Quercetin Reduces Inflammatory Pain: Inhibition of Oxidative Stress and Cytokine Production

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Figure S1. The antihypernociceptive effect of quercetin (1) depends on pré-treatment time. Mice were treated with 1 (100 mg/kg, 30 min, intraperitoneal) or vehicle (Tween 80 20% in saline) at different time points (12, 6 or 3 h, or 30 min) before the subcutaneous plantar injection of carrageenin (100 µg/paw). The intensity of hypernociception was measured 1, 3 and 5 h after carrageenin injection by the electronic pressure-meter test (n = 5). [*p < 0.05 compared with the saline group, **p < 0.05 compared to the vehicle group (one-way ANOVA followed by Tukey test)].
Figure S2. Quercetin (1) inhibits carrageenin-induced paw edema. Mice were treated with 1 (100 mg/kg, 30 min, intraperitoneal) or vehicle (Tween 80 20% in saline) before the subcutaneous plantar injection of carrageenin (100 µg/paw). The paw edema was evaluated 30 min, 1, 2 and 3 h after stimulus injection using a calliper (n = 5). [* p < 0.05 compared with the saline group, ** p < 0.05 compared to the vehicle group (one-way ANOVA follewed by Tukey test)].
Figure S3. Treatment with quercetin (1) treatment did not affect carrageenin-induced neutrophil recruitment or TNFα and CXCL1 production. Mice were treated with 1 (100 mg/kg, 30 min, intraperitoneal, 30 min) or vehicle (Tween 80 20% in saline) before the subcutaneous plantar injection of carrageenin (100 µg/paw). Three hours after carrageenin injection, mice were sacrificed and paw skin samples were collected for the determination of myeloperoxidase activity (Panel A), and TNFα (Panel B) and CXCL1 (Panel C) production (n = 5). [* p < 0.05 compared with the saline group (one-way ANOVA followeed by Tukey test)].
Figure S4. Treatment with quercetin (1) did not reduce TNFα- and CXCL1-induced neutrophil recruitment or the hypernociception induced by direct-acting hypernociceptive mediators (PGE₂ and dopamine). Mice were treated with 1 (100 mg/kg, 30 min, intraperitoneal) or vehicle (Tween 80 20% in saline) before cytokine (TNFα 300 pg/paw or CXCL1 20 ng/paw, Panel A), PGE₂ (100 ng/paw, Panel B) or dopamine (10 µg/paw, Panel B) injection. The myeloperoxidase activity was determined in samples of paw skin collected 3 h after cytokine injection (Panel A). The intensity of mechanical hypernociception was measured 3 h after stimulus injection by the electronic pressure-meter test (Panel B). \( n = 5 \). \( * \) \( p < 0.05 \) compared with the saline group (one-way ANOVA followed by Tukey test).