

Exposure of microplastics at levels relevant for human health: cytotoxicity and cellular localization of polystyrene microparticles in four human cell lines

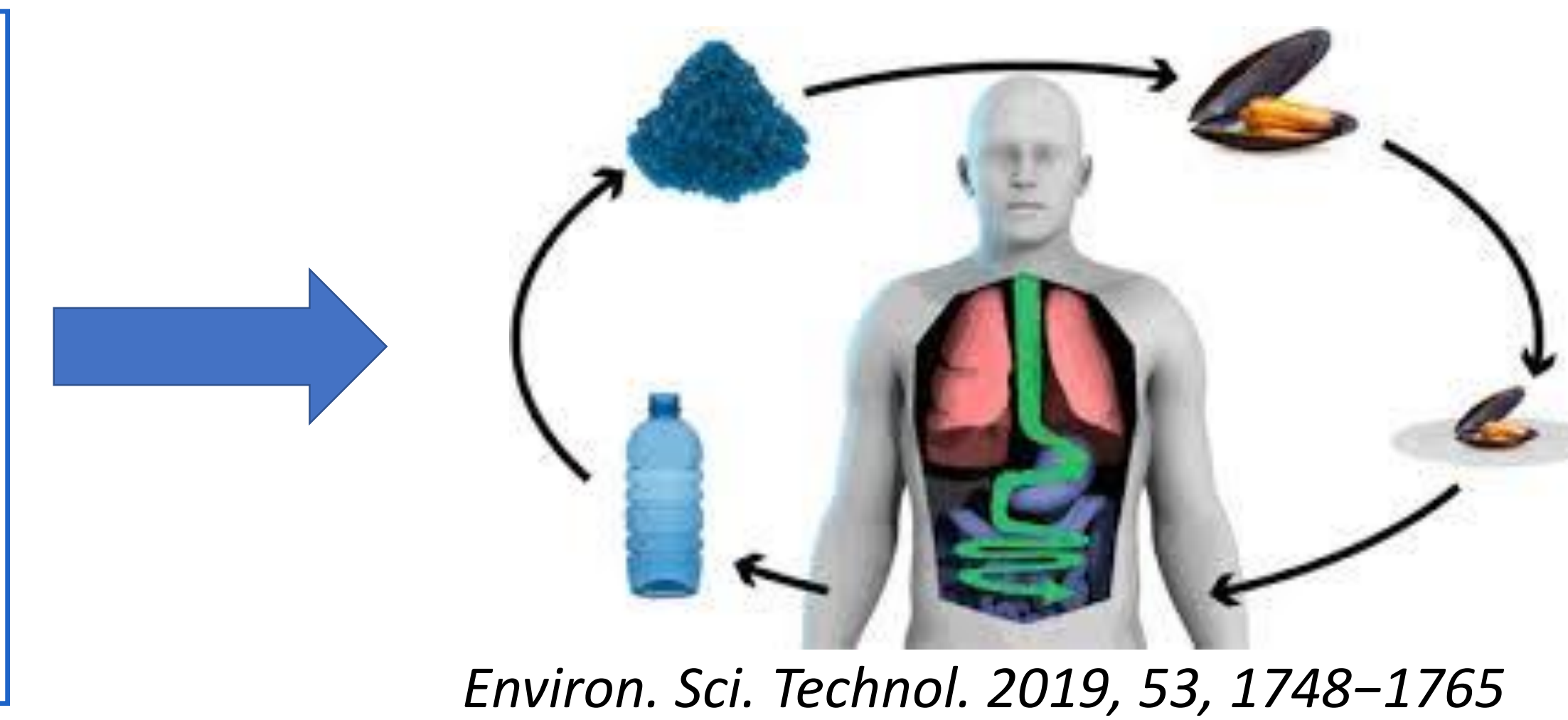
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How to rationally understand the threats of microplastics (MPs) on human health?



