

1 **Gold nanorod-loaded nano-contrast agent with**
2 **composite shell-core structure for**
3 **ultrasonic/photothermal imaging-guided therapy in**
4 **ischemic muscle disorders**

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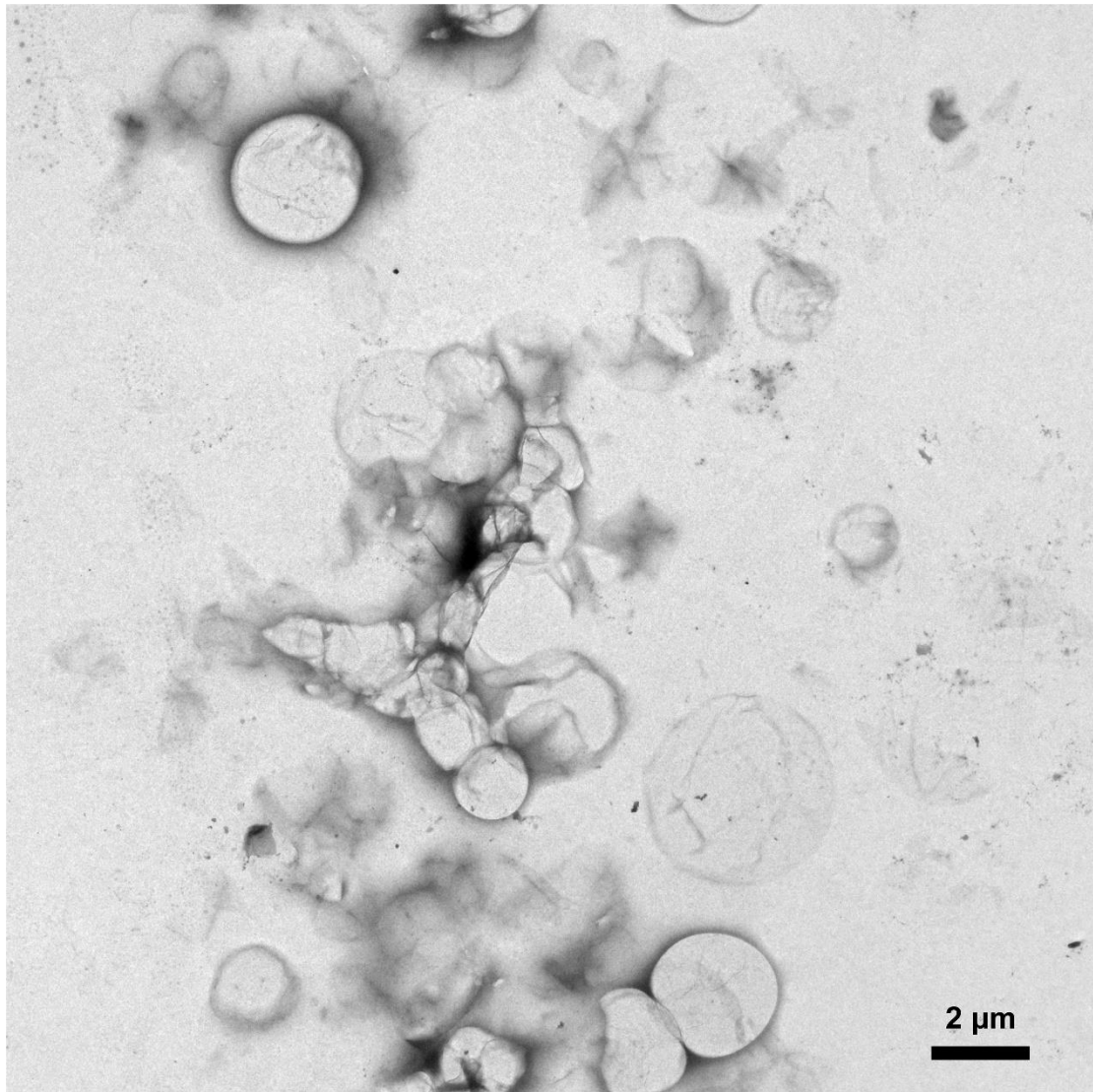
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22 **Supplementary Information**



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24 **Supplementary Figure 1** TEM image of Sonazoid at low magnification. Scale

25 bar=2 μm.

