IHI Call Days | Call 12

Translational platform for Reprogramming Lung Immunity: Enhancing Transplant Survival via Ex Vivo Modulation (**TransLUNG**)

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Link to the IHI brokerage platform:

- IHI Call 12- Brokerage Event and Platform
- IHI Call 12- Brokerage Event and Platform

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Challenges and objectives

SO1: Contribute towards a better understanding of the determinants of health and priority disease areas

TransLUNG tackles the **critical challenge of immune-mediated ischemia-reperfusion injury (IRI) and graft rejection** in lung transplantation by pioneering innovative healthcare strategies, notably through ex vivo organ modulation **(diagnosis & prevention)**

TransLUNG contributes to the **better understanding** of immune determinants in the field of transplantation induced disease advancing **therapeutic target ID and biomarker discovery efforts**

TransLUNG addresses the unmet medical need in lung transplant rejection by developing **innovative ex vivo organ engineering treatment paradigms** and **precision immune modulation platforms (tools & protocols)** to improve graft survival and reduce post-transplant complications.

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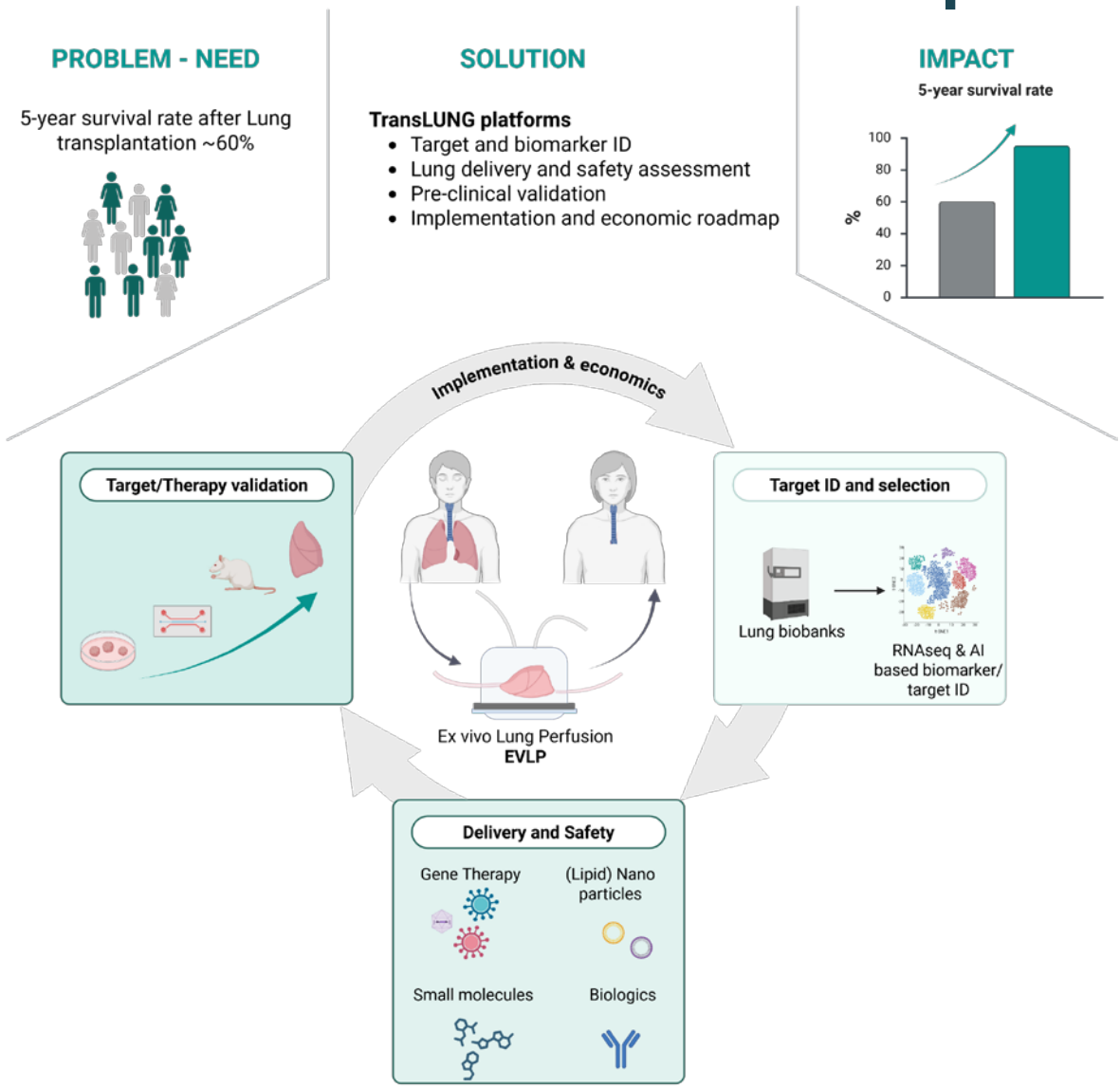
Your approach to solve the problem