Table 1 Four cell lines exposed to 2- μm fluorescent PS at levels relevant for human health (10^3 - 10^7 particles/L)

Acute cellular assays Human cell lines	Mitochondrial membrane potential	Reactive oxygen species	Sulforhodamine B assay	MTT assay
A549	No effect	Adverse effect	No effect	No effect
BEAS-2B	No effect	No effect	No effect	No effect
Caco-2	No effect	Adverse effect	No effect	No effect
HepG2	No effect	No effect	No effect	No effect

Quantifying the cellular uptake and localization of MPs

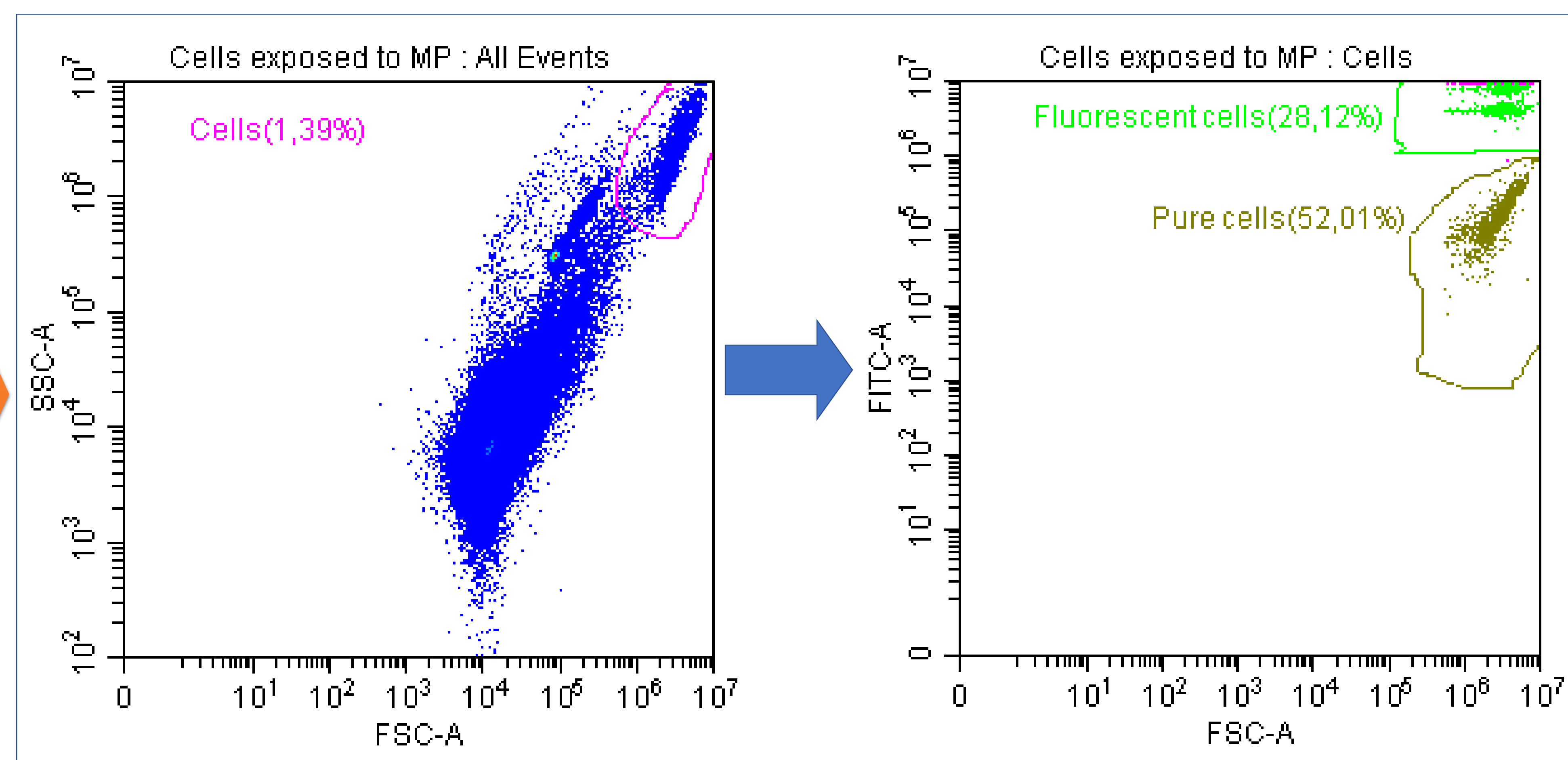


Fig. 1 The signals of human cells exposed to fluorescent MPs originated from flow cytometry.

