Online Supplement:

The TNF-a antagonist etanercept decreases blood pressure and protects the kidney in a mouse model of systemic lupus erythematosus

Marcia Venegas-Pont ¹, Michaele B. Manigrasso ¹, Samira C. Grifoni ¹, Babbette B. LaMarca ¹, Christine Maric ¹, Lorraine C. Racusen ², Porter H. Glover ¹, Allison V. Jones ¹, Heather A. Drummond ¹ and Michael J. Ryan ¹

¹ Department of Physiology and Biophysics and the Center for Excellence in Cardiovascular Renal Research, University of Mississippi Medical Center, Jackson, MS.

² Department of Pathology, Johns Hopkins Hospital, Baltimore, MD.

Running Title: Role of TNF-a in SLE Hypertension

To whom correspondence should be addressed: Michael J. Ryan, Ph.D.
Associate Professor
University of Mississippi Medical Center
Department of Physiology & Biophysics
2500 North State St.
Jackson, MS 39216-4505

Office: 601/984-1842 Lab: 601/815-4856 Fax: 601/984-1817

mjryan@physiology.umsmed.edu

% Change in Body Weight Ctrl+Veh Ctrl+Etan SLE+Veh SLE+Etan Time (weeks)

Figure S1. Percent change in body weight over the course of the experiment. Etanercept treatment did not affect body weight change in SLE or in CTRL mice. (Ctrl+Veh n=11, Crtl+Etan n=12, SLE+Veh n=10, SLE+Etan n=9) * p<0.05 vs Ctrl+Veh and Ctrl+Etan, # p<0.05 vs Ctrl+Etan

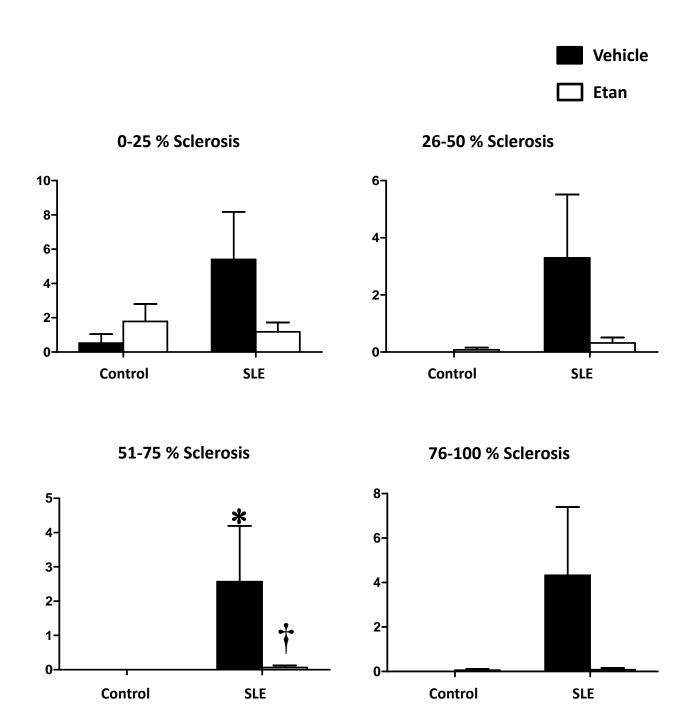


Figure S2. Complete glomerulosclerosis data for all categories of scoring. This method was described previously (Reference 18) and divides the groups based on the percent area of the glomerulus that is slerotic. The glomeruli with 51-75% sclerotic area is shown in the manuscript (Figure 3) because this data reached a statistically signficant difference. *p<0.05 vs. Ctrl+Veh, † p<0.05 vs. SLE+Veh. (Ctrl+Veh n=6, Crtl+Etan n=10, SLE+Veh n=8, SLE+Etan n=9)

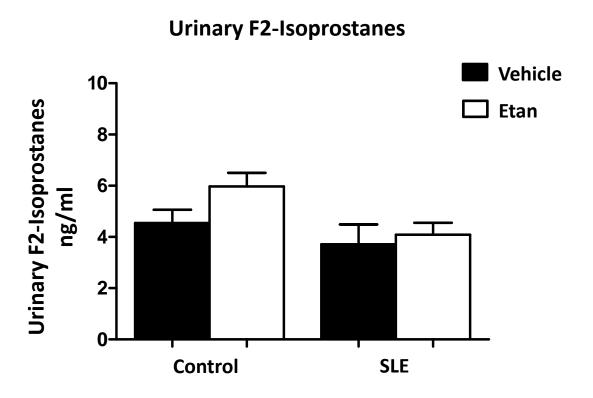


Figure S3. Urinary F2-isoprostanes were measured using a commercially ELISA as a marker of whole body oxidative stress. There was no statistical difference between the groups. (Ctrl+Veh n=9, Crtl+Etan n=7, SLE+Veh n=8, SLE+Etan n=10)

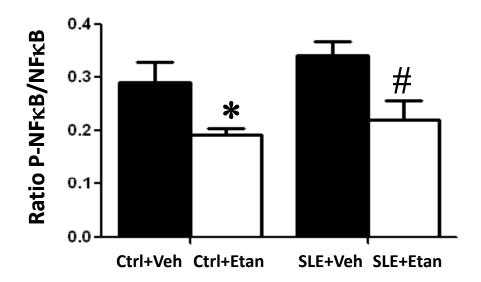


Figure S4. The ratio of P-NF κ B to non-phosphorylated protein expression (representing the relative activation of P-NF κ B) was significantly reduced in the renal cortex of both etanercept-treated SLE mice and etanercept-treated control mice. *p<0.05 vs. Ctrl+Veh, # p<0.05 vs. SLE+Veh (n=4 per group)

Urinary MCP-1

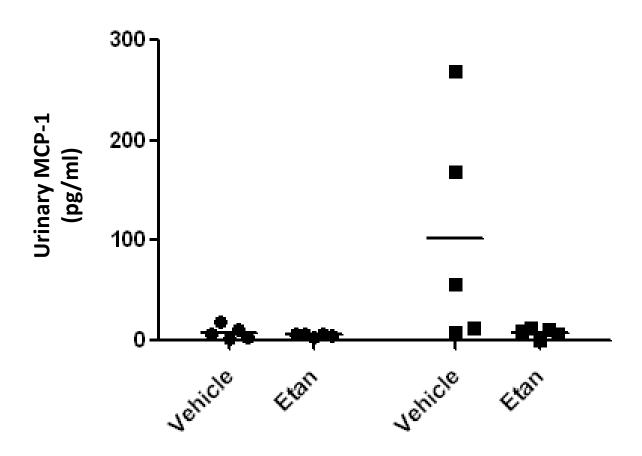


Figure S5. Urinary MCP-1 levels in SLE and Ctrl mice treated with vehicle or etanercept. Due to the large variability in the amount of urinary MCP-1, a statistical difference was not observed. However, 3 out of 5 mice from SLE+Veh had increased MCP-1 whereas MCP-1 was not elevated from any of the other mice in this experiment. (Ctrl+Veh n=5, Crtl+Etan n=5, SLE+Veh n=5, SLE+Etan n=5).