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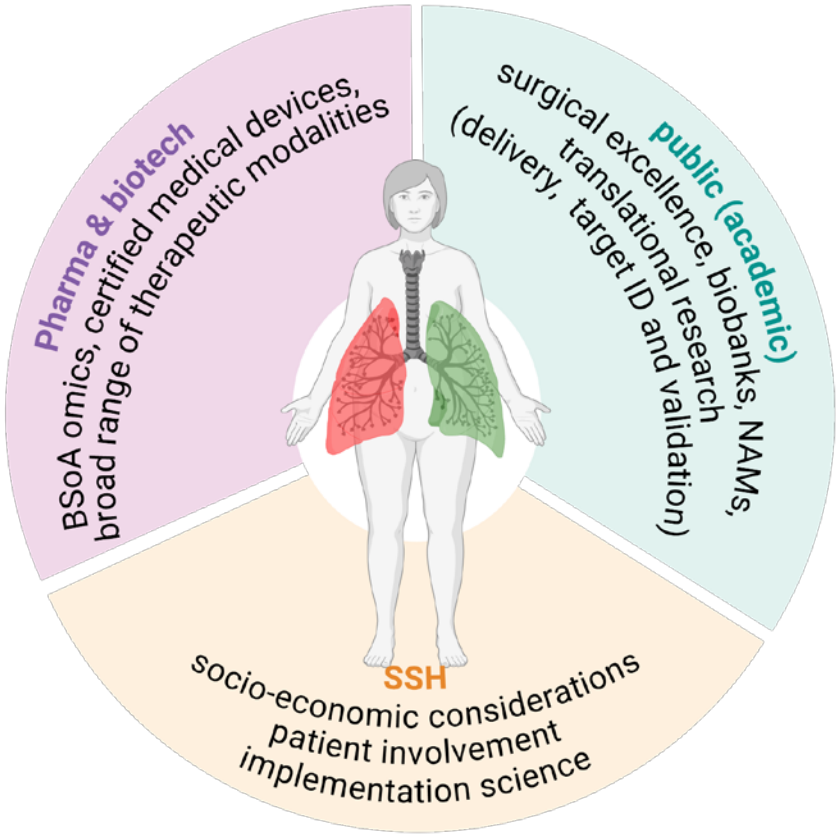
Is your project suitable for IHI?

Large pharma/biotech with an interest in immune modulating therapeutics (drugs, ATMP, biologicals)

Medical device companies (ex vivo perfusion)

Digital health (AI, data mining, biomarkers, diagnostics)



Clinical centers of excellence with access to large patient cohorts

Public centers of innovation (innovation of tailored delivery tools)

Academic centers of excellence in disease mechanisms and modelling

TransLUNG harnesses **interdisciplinary** (trans sectorial) clinical, biomedical, and technological innovation to build a versatile platform advancing our understanding and treatment paradigms of the pulmonary immune system in disease.

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Outcomes and Impact

- **What do you expect out of your proposal in terms of concrete results/outcomes and impact?**

An advanced understanding of the complex immune system of the lung and lung-focused translational platforms, leading to improved **treatment and diagnosis and prevention of graft rejection**.

- **How do you envisage your proposal to ensure translation from research to innovative solutions that can be integrated/implemented into the healthcare ecosystem**

TransLUNG delivers **technology platforms, knowledge and data resources** that enhances lung transplantation outcomes through **targeted immune modulation**, driving improved long-term survival. Its **standardized innovation workflows** enable scalable applications across **chronic lung diseases** and extend potential benefits to other organ systems.

- **How does your project proposal contribute to strengthening the competitiveness of the Union's health industry?**

TransLUNG accelerates translational research and clinical adoption, fostering **cross-sector collaboration** and enabling broader applications in chronic lung disease and other organ systems, therefore positioning the EU as a global leader in **advanced transplant technologies and immune modulation therapies**.

- **How does your project proposal contribute to the expected benefits for patients?**

TransLUNG will significantly improve the **quality and expectancy of life** and extend the currently limited 5-year survival rates in lung transplantation.

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Expertise and resources

TransLUNG consortium

- **Clinical centers of excellence** (transplantation expertise, biobanks)
- **ATMP specialists** (gene therapy, CRISPR, delivery tools)
- **NAM experts** (Organ on Chip, EVLP animal models)
- **Medical devices** (perfusion)
- **AI/omics** (immune profiling)
- **Large pharma** (safety, drugs)

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- **Complementary expertise**
- **Diagnostics** (biomarker validation)
- **AI experts** (target prioritization)
- **Pharma immune therapeutics** (biologicals, drugs, ATMP)

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