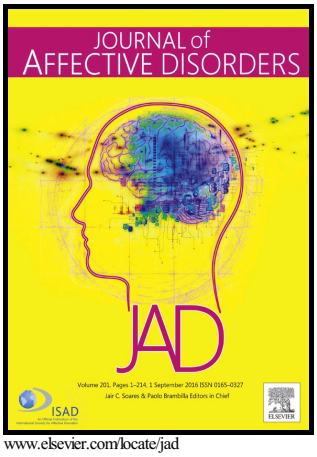


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# *Effects of macrophage migration inhibitory factor on cardiac reperfusion injury in mice with depression induced by constant-darkness*

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**ABSTRACT**

**Rationale**

Depression is associated with coronary artery disease and increases adverse outcomes and mortality in patients with acute myocardial infarction, but the underlying pathophysiological mechanisms remain unclear.

**Objective**

To evaluate the effect of macrophage migration inhibitory factor (MIF) on cardiac ischemia-reperfusion (I/R) injury in mice with constant darkness-induced depression.

**Methods and Results**

Twenty C57BL/6 mice (8 weeks old, male) were randomly divided into 2 groups: one group was housed in a 12 h light/dark cycle environment (LD) and the other in a constant darkness environment (DD). After 3 weeks, constant darkness-exposed (DD) mice displayed depression-like behavior as indicated by increased immobility in the forced swim test (FST) and lower sucrose preference rate. Western blotting revealed cardiac MIF expression was significantly lower in the DD mice than that in the LD mice. Next, 84 mice were randomly divided into 4 groups: LD sham group, LD I/R

[1] These two authors contributed equally to this work.