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(54) Title: COMPOSITIONS AND METHODS FOR TARGETED DELIVERY TO RETINAL CELLS

(57) Abstract: The present disclosure provides nanoparticle compositions for targeted drug delivery to retinal cells. The nanoparticles comprise a porous core that is at least partially coated with an ionic liquid. Targeting moieties conjugated to the core direct the nanoparticles to retinal cells. In one embodiment, the nanoparticle comprises polymeric bridged periodic mesoporous organosilica (PMO) - amino acid ionic liquid, linked to antibodies specific to retinal ganglion cells (RGCs). Also provided are methods of preparing the nanoparticles and methods of using the nanoparticles for treatment of retinal diseases.

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