



Development and Characterization of Biomedical Polymers



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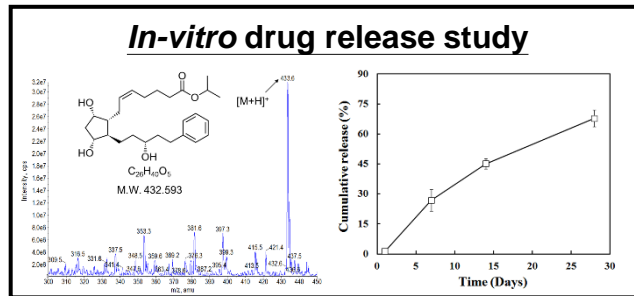
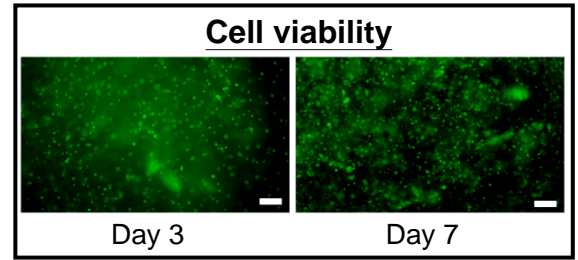
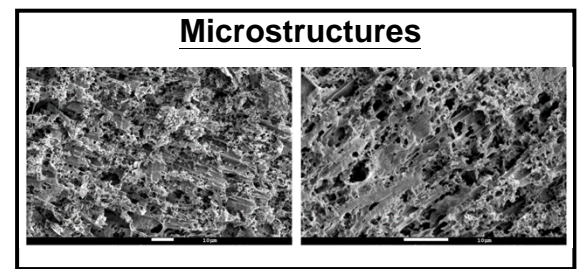
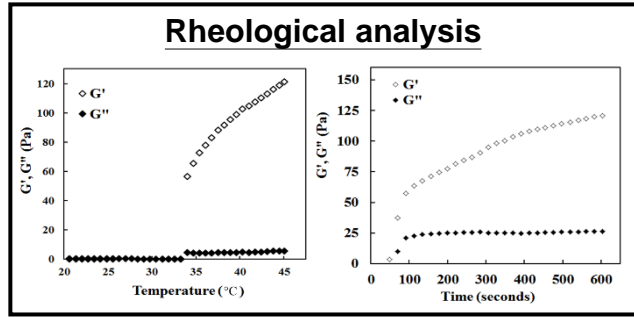
1) Thermosensitive hydrogels



Injectable

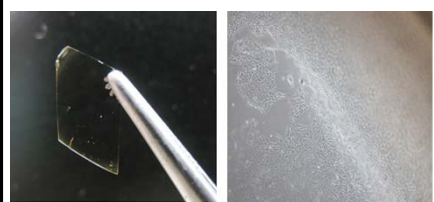


25°C 37°C



2) Polymer films

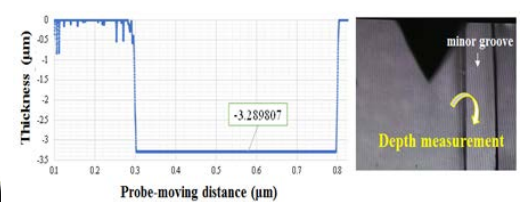
Biocompatibility



Contact angle measurement

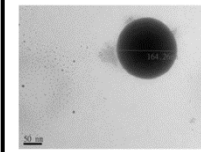


Membrane thickness (Surfcoorder)

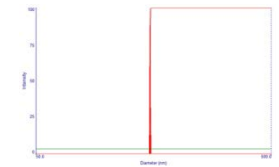


3) Nanoparticles

TEM image



Particle size distribution



Particle size (nm)	186.8 ± 4.2
Polydispersity index	0.097 ± 0.017
Zata potential (mV)	-17.48 ± 1.60



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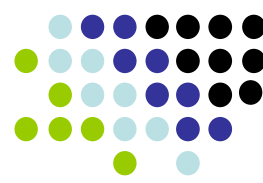
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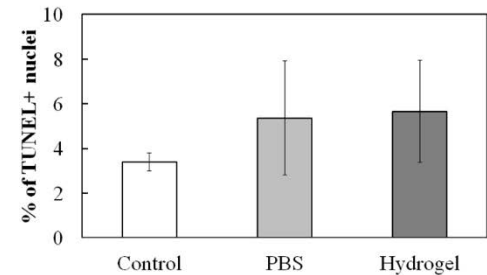
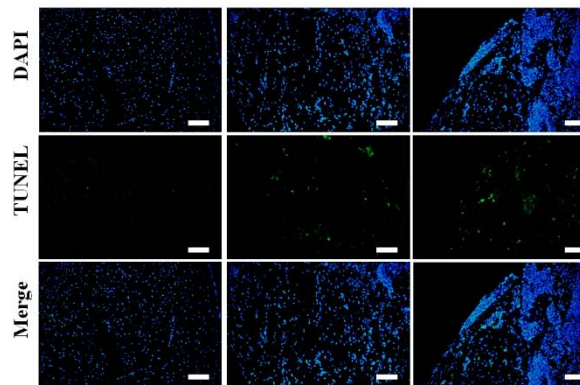
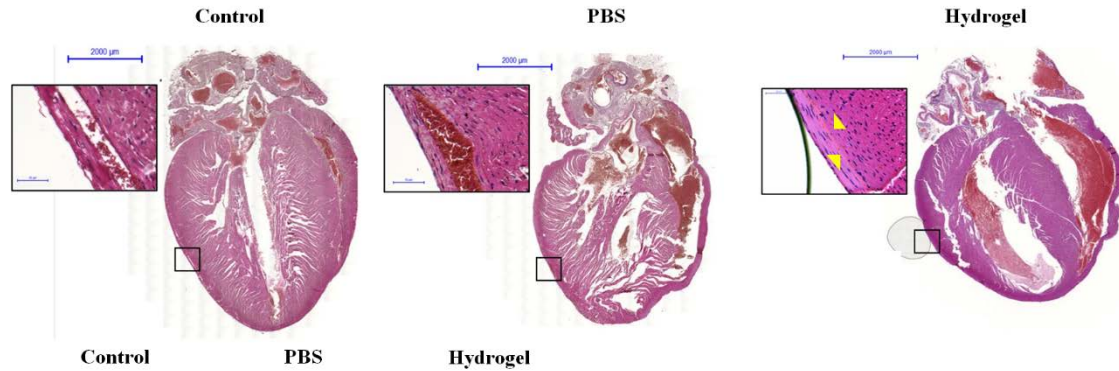
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Biomaterials for Regenerative Medicine and Drug Delivery Applications

