



- Associate Professor
- Department of Pediatrics
- Division of Cell Biology

#### Conditions Treated:

#### Research Areas:

- FPF Site
- Pulmonary Fibrosis
- Interstitial Lung Disease (ILD)
- Macrophage Biology
- Fibroblast biology

#### Programs & Services:

- Cell Biology

My career interests are focused on the interactions between TNF- $\alpha$ , macrophages and myofibroblasts and their role in the resolution of established pulmonary fibrosis with the goal to investigate the mechanisms by which TNF- $\alpha$  resolves fibrosis as the basis for the translational application of this work as a potential therapeutic. We plan to elucidate the mechanisms by which TNF- $\alpha$  is reducing the pro-fibrotic phenotype of macrophages and myofibroblasts and via the creation of an anti-fibrotic lung microenvironment. The importance of understanding how macrophages are shaping the lung environment during disease and how these interactions can be modulated to influence disease resolution is an important research direction that can be applied to many diseases including fibrosis and cancer. It is my goal that my basic science findings conducted in mouse models be translatable to human disease and into potential therapeutic treatments.

#### Education

University of Colorado Denver, PhD

#### Affiliations with the University of Colorado Denver

Associate Professor of the University of Colorado School of Medicine, Department of Medicine, Division of Pulmonary Sciences and Critical Care Medicine

#### Publications

Redente EF, Jacobsen KM, Solomon J, Lara A, Faubel S, Keith RC, Henson P, Downey GP, Riches DWH. 2011. Age and gender dimorphisms contribute to the severity of bleomycin-induced lung injury and fibrosis. *Am J Physiol (LCMP)* 301(4):L510-8. PMID: 21743030

Redente EF, Keith RC, Janssen WJ, Ortiz LA, Downey GP, Bratton DL, Riches DWH. 2014. TNF- $\alpha$  accelerates the resolution of pulmonary fibrosis in mice by reprogramming lung macrophages. *Am J of Resp Cell and Mol Biol.* 50(4):825-837. PMID: 24325577

Redente EF, Aguilar MA, Black BP, Edelman BL, Bahadur A, Humphries SM, Lynch DA, Wollin SL, Riches DWH. Evaluation of therapeutic efficacy of nintedanib in a model of rheumatoid arthritis-associated interstitial lung disease. *Am J Physiol Lung Cell Mol Physiol*. 2018. Jun 1;314(6):L998-L1009. PMID: 29543042

Bamberg A\*, Redente EF\*, Groshong SD, Tuder RM, Cool CD, Keith RC, Edelman BL, Black BP, Cosgrove GP, Wynes MW, Curran-Everett D, De Lang S, Ortiz LA, Thorburn A, Grusby MJ, Riches DWH. The protein tyrosine phosphatase PTPN13 links lung fibroblast resistance to apoptosis with the development of pulmonary fibrosis. *Am J Resp and Crit Care Med*. 2018. Oct 1;198(7):914-927. PMID: 29727583

Tighe RM, Redente EF, Yu YR, Herold S, Sperling AI, Curtis JL, Duggan R, Swaminathan S, Nakano H, Zacharias WJ, Janssen WJ, Freeman CM, Brinkman RR, Singer BD, Jakubzick CV, Misharin AV. Improving the Quality and Reproducibility of Flow Cytometry in the Lung. An Official American Thoracic Society Workshop Report. *Am J Respir Cell Mol Biol*. 2019 Aug;61(2):150-161. PMID:31368812

#### **Doctor's Contact Information**

Office: 303.398.1548

#### **Locations**

National Jewish Health Main Campus  
1400 Jackson St.

Denver, CO 80206