Table S1. The Spectrum of Autoinflammatory Diseases¹

**Classic Autoinflammatory Diseases**
- Familial Mediterranean Fever (Masters et al., 2009; Mitroulis et al., 2008)
- Cryopyrin Associated Periodic Syndromes (Goldbach-Mansky et al., 2006; Hoffman et al., 2008; Lachmann et al., 2009)
- Hyper IgD Syndrome, Mevalonic Aciduria (Bodar et al., 2005, 2009)
- Adult and Juvenile Still's Disease (Fitzgerald et al., 2005; Pascual et al., 2005)
- Behçet's Disease (Botsios et al., 2008)
- Schnitzler's Syndrome (De Koning et al., 2005; Eiling et al., 2007)
- TNF Receptor-Associated Periodic Syndrome (Simon et al., 2004)

**Probable Autoinflammatory Diseases**
- Macrophage Activation Syndrome (Kelly and Ramanan, 2008; Chou et al., 2010)
- Urticular Vasculitis (Botsios et al., 2007)
- Anti-synthetase Syndrome (Furlan et al., 2008)
- Relapsing chondritis (Chauffier et al., 2009)
- PAPA Syndrome; Blau’s Syndrome; Sweet’s Syndrome (Brenner et al., 2009)

**Common Diseases Mediated by IL-1β**
- Urate Crystal Arthritis (gout) (So et al., 2007; Terkeltaub et al., 2009)
- Type 2 Diabetes (Donath et al., 2009; Larsen et al., 2009; Larsen et al., 2007)
- Smoldering Multiple Myeloma (Lust et al., 2009)
- Post-myocardial infarction heart failure (Abbate et al., 2010)
- Osteoarthritis (Chevalier et al., 2009)

¹Each responsive to reduction in IL-1β activity
²CAPS is a grouping of Familial Cold Autoinflammatory Syndrome, Muckle-Wells Syndrome and Neonatal Onset Multi-inflammatory Disease

**Supplemental References**


Table S2. Anti-inflammatory and Immunosuppressive Properties of HDAC Inhibitors

Systemic Inflammation
Improved survival following hemorrhage
Decreased cytokinemia following systemic endotoxin
Decreased nitric oxide production
Protection against hepatitis following intravenous Concanavalin A

In vitro cytokine production
Decreased gene expression and synthesis of endotoxin-induced TNFα and IFNγ in human monocytes
Decreased production of IL-6 in PBMC stimulated with IL-12 plus IL-18
Decreased processing and secretion of IL-1β
Increased production of IL-1 receptor antagonist and IL-10
Decreased IL-12 production from dendritic cells
Decreased IL-12-induced IFNγ production

Models of inflammatory bowel disease
Reduced disease severity in Dextran Sodium Sulfate and TNBS colitis
Decreased cytokine levels in colitis model

Immuno suppressive and anti-inflammatory properties
Survival benefit in graft versus host disease
Sparing effect on graft versus leukemia
Increased Foxp3 cells in collagen-induced arthritis and islet allografts
Tolerance in islet allograft transplantation
Inhibition of IDO and dendritic cell maturation
Reduced nephritis in lupus prone mice
Decrease disease severity in experimental allergic encephalitis

Models of arthritis
Reduced joint destruction in collagen-induced arthritis
Less bone and cartilage loss
Lower cytokine and chemokine levels

Brain and Neurological Systems
Improved neurological recovery after closed head trauma
Reduced gliosis
Reduced brain infarct after cerebral artery occlusion
Decreased disease severity in models of Huntington’s disease
Reduced loss of function in models of muscular dystrophy
Reduced loss of function in model of amyotrophic lateral sclerosis

Models of Diabetes
Decreased death in IL-1β-induced pancreatic insulin-producing beta cells
Decreased death in IL-1β-induced insulin-producing INS cells
Protection from streptozotocin-induced diabetes
Decreased islet cytokine production
Inhibition of IL-1β-induced nitric oxide production by pancreatic islets

1Trichostain A, SAHA, ITF2357, valproic acid, butyrate