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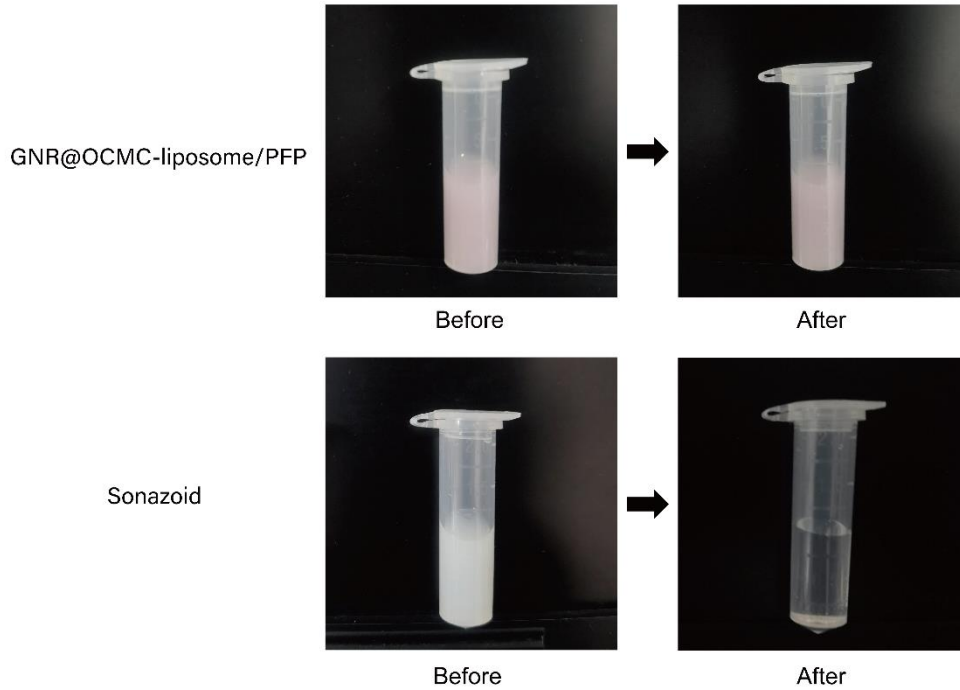
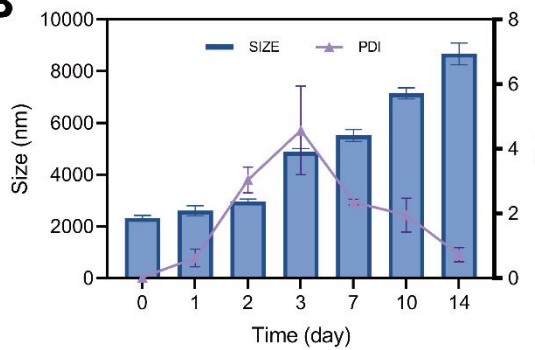
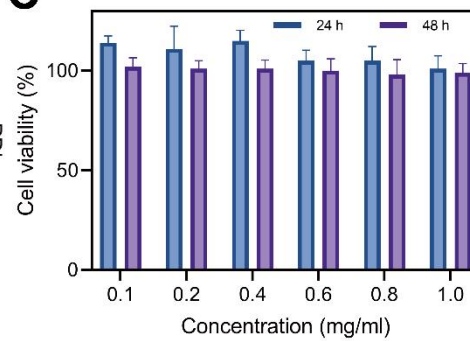
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A**B****C**

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33 **Supplementary Figure 2** (A) The visual observations of GNR@OCMC-

34 liposome/PFP and Sonazoid at the beginning and end of the evaluation

35 period; (B) Plots showing the size of Sonazoid and its PDI with time at 4°C;

