• Flow rate (10mm/s)

• Lymph flow responds to sympathetic stimulation
• An α-adrenergic and purinergic (ATP) excitatory mechanism exist
• A β-adrenergic inhibitory mechanism exists

• Inflammatory cytokines stimulate the lymphatic pump system (stroke volume)
  – Benoit and Zawieja, 1992
  – Olszewski et al., 2001

Lymphatics carry cytokines away from the site of inflammation

• Proinflammatory cytokines
  – Interleukin-1
  – Interleukin-6
  – Tumor necrosis factor-alpha (TNFα)

Anti-inflammatory cytokines
  – Interleukin-4
  – Interleukin-10