Cystic fibrosis (CF) is a recessive genetic disorder that causes the formation of thick mucus plugs in the lungs of approximately 30,000 people in the United States and 60,000 individuals worldwide. *Pseudomonas aeruginosa*, an opportunistic bacterial pathogen, is able to colonize the mucus plugs and form antibiotic resistant biofilms. These microbial colonies, known as biofilms, cause serious problems for individuals living with CF. *P. aeruginosa* biofilms are able to cause chronic infections in the lungs of CF patients leading to increased morbidity and mortality. Using a modified biofilm assay, we tested the effects of modified chemical compounds and amino acids on *P. aeruginosa* biofilm dispersion. A previous study performed on *P. aeruginosa*, found that treatment of d- and l- amino acids resulted in biofilm dissemination. Through additional experiments, we will identify modified chemical compounds that induce biofilm dispersion. This research will increase our knowledge of *P. aeruginosa* biofilm dispersion, and allow us to explore new forms of treatment and therapy for CF patients with chronic infections that could be life threatening.