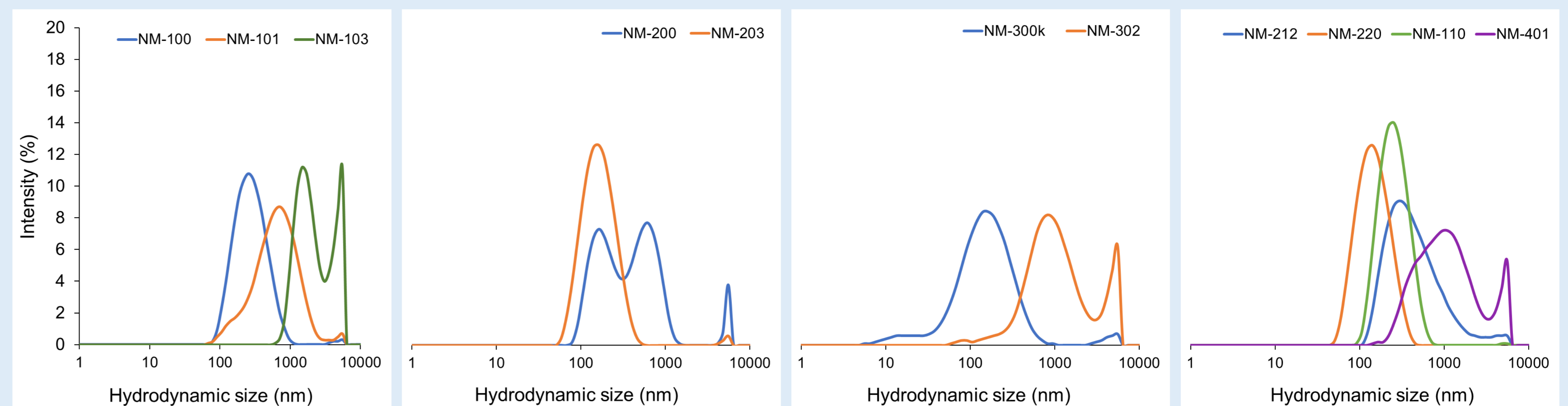


METHODS



RESULTS

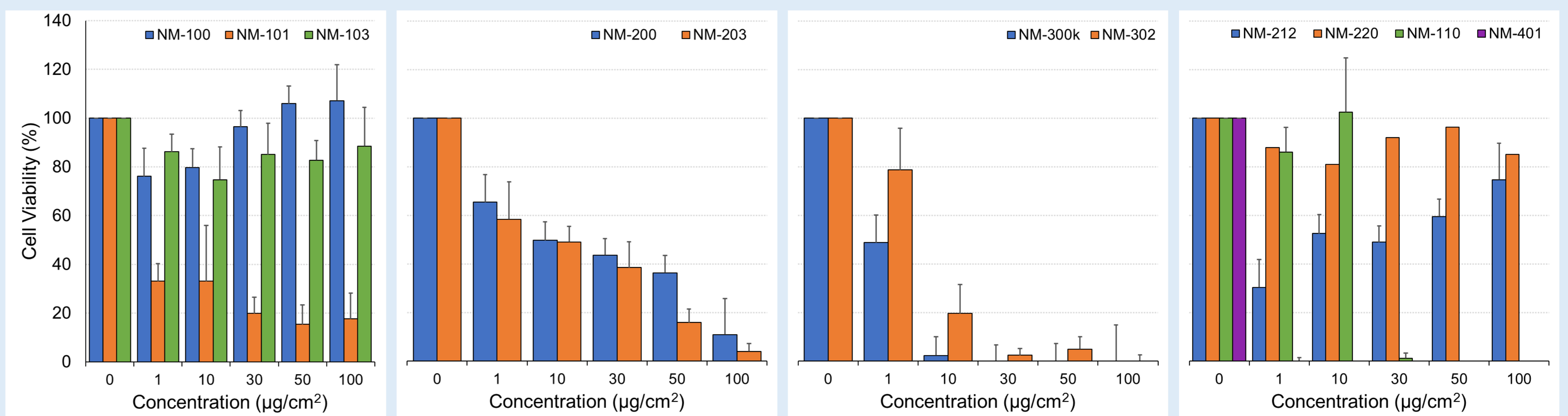
DLS – NMs' batch dispersion



Homogeneous dispersion → NM-100, NM-101, NM-203, NM-300k, NM-212, NM-220, NM-110

Multimodal size-distribution → NM-103, NM-200, NM-302 and NM-401

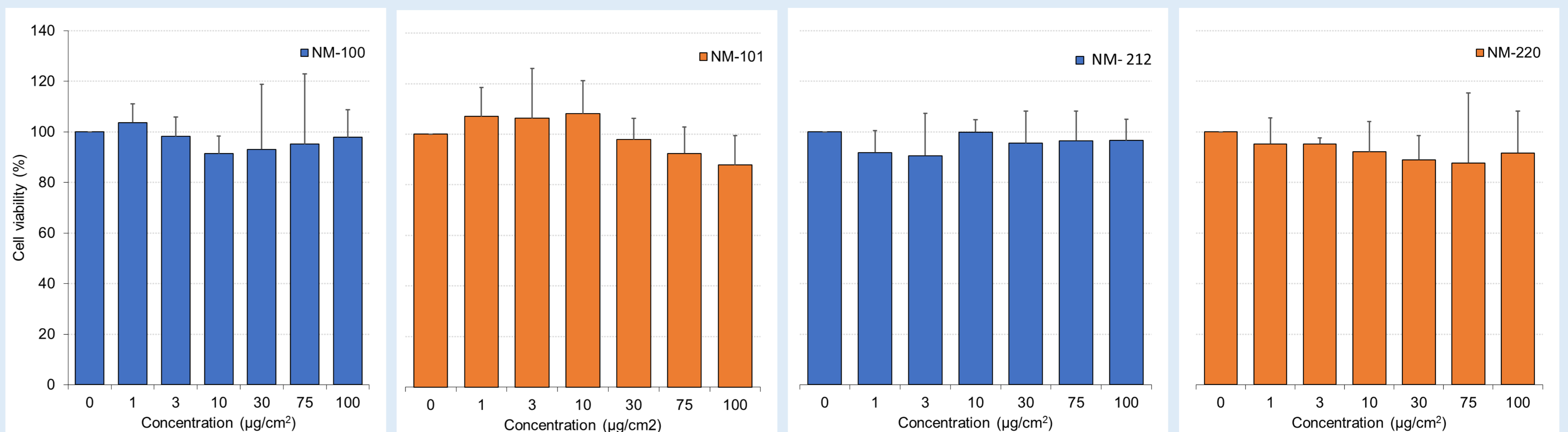
PE Assay



Cytotoxic → NM-101, NM-200, NM-203, NM-300k, NM-302, NM-212, NM-110, NM-401.

Not cytotoxic → NM-100, NM-103 and NM-220.

MTT Assay



None of the nanomaterials is cytotoxic.

CONCLUSIONS

PE assay

Positive results for most nanomaterials

Although not directly comparable, PE seems more sensitive than MTT to NMs' induced toxicity

Long-term exposure to NMs is possibly more relevant to address impact of NMs

Perspectives

The assessment of the toxicological profiles of nanomaterials is a very complex issue, due to specificities of their features and behaviour. Therefore, the development of high-throughput methodologies directed to the study of nanomaterials' toxicity remains a priority for addressing potential human health risks.

ACKNOWLEDGMENTS

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