Supplementary material

1. Toxicology of naringin in Zebrafish Larvae.

The toxicology of naringin was evaluated by counting the survival rate, heart rate, body length, morphology and liver changes of zebrafish larvae immersed in naringin of different concentrations. The zebrafish (5 dpf) were treated with naringin for 72 h. Within the designed concentration range, no abnormality in morphology, body length, liver development and survival rate were observed in the zebrafish larva (Fig. S1 A, B, D). This indicated that naringin had no toxic effect during the development of zebrafish. It is worth noting that in the heart rate test, 100 μg/ml naringin had significant effect on heart rate of zebrafish larvae (Fig. S1C). According to the preliminary research results, we found that naringin was safe. Then, we chose 15, 30, 60 μg/ml naringin for the next experiment.

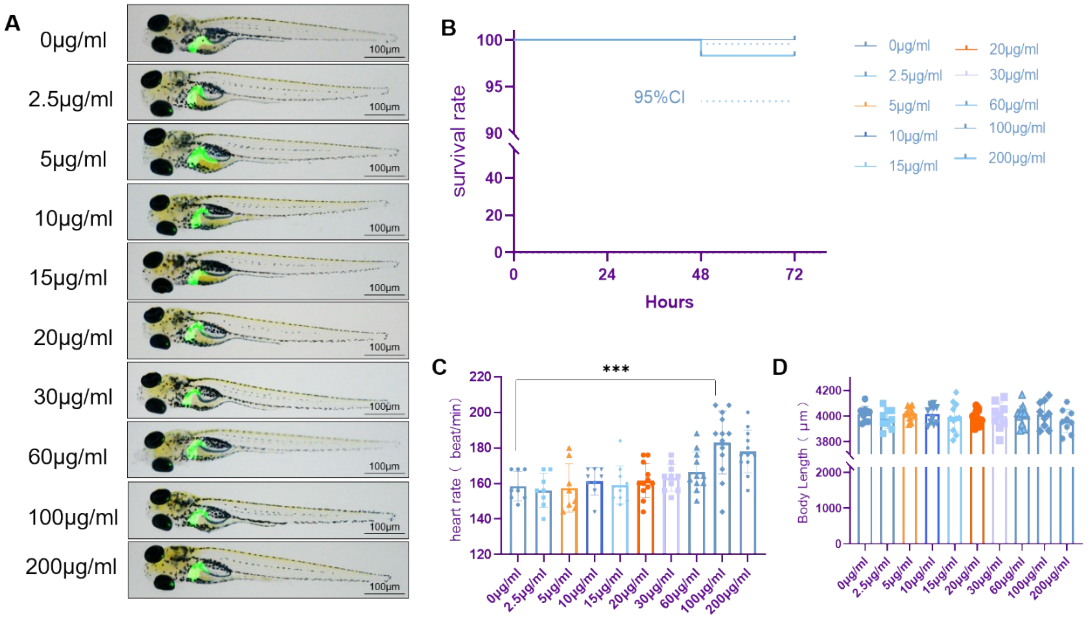

Figure S1. Toxicology of naringin in Zebrafish Larvae. (a) The effect of zebrafish larvae exposed to different concentrations of naringin for 72 h on zebrafish larval morphology and liver development (n = 6). Figures are magnified as ×20. (b) The effect of different concentrations of naringin on the survival rate of zebrafish larvae (n = 40). (c) Heart rates of zebrafish larvae exposed to different concentrations of naringin (n = 8). (d) The body length of zebrafish larvae exposed to different concentrations of naringin (n = 8). ***$p < 0.001$.