

## Supporting Information

### **Coordination-Driven Self-Assembly of Antioxidative and Anti-inflammatory Cerium–Luteolin Nanoparticles for Effective Treatment of Ocular Alkali Burns**

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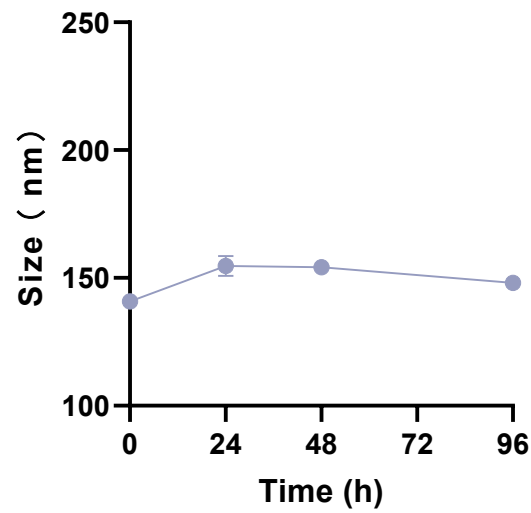
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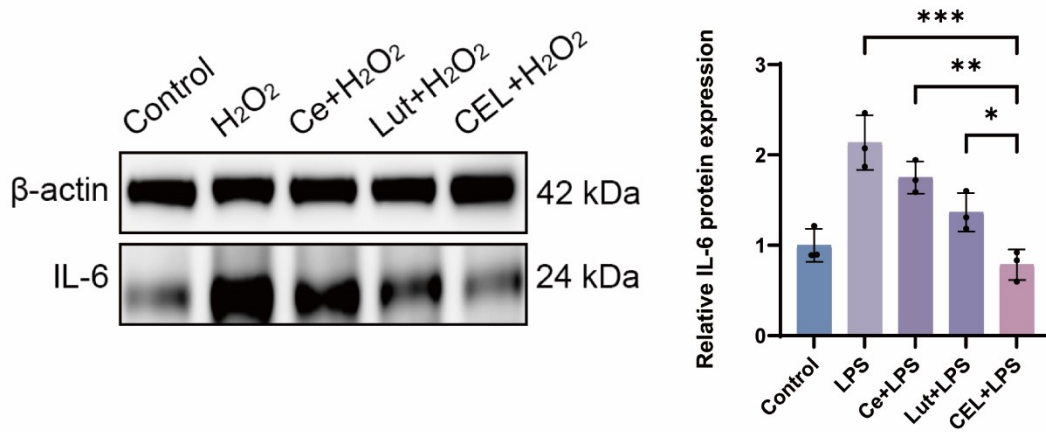
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**Table S1.** PCR primers for macrophages in this study

Gene	Forward primer (5'-3')	Reverse primer (5'-3')
IL-1 $\beta$	AGAGCATCCAGCTTCAAAT	CATCTCGGAGCCTGTAGTG
IL-6	GAGGATACTCACTCCCAACAGACC	AAGTGCATCATCGTTGTTTCATACA
IL-10	GCTCTTACTGACTGGCATGAG	CGCAGCTCTAGGAGCATGTG
$\beta$ -actin	GGCTGTATTCCCCTCCATCG	CCAGTTGGTAACAATGCCATGT



**Figure S1.** Hydrodynamic size of CEL NPs measured by DLS over 96 hours.



**Figure S2.** Western Blot and quantitative analysis of key protein expression levels (IL-6) in the NF- $\kappa$ B signaling pathway after different treatments in HCECs cells. (n = 3, \*p < 0.05, \*\*P < 0.01, \*\*\*P < 0.001).

