



Conditions Treated:

Research Areas:

- *Pulmonary Fibrosis*
- *Epidemiology*
- *Genetics*
- *Genomics*
- *Molecular Genetics*

Programs & Services:

- *Center for Genes, Environment and Health*

The Seibold Lab is focused on identifying genetic determinants and biomarkers of complex lung diseases, including asthma and pulmonary fibrosis. Many of the genetic variants that influence development and severity of these lung diseases do so by altering molecular functions in specific lung cell types. His lab is focused on identifying dysregulated molecular functions in patient lung cells, by Next-Generation sequencing technologies. Using patient cohorts the genetic determinants of these molecular changes are then mapped. The lab is also editing the genome of these lung cells to allow detailed mechanistic studies of disease variants and better understanding of how these genetic changes increase risk of disease development.

Education

2001	Southwestern Oklahoma State University, Chemistry
2008	University of California-San Francisco, PhD, Pharmaceutical Sciences and Pharmacogenomics
2008 - 2011	National Jewish Health, Genetics of Pulmonary Fibrosis, Laboratory of Dr. David Schwartz

Teaching or Professional Positions

2015-present Associate Professor, CGEH, Department of Pediatrics, National Jewish Health
2011-2015 Assistant Professor, CGEH, Department of Pediatrics, National Jewish Health

Publications

[A common MUC5B promoter polymorphism and pulmonary fibrosis.](#) Seibold MA, Wise AL, Speer MC, Steele MP, Brown KK, Loyd JE, Fingerlin TE, Zhang W, Gudmundsson G, Groshong SD, Evans CM, Garantziotis S, Adler KB, Dickey BF, du Bois RM, Yang IV, Herron A, Kervitsky D, Talbert JL, Markin C, Park J, Crews AL, Slifer SH, Auerbach S, Roy MG, Lin J, Hennessy CE, Schwarz MI, Schwartz DA. *N Engl J Med.* 2011 Apr 21;364(16):1503-12.

[Genetic ancestry in lung-function predictions.](#) *Kumar R, *Seibold MA, *Aldrich MC, *Williams LK, Reiner AP, Colangelo L, Galanter J, Gignoux C, Hu D, Sen S, Choudhry S, Peterson EL, Rodriguez-Santana J, Rodriguez-Cintron W, Nalls MA, Leak TS, O'Meara E, Meibohm B, Kritchevsky SB, Li R,

Harris TB, Nickerson DA, Fornage M, Enright P, Ziv E, Smith LJ, Liu K, Burchard EG. N Engl J Med. 2010 Jul 22;363(4):321-30. Epub 2010 Jul 7.

[Differential enzymatic activity of common haplotypic versions of the human acidic Mammalian chitinase protein.](#) Seibold MA, Reese TA, Choudhry S, Salam MT, Beckman K, Eng C, Atakilit A, Meade K, Lenoir M, Watson HG, Thyne S, Kumar R, Weiss KB, Grammer LC, Avila P, Schleimer RP, Fahy JV, Rodriguez-Santana J, Rodriguez-Cintron W, Boot RG, Sheppard D, Gilliland FD, Locksley RM, Burchard EG. J Biol Chem. 2009 Jul 17;284(29):19650-8. Epub 2009 May 12.

[Chitotriosidase is the primary active chitinase in the human lung and is modulated by genotype and smoking habit.](#) Seibold MA, Donnelly S, Solon M, Innes A, Woodruff PG, Boot RG, Burchard EG, Fahy JV. J Allergy Clin Immunol. 2008 Nov;122(5):944-950.e3. Epub 2008 Oct 9.

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Locations

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