



# SOLVING ORGAN SHORTAGE

## Whole Lung Research Community

### Phase One Strategic Research Goals

Identify 2-3 iPS-derived epithelial progenitor cells (basal, type II alveolar) to repopulate the airway tree.

Utilize air breathing to induce sufficient surfactant production to maintain lung compliance and alveolar inflation.

Seed sufficient mesenchymal support cells to maintain lung matrix and epithelial niche for differentiation.

Achieve, either *in vitro* in bioreactors or *in vivo* after implantation, sufficient mucociliary clearance to maintain a patent airway.

Provide pulmonary vascular smooth muscle cells to reseeded vessels to allow for hypoxic pulmonary vasoconstriction and modulate blood oxygenation.

### Chief Science Coordinator, Lung



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*Seed money prudently  
invested can advance the  
science further, faster.*

### About Solving Organ Shortage

SOS is a nonprofit organization formed in 2014 to advance a novel, science-driven effort to regenerate or engineer replacement organs for transplantation by funding strategic, high-impact research initiatives. Its organ-specific Research Communities comprise a global Consortium of Researchers focused on solving one of society's urgent healthcare issues. Learn more at [solvingorganshortage.org](http://solvingorganshortage.org).