

## Novel Approach to Induce Protection Against Respiratory Viruses

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**Categories:**

- Biotechnology

**Keywords:**

- Anti-Virus
- Biotechnology
- Cell Biology
- Coronavirus
- Drug Development
- Influenza
- Respiratory
- Respiratory Disease
- Therapeutics
- Vaccines
- Virus

Researchers at Purdue University have developed a new method for protecting against respiratory viruses by activating inherent immune response. The technique is virus-specific, promoting adaptation to specific viral strands such as influenza, SARS-CoV-2, respiratory syncytial virus (RSV), and others. This innovative method has been tested in vitro with human innate lymphoid cells (ILC) as well as in mice in vivo, exhibiting strong CD8 T-cell response. By increasing ILC response in the lungs of mice, a 60% survival rate was observed. Vaccination kits can be created using these results to protect against respiratory viruses.

**Technology Validation:**

- In vivo testing on mice
- In vitro testing on human ILC cells

**Advantages:**

- Rapid Immune Response
- Improved Survival Rate in Mice

**Potential Applications:**

- Virus Research
- Biotechnology
- Vaccinations

**People:**

- Mittal, Suresh K (Project leader)
- Sambhara, Suryaprakash

**Intellectual Property:**

**Application Date:** August 24, 2021

**Type:** Utility-Gov. Funding

**Country of Filing:** United States

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