

Stanford



Elizabeth Burgener

Instructor, Pediatrics - Pulmonary Medicine

CLINICAL OFFICES

- **Pediatric Pulmonary and Cystic Fibrosis Clinic**

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Bio

CLINICAL FOCUS

- Cystic Fibrosis
- Pediatric Pulmonary

ACADEMIC APPOINTMENTS

- Instructor, Pediatrics - Pulmonary Medicine

PROFESSIONAL EDUCATION

- Board Certification: Pediatric Pulmonary, American Board of Pediatrics (2018)
- Board Certification, American Board of Pediatrics , Pediatric Pulmonology (2018)
- Fellowship: Stanford University Pediatric Pulmonary Fellowship (2018) CA
- Residency: Stanford University Pediatric Residency (2015) CA
- Board Certification: Pediatrics, American Board of Pediatrics (2014)
- Medical Education: Joe and Teresa Lozano Long School of Medicine at UT San Antonio (2011) TX

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Patients with cystic fibrosis suffer from chronic infection in their airways. *Pseudomonas aeruginosa* is the most common bacteria found in their lungs and is associated with faster decline in lung function and earlier death. We recently discovered a bacteriophage (virus) that infects *Pseudomonas*, Pf bacteriophage. This virus turns sputum into a thick goop of molecules called a biofilm that makes infection very difficult to treat. In the laboratory we know that Pf phage makes biofilms more viscous, more adherent, and it helps protect *Pseudomonas* from both antibiotics and immune cells. I am currently studying the role of Pf phage in patients with cystic fibrosis. We suspect that the presence of Pf phage will be associated with worse clinical outcomes.

Publications

PUBLICATIONS

- **Methods for Extraction and Detection of Pf Bacteriophage DNA from the Sputum of Patients with Cystic Fibrosis.** *PHAGE (New Rochelle, N.Y.)*
Burgener, E. B., Secor, P. R., Tracy, M. C., Sweere, J. M., Bik, E. M., Milla, C. E., Bollyky, P. L.
2020; 1 (2): 100–108
- **Pf Bacteriophage and Their Impact on Pseudomonas Virulence, Mammalian Immunity, and Chronic Infections.** *Frontiers in immunology*
Secor, P. R., Burgener, E. B., Kinnersley, M., Jennings, L. K., Roman-Cruz, V., Popescu, M., Van Belleghem, J. D., Haddock, N., Copeland, C., Michaels, L. A., de Vries, C. R., Chen, Q., Pourtois, et al
2020; 11: 244
- **Filamentous bacteriophages are associated with chronic Pseudomonas lung infections and antibiotic resistance in cystic fibrosis** *SCIENCE TRANSLATIONAL MEDICINE*
Burgener, E. B., Sweere, J. M., Bach, M. S., Secor, P. R., Haddock, N., Jennings, L. K., Marvig, R. L., Johansen, H., Rossi, E., Cao, X., Tian, L., Nedelec, L., Molin, et al
2019; 11 (488)
- **Cystic fibrosis transmembrane conductance regulator modulators: precision medicine in cystic fibrosis** *CURRENT OPINION IN PEDIATRICS*
Burgener, E. B., Moss, R. B.
2018; 30 (3): 372–77
- **Pf Phage in Chronic Pseudomonas aeruginosa Wound Infections**
Bach, M. S., Sweere, J., Burgener, E. B., Bollyky, P. L., Suh, G. A.
WILEY.2018: A5
- **PF BACTERIOPHAGE IN PATIENTS WITH CYSTIC FIBROSIS (CF) IS ASSOCIATED WITH INCREASED SPUTUM ELASTASE AND PSEUDOMONAS AERUGINOSA LOAD**
Burgener, E. B., Sweere, J. M., Bollyky, P. L., Milla, C.
WILEY.2017: S350
- **Clinical characteristics and outcomes of pediatric patients with CMV DNA detection in bronchoalveolar lavage fluid.** *Pediatric pulmonology*
Burgener, E. B., Waggoner, J., Pinsky, B. A., Chen, S. F.
2017; 52 (1): 112-118
- **Molecular and Culture-Based Bronchoalveolar Lavage Fluid Testing for the Diagnosis of Cytomegalovirus Pneumonitis.** *Open forum infectious diseases*
Tan, S. K., Burgener, E. B., Waggoner, J. J., Gajurel, K., Gonzalez, S., Chen, S. F., Pinsky, B. A.
2016; 3 (1): ofv212-?
- **Eosinophilic Pneumonitis As Initial Presentation Of Acute Lymphoblastic Leukemia**
Burgener, E. B., Milla, C. E.
AMER THORACIC SOC.2016
- **Index of suspicion.** *Pediatrics in review*
Todd, S., Arora, R., Kannikeswaran, N., Allarakhia, I., Sivaswamy, L., Wallenstein, M. B., Burgener, E. B., Klotz, J., Kerner, J. A.
2014; 35 (10): 439-446
- **Case 3 Lactic Acidosis and Cardiovascular Collapse in a Teen With Ulcerative Colitis** *PEDIATRICS IN REVIEW*
Wallenstein, M. B., Burgener, E. B., Klotz, J., Kerner, J. A.
2014; 35 (10): 444–46
- **The impact of the central venous catheter on the diagnosis of infectious endocarditis using Duke criteria in children with Staphylococcus aureus bacteremia** *PEDIATRIC INFECTIOUS DISEASE JOURNAL*
Bendig, E. A., Singh, J., Butler, T. J., Arrieta, A. C.
2008; 27 (7): 636-639