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Research Title:

Regenerative
pharmacology

Although a common and highly morbid disease, no disease modifying therapies are currently available for patients with COPD. Our primary interest in understanding endogenous lung repair and regeneration in the context of COPD pathophysiology with the ultimate goal of developing therapeutics aimed at filling the major gap in therapy for this chronic lung disease. We have on-going projects studying the stem and progenitor cells of the lung epithelium including the pathways driving stemness and differentiation in this population. We are currently developing an organoid modeling system derived from patient donor lung samples to better characterize the patient and disease specific changes to these cell populations, how this dysfunction might affect native regenerative process, and importantly where therapeutics might be able to intervene.