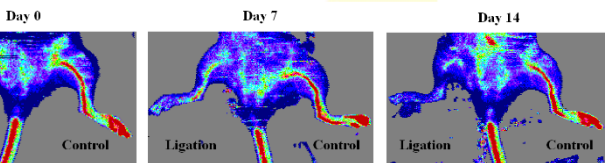
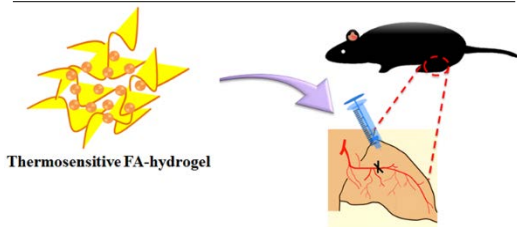


1) Cardiovascular diseases

In-vivo study: histological analysis & apoptosis assay

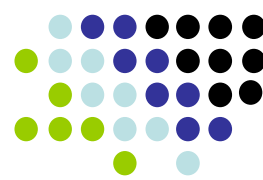


Mouse hindlimb ischemia model





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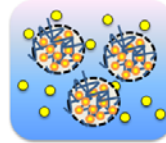
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2) Ocular diseases

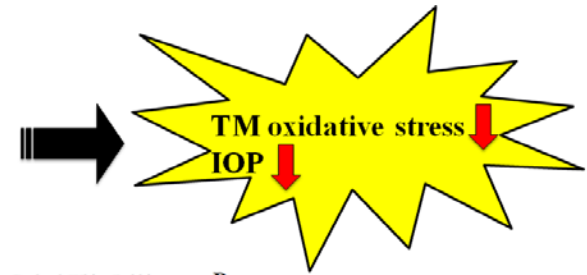
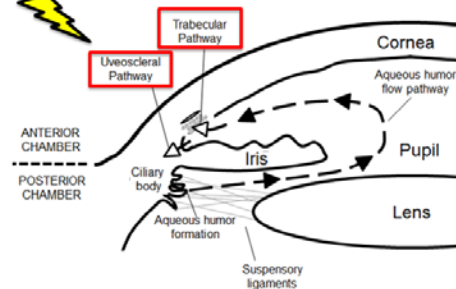
Glaucoma treatment

Dual-drug delivery system



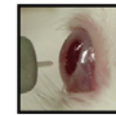
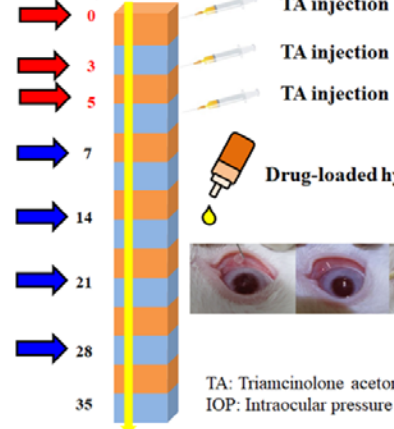
(I) Nanoparticles

(II) Hydrogels



New Zealand White Rabbit

Days

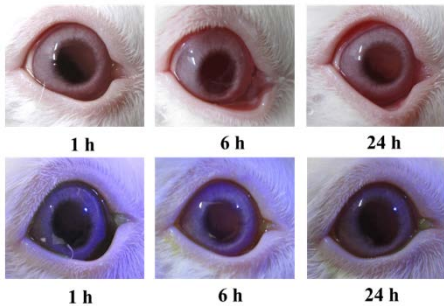


IOP measurement

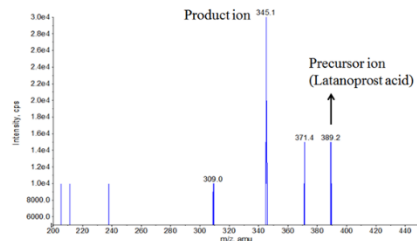


TA: Triamcinolone acetonide
IOP: Intraocular pressure

In-vivo biocompatibility



(a)



In-vivo drug release study

(b)

