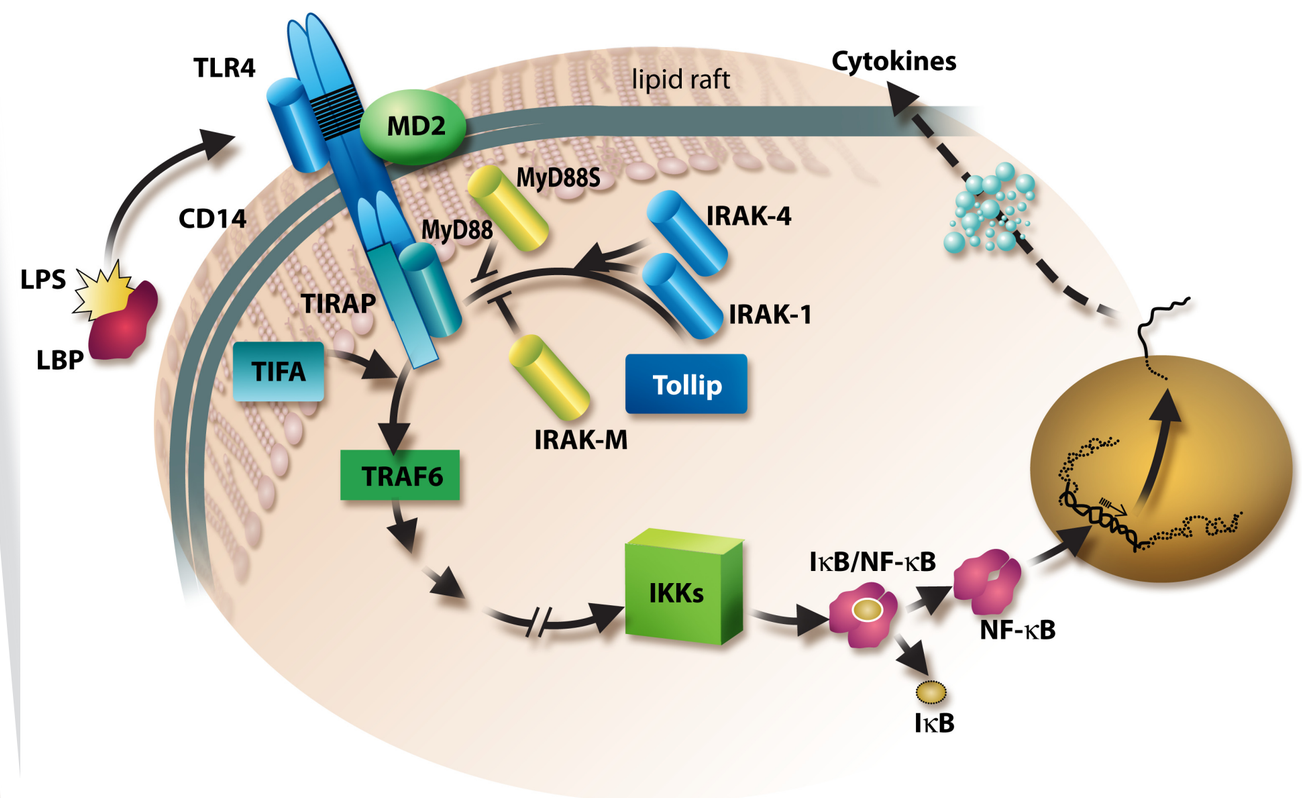
Rising Star



Lipopolysaccharide signaling from lipid raft microdomains.

Principal Investigator for the Host Defense Group, Laboratory of Respiratory Biology (LRB), National Institute of Environmental Health Sciences

Michael Fessler, M.D.

Investigates areas of crosstalk between innate immunity and cellular cholesterol trafficking, with an aim of defining how mobilization of cholesterol and remodeling of membrane microdomains act as key regulatory events in activation of Toll Like Receptors (TLRs). Described the critical role of lipid rafts in lipopolysaccharide signaling in neutrophils and macrophages, novel means for manipulating pulmonary innate immune responses with cholesterol-targeting agents, and applications of proteomic analysis to TLR signal transduction.

Received the NIEHS Early Career Award in 2008.

NIEHS