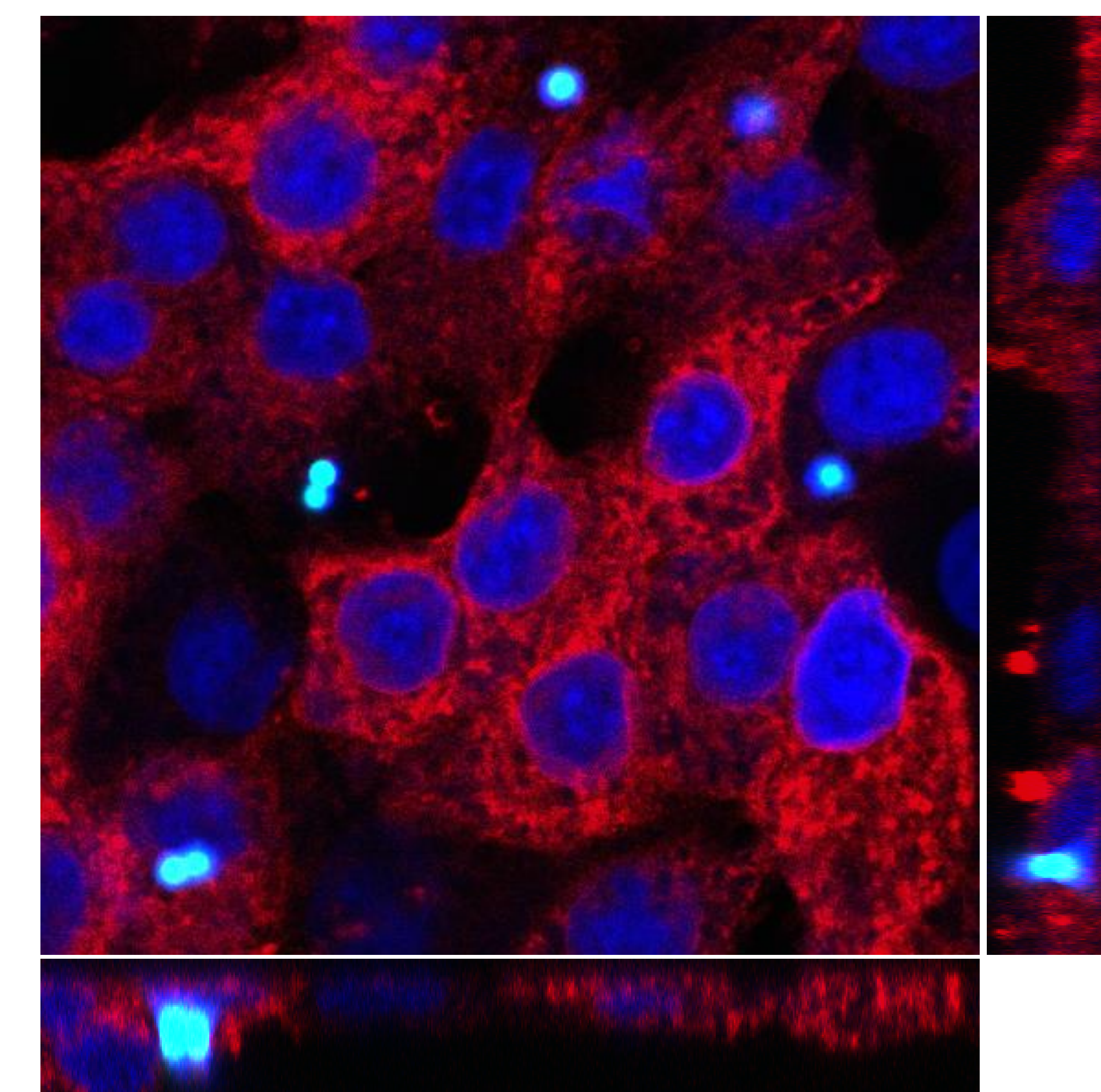


Fig. 2 Three-dimensional images of human cells exposed to fluorescent MPs taken with confocal microscopy.

MPs at levels relevant for human health can translocate into cell lines and cause certain adverse effects.

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