# Multiplex immunoassay detection of autoimmune disease autoantibodies in serum and plasma

Brooke Gilliam1, Danielle Pepin1, Terry Moore2, Qiang Xiao1

1MilliporeSigma, St. Louis, MO; 2Saint Louis University School of Medicine, St Louis, MO

Autoantibody formation is principal to the pathogenesis of a variety of autoimmune diseases. Dysregulated apoptosis and the subsequent defective clearance of cellular debris leads to the exposure of

autoantigens and the generation of autoantibodies. The presence of autoantibodies may indicate disease activity, prognosis, and clinical associations related to a variety of autoimmune diseases, including

systemic lupus erythematosus (SLE), Sjögren’s Syndrome, Systemic Sclerosis, Polymyositis (PM)/Dermatomyositis, and various overlap syndromes of these diseases. Here we report the development of a

multiplex immunoassay to monitor 20 autoantibodies present in blood that are involved in a variety of autoimmune diseases: SSA/Ro60, SSA/Ro52, SSB/La, RNP, RNP/Sm, Sm, Ribosomal P, Proteinase 3,

Myeloperoxidase, PCNA, β2-Glycoprotein, CENP-A, CENP-B, Scl-70, Jo-1, C1q, PM/Scl-100, Ku, Mi-2, and PL-12.