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Cargo-free particles of ammonio methacrylate copolymers: from pharmaceutical inactive ingredients to effective anticancer immunotherapeutics

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Running headline: Potential role of ammonio methacrylate copolymer nanoparticles as cancer immunotherapeutics

Abstract

Nanoparticles create exciting platforms for anticancer immunotherapy and vaccination, though their inherent immunomodulatory properties have remained underexploited. Ammonio methacrylate copolymers (AMC) are well-established excipients in pharmaceutical industry and components of controlled-release oral formulations. Here, we demonstrate that nanoscaling of type A and B AMC (Eudragit® RL and RS) endows these inactive ingredients immunostimulatory properties exploitable for cancer therapy. The particles induce the secretion of various pro-inflammatory cytokines and chemokines from the cells of innate immunity. Though the underlying mechanisms are not fully uncovered, the current work established the partial

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