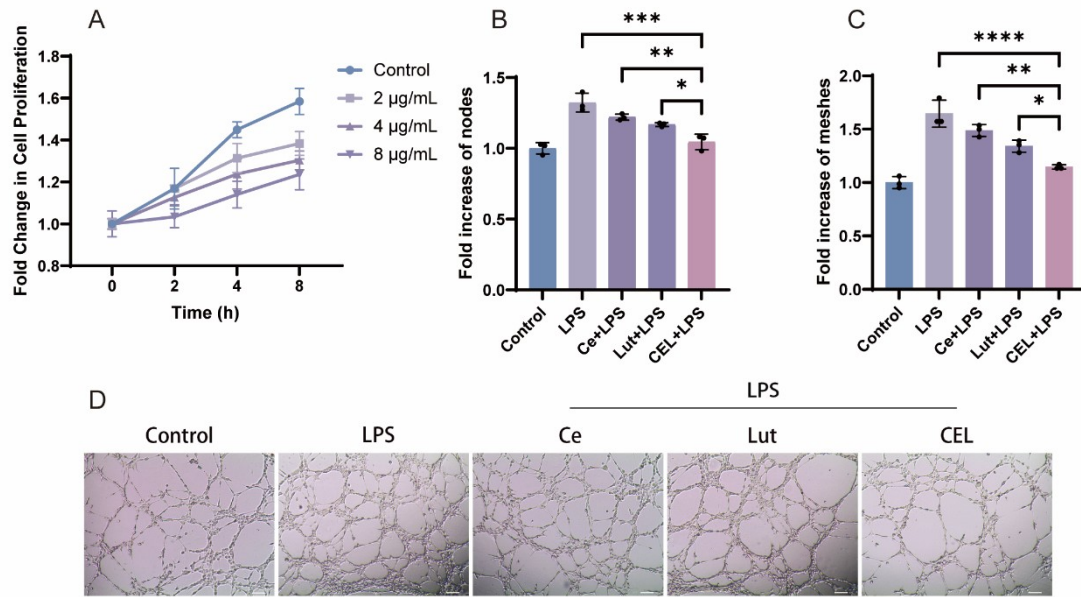


Figure S3. A) Cell proliferation of HUVECs after different treatments. Quantitative analysis of the numbers of nodes (B) and meshes (C). D) Images of tube formation assay in HUVECs after different treatments. (scale bar = 50 µm). (n = 3, \*p < 0.05, \*\*P < 0.01, \*\*\*p < 0.001, \*\*\*\*p < 0.0001, ns = no significance). [LPS] = 500 ng/mL, [CEL NPs] = 5 µg/mL. The concentrations of Ce ions and luteolin were fixed at an equivalent concentration of CEL NPs.

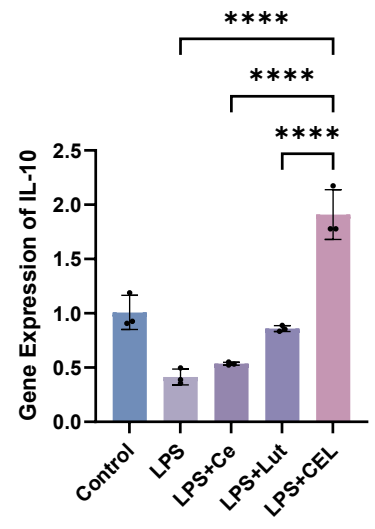
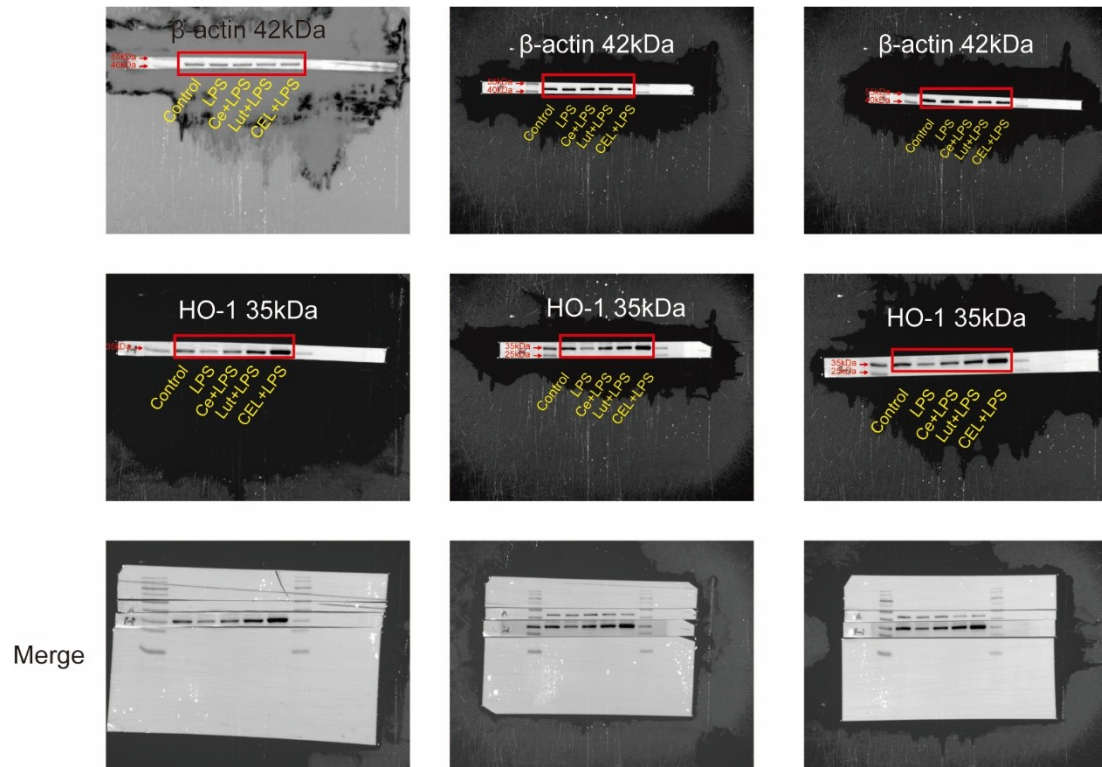


