



Publications Template

#	Research Title	Field	Abstract	Year of Publication Publishing	Publishing Link "URL"
1	Thymoquinone improves the kidney and liver changes induced by chronic cyclosporine A treatment and acute renal ischaemia/reperfusion in rats	Pharmacology & Experimental Therapeutics	<p>Objectives This study was designed to evaluate the effects of chronic cyclosporine A (CsA) treatment and acute renal ischaemia/reperfusion (I/R) on the kidney and liver in thymoquinone (TQ)-treated rats.</p> <p>Methods In the CsA study, adult male rats were divided into control, CsA (25 mg/kg per day), TQ (10 mg/kg per day) and CsA + TQ groups, and rat treatment was for 28 days. In the I/R study, adult male rats were divided into sham-operated, I/R (renal ischaemia for 60 min followed by 60 min reperfusion) and TQ + I/R (TQ 10 mg/kg, 24 h and 1 h before ischaemia) groups.</p> <p>Key findings CsA treatment and renal I/R caused kidney and liver dysfunction as evaluated by histopathological changes and</p>	2015	https://doi.org/10.1111/jphp.12363

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			<p>biochemical parameters. TQ treatment reduced elevated serum indices back to control levels and ameliorated CsA-induced kidney and liver histopathological changes. In renal and hepatic tissues, CsA and renal I/R induced significant increases in malondialdehyde levels with significant decreases in reduced glutathione levels and superoxide dismutase activities. Such changes in oxidative stress markers were counteracted by TQ treatment.</p> <p>Conclusions Kidney and liver injury due to CsA or renal I/R can be significantly reduced by TQ, which resets the oxidant/antioxidant balance of the affected organs through scavenging free radicals and antilipoperoxidative effects.</p>		
2	<p>Design of Targeted Flurbiprofen Biomimetic Nanoparticles for Management of Arthritis: In Vitro and In Vivo Appraisal</p>	<p>Pharmaceutics, Nonoformulation Pharmacology & Experimental Therapeutics</p>	<p>Flurbiprofen (FLUR) is a potent non-steroidal anti-inflammatory drug used for the management of arthritis. Unfortunately, its therapeutic effect is limited by its rapid clearance from the joints following intra-articular injection. To improve its therapeutic efficacy, hyaluronic acid-coated bovine serum albumin nanoparticles (HA-BSA NPs) were formulated and loaded with FLUR to</p>	2022	<p>https://doi.org/10.3390/pharmaceutics14010140</p>



achieve active drug targeting. NPs were prepared by a modified nano-emulsification technique and their HA coating was proven via turbidimetric assay. Physicochemical characterization of the selected HA-BSA NPs revealed entrapment efficiency of $90.12 \pm 1.06\%$, particle size of 257.12 ± 2.54 nm, PDI of 0.25 ± 0.01 , and zeta potential of -48 ± 3 mv. The selected formulation showed in-vitro extended-release profile up to 6 days. In-vivo studies on adjuvant-induced arthritis rat model exhibited a significant reduction in joint swelling after intra-articular administration of FLUR-loaded HA-BSA NPs. Additionally, there was a significant reduction in CRP level in blood as well as TNF- α , and IL-6 levels in serum and joint tissues. Immunohistochemical study indicated a significant decrease in iNOS level in joint tissues. Histopathological analysis confirmed the safety of FLUR-loaded HA-BSA NPs. Thus, our results reveal that FLUR loaded HA-BSA NPs have a promising therapeutic effect in the management of arthritis.