



Conditions Treated:

Research Areas:

- *Cystic Fibrosis (CF)*
- *Acute Lung Injury*
- *Infectious Diseases*
- *Cellular and Molecular Biology*
- *Gene Expression*
- *HIV/AIDS: Safety and Efficacy of Medications*
- *Inflammation*
- *Mycobacterium Abscessus and Neutrophils*
- *Neutrophil Biology*
- *Pseudomonas*
- *Type I Interferon Responses*
- *Viral Infections*

Programs & Services:

- *Department of Medicine*
- *Division of Pulmonary, Critical Care and Sleep Medicine (Adult)*

Research Interests

My research has focused on the signalling mechanisms of inflammatory and immune cells. Recently, my research is directed at the role of viral infections such as influenza to impact the pathogenesis of lung injury. Previous work has demonstrated the ability of a particular bacterial product, LPS, to drive the expression of specific anti-viral genes in neutrophils. The finding that neutrophils express anti-viral genes has instigated studies into the role of neutrophils in complications of respiratory viral infections. We use both cellular and animal models of viral infection and patients to assess the role of neutrophils in lung injury.

Education

1993 University of Colorado Denver, Department of Pharmacology, PhD

Publications

Fessler, M.B., Arndt, P.G., Just, I., Nick, J.A., Malcolm, K.C., Worthen, G.S. (2007) Dual role for RhoA in suppression and induction of cytokines in the human neutrophil. *Blood* 109, 1248-1256.

Malcolm K.C. and Worthen G.S. (2003) Lipopolysaccharide stimulates p38-dependent induction of anti-viral genes in neutrophils independently of paracrine factors. *J. Biol. Chem.* 278, 15693-15701.

Avdi, N.A., Malcolm, K.C., Nick, J.A., Worthen, G.S. (2002) p38 mitogen-activated protein kinase-mediated regulation of the c-jun NH2 terminal kinase pathway in human neutrophils: a role for PP2A. *J. Biol. Chem.* 277, 40687-40696.

Fessler M., Malcolm K.C., Duncan M., and Worthen G.S. (2002) An analysis of the lipopolysaccharide-stimulated human neutrophil using oligonucleotide microarrays and proteomics. *J.Biol. Chem.* 277, 31291-31302.

Malcolm, K.C., Ross, A.H., Qui, R.-G., Symons, M., and Exton, J.H. (1994) Activation of rat liver phospholipase D by the small GTP-binding protein RhoA. *J. Biol. Chem.* 269, 25951-25954

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