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Nanoparticle exposure, lipid wrapping and coagulation cascade interference

Several reports indicate strong affinity of some nanoparticles surfaces towards biological molecules such as lipids and nucleic acids. Should this affinity be strong enough to pull out the lipids from membrane or nucleic acids from nuclei and aggregate them, this can have many implications on the cellular function with mostly unpredictable adverse outcomes. In my talk, I will discuss the set of experiments that clearly prove high lipid affinity towards titanium-dioxide nanotube surface, leading to the recently discovered phenomena of lipid wrapping and its hidden biological consequence such as interference with molecular cascades that lead to development of cardio vascular disease.