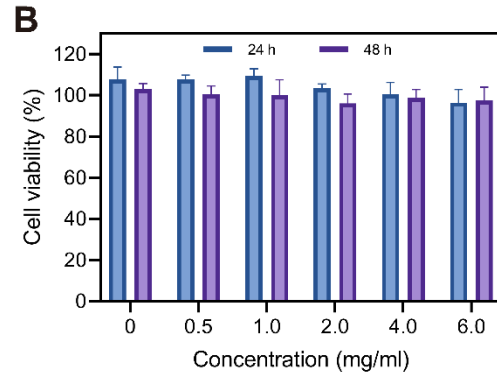
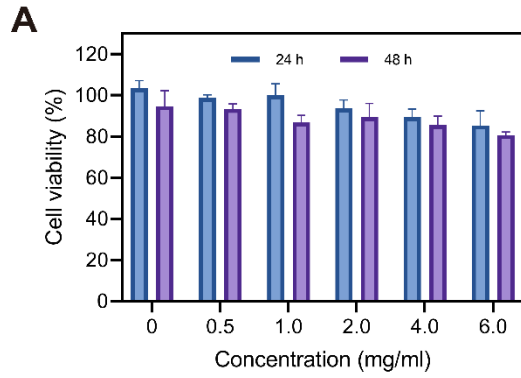
36 (C) Changes in C2C12 cell viability after 24 h and 48 h incubation with

37 Sonazoid.

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42 **Supplementary Figure 3** (A) Changes in C2C12 cell viability after 24 h and

43 48 h incubation with GNR@OCMC-liposome/PFP (0-6mg/ml); (B) Changes in

44 C2C12 cell viability after 24 h and 48 h incubation with Sonazoid (0-6mg/ml).

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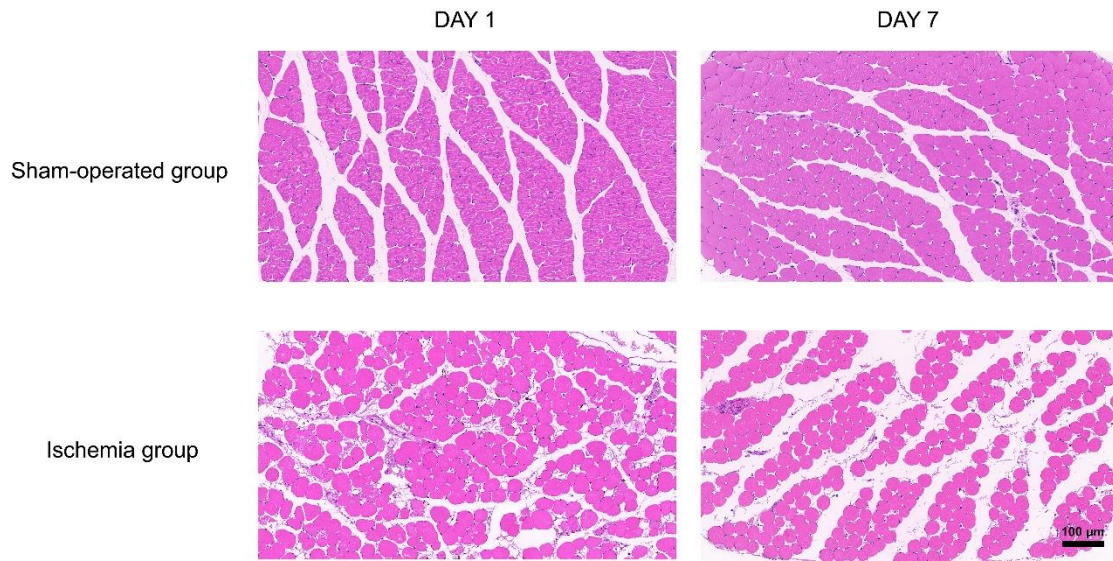
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60 **Supplementary Figure 4** H&E staining results of the left hindlimb muscles of
61 the sham-operated and ischemia groups at postoperative days 1 and 7. Scale
62 bar=100 μm.