Figure S4. Anti-inflammatory cytokines expression in macrophages subsequent to treatment with diverse drug formulations. The mRNA levels of proinflammatory

factors (IL-10) in RAW264.7 cells were assessed using RT-qPCR.. (n = 3, \*\*\*P < 0.001).



$\beta$ -actin 42kDa



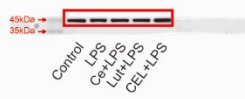
IL-6 24kDa



Merge



$\beta$ -actin 42kDa



IL-6 24kDa



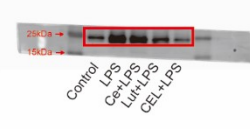
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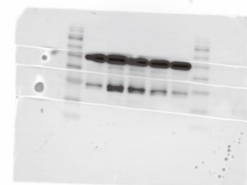
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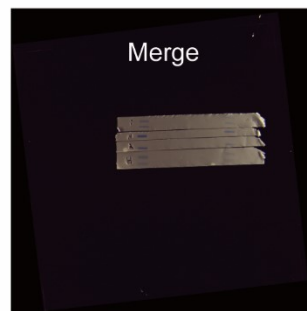
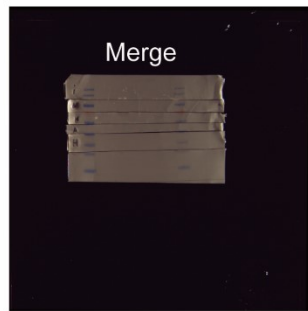
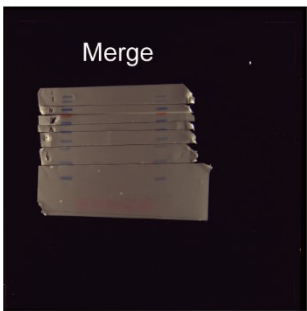
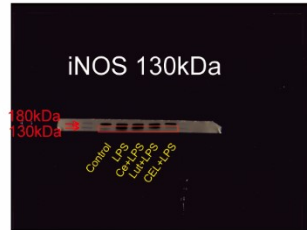
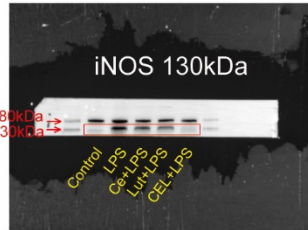
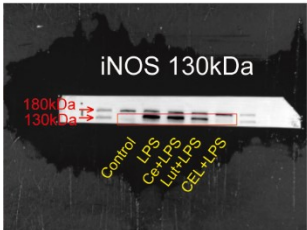
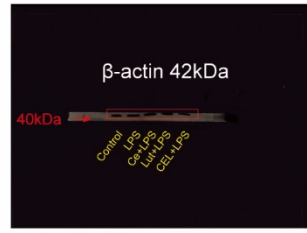
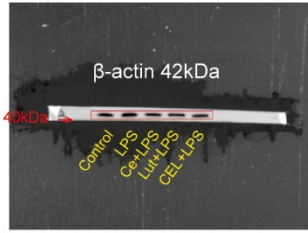
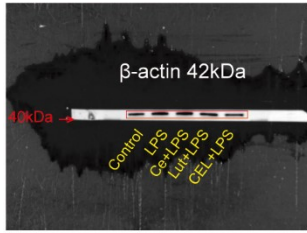


IL-6 24kDa



Merge







**Figure S5.** Original blots.