

## **Title: Modulating immune cell response through Nano-Bio interaction**

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Nanoparticles exhibit distinctive physical, chemical, and biological properties attributable to the nanosize effects, thereby offering numerous advantages for biomedical applications, including drug delivery and tissue engineering. Upon administration, nanoparticles are recognized by the immune system, triggering reactions. Employing a multidisciplinary approach encompassing nanotechnology, immunology, and cell biology, we investigate the influence of diverse nanoparticles characteristics on macrophage behaviour and subsequent immune responses. This research contributes significantly to advancing our comprehension of Nano-Bio interactions in biomedicine and underscores the potential of nanomaterials for various drug delivery applications.

### **Biography**

Dr. Chun Xu is a senior lecturer and group leader at The University of Sydney. He received his Ph.D. in Biomedical Engineering and Nanotechnology at The University of Queensland, Australia in 2016. Before that, he got a M.D.S. in Oral and Maxillofacial Surgery and a B.D.S. in Dentistry from Wuhan University, China. He has published over 90 peer-reviewed scientific papers in top journals including *Angew. Chem., Adv. Mater., Chem. Mater., Small* and holds several patents. His publication has attracted more than 5200 citations with a h-index of 42. He is a regular reviewer for several scientific journals and for NHMRC and ARC grants. He also serves as editor on the ECR editorial board of *Nano-Micro Letters, National Science Review, Materials Today Bio* etc. He has received several awards such as the Young Tall Poppy Scientific Award, Frontiers Rising Star Award, U21 Health Sciences Early Career Researcher Award. He is a member of the ISO experts committee for Nanoscience and Nanotechnologies.