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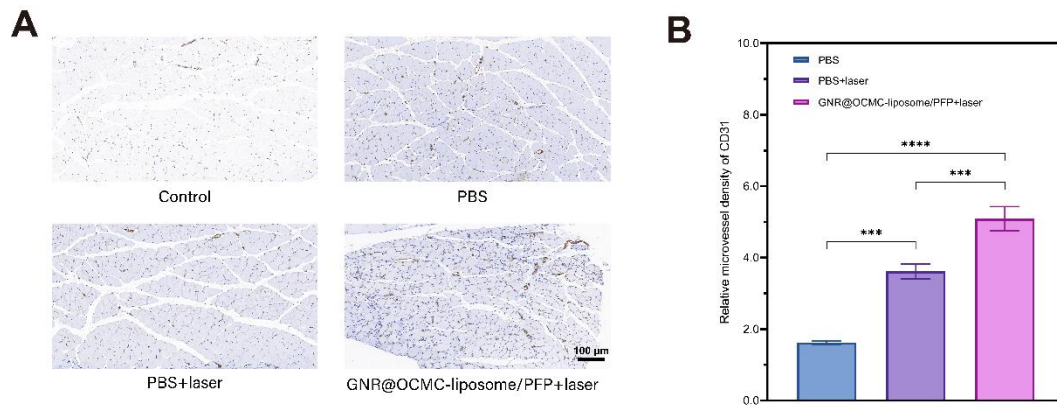
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76 **Supplementary Figure 5** (A) Immunohistochemical results of CD31 in the left

77 hind limb muscle of mice in each group on day 7; (B) Quantification of relative

78 microvessel density as reflected by CD31 expression in each group compared

79 to the control group. *** indicates $P < 0.001$. Scale bar=100 μm.

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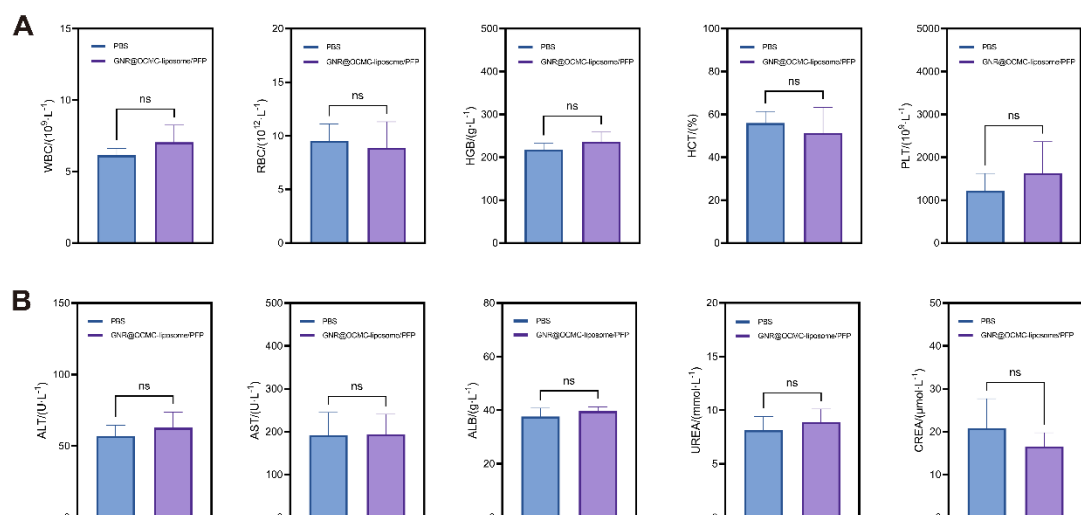
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93 **Supplementary Figure 6 (A)** Hematological analyses of normal mice after 48

94 hours of injection of PBS and GNR@OCMC-liposome/PFP (WBC: white blood

95 cells; RBC: red blood cells; HGB: hemoglobin; HCT: hematocrit; PLT:

96 platelets). (B) Serum biochemical analyses of normal mice after 48 hours of

97 injection of PBS and GNR@OCMC-liposome/PFP (ALT: alanine

98 transaminase; AST: aspartate transaminase; ALB: albumin; UREA: blood

99 urea; CREA: creatinine). ns indicates that the difference was not statistically

100 significant.