Scott Canna, MD
Speaker Biography

Dr. Canna leads a translational research program and also cares for children with rheumatologic and Immune Dysregulation diseases. His program has been committed to translational research in autoinflammatory diseases and cytokine storm syndromes since 2005. This began with early contributions to the first trials of Interleukin-1 blockade in NOMID patients with mutations of the NLRP3 inflammasome. It continued through work characterizing murine models of the cytokine storm of Macrophage Activation Syndrome (MAS). It extended to the discovery that NLRC4 inflammasome hyperactivity drives both elevated IL-18 (the other inflammasome cytokine) and life-threatening MAS. His independent, NIH-funded research program is primarily focused on the translationally-relevant contexts and mechanisms by which excess IL-18 promotes inflammatory responses. Along the way, his group's biomarker work has identified the specific human contexts in which IL-18 rises above the normal suppression by IL-18 binding protein and IL-18 is "free" to drive inflammation. Translating this work, his group demonstrated that IL-18 blockade may be a rational and feasible treatment strategy in NLRC4-MAS, and they are helping drive the development of several clinical trials of IL-18 blockade in autoinflammatory diseases. Follow them at www.labcanna.org and @canna_lab.