Inhibition of MIF as Novel Treatment for Autoimmune Myocarditis and Dilated Cardiomyopathy

Dilated cardiomyopathy (DCM) is a frequent and often fatal sequel of myocarditis and accounts for approximately 5% of the 5.8 million cases of heart failure (HF) in the United States alone. Half of the DCM patients survive less than 4 years after diagnosis. It is believed that progression of myocarditis to DCM is often mediated by an autoimmune attack on the heart, but for unknown reasons immunosuppressive treatments are not effective. Here, we will provide evidence that the cytokine macrophage migration inhibitory factor (MIF) plays a key role in resistance to immunosuppressive treatment and we will present a novel approach to prevent DCM by targeting the MIF/corticosteroid axis.