Preface

Engineered nanoparticles have emerged as powerful tools in regenerative medicine immunotherapy, offering innovative strategies for targeted tissue repair and immune modulation. By precisely delivering bioactive agents, cytokines, or genetic material to damaged tissues or immune cells, these nanoparticles enhance regenerative processes while simultaneously orchestrating immune responses. Their customizable surfaces and functional cores allow for improved biocompatibility, targeted delivery, and controlled release of therapeutic payloads. In the context of immunotherapy, engineered nanoparticles facilitate immune tolerance, inflammation control, and regeneration, providing promising avenues for treating chronic wounds, autoimmune disorders, and organ damage. This work explores their pivotal role in advancing regenerative therapies.