Poppy Awarded ARPA-H Contract up to $39M to Tackle Preventative Health Through Breakthrough Indoor Air Infrastructure

Poppy secures up to $39M from ARPA-H to deploy real-time indoor air hazard detection in schools.

MOUNTAIN VIEW, CA, UNITED STATES, December 11, 2025 / EINPresswire.com/ -- Poppy Health, a pioneer in indoor environmental

Poppy Health combines energy optimization and health protection for buildings.

health and energy technology, announced today it has been awarded a contract for up to $39 million by the Advanced Research Projects Agency for Health (ARPA-H) to lead a national initiative that uses smart building technology to reduce disease through cleaner indoor air.

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> *Dr. Joshua Santarpia*

The effort, known as Strategic Control of bioAerosols in Learning Environments (SCALE), is part of ARPA-H's mission to drive breakthrough health improvements at the population level. The project will develop and deploy the first real-time, building-integrated system to detect and reduce exposure to indoor air hazards such as allergens, molds, bacteria and viruses—factors that contribute to asthma, cardiovascular disease, respiratory inflammation, and other chronic and infectious conditions.

"BREATHE is not just about building transformative sensors—we're reimagining how buildings protect human health. Our SCALE project represents a convergence of advanced biotechnology and intelligent infrastructure to create the world's first truly health-responsive built environment" said Sam Molyneux, overall lead for the SCALE project and Co-CEO at Poppy.

As the prime contractor, Poppy Health leads a multidisciplinary team of experts from industry, academia, and public health, including: Attune, Daikin Applied Americas, Draper, Handix Scientific, The Wyss Institute, Mosaic Design Labs, Primary.Health, Penn State, University of Colorado Anschutz Medical Campus, University of Colorado - Boulder, University of Minnesota, University of Nebraska Medical Center, University of Nottingham, University of Texas Medical

Branch, with notable advisors from multiple fields.

The BREATHE SCALE system integrates three core components:
1. Real-time biosensing of long term and acute threats carried in the air—such as allergens, mold, bacteria and viruses - using an amplification-free genetic sensor that sends a tiny electrical signal when it recognizes a target microbe in the air

2. Intelligent risk controller software platform that quantifies how biological air pollutants impact human health, and translates them to building actions. The SCALE Team model extends and reimagines the ASHRAE 241 Standard model as a real-time decision engine, designed for a library of specific biological agents

3. Smart building automation to measure and adjust clean airflow, filtration, and air cleaning to precisely and dynamically deliver clean air where it's needed to reduce exposures before they occur

"Clean air is medicine—especially for children, seniors, and anyone with respiratory conditions," said Dr. Marwa Zaatari, an indoor air quality expert and technical lead for BREATHE SCALE's decision engine. "Our risk model connects air quality data to health outcomes, and we're proud to make it open-source so that anyone—schools, health departments, or building operators—can use it to make healthier choices."

BREATHE SCALE will initially be deployed in schools across four climate zones, with a focus on communities facing disproportionate health burdens. The program will set a gold-standard for evidence-based indoor air quality interventions, establishing rigorous validation to ensure proven improvements for the students and educators.

"We're integrating state-of-the-art aerosol collection, nucleic acid processing and detection technologies to develop the world's first real-time bioaerosol identification system to find disease-causing particles and prevent illness," said Dr. Joshua Santarpia, Professor at the University of Nebraska Medical Center and lead for the project's sensing technology. "This revolutionary technology will give buildings the power to reduce the burden of disease, day in and day out."

The technology is designed to be low-cost, highly adaptable, retrofit-friendly, and scalable across diverse building types—including workplaces, schools, long-term care facilities, as well as defense applications.

"Today, most buildings can't see what's in their air, allowing harmful allergens and pathogens to circulate unnoticed," said ARPA-H BREATHE Program Manager Dr. Jessica Green. "BREATHE innovators are closing the gap, so buildings actively protect occupants instead of amplifying risk."

For more information about the BREATHE program, see "ARPA-H launches BREATHE to monitor and improve indoor air quality"

For media inquiries or interviews, please contact: press@poppy.com

About Poppy
Poppy Health combines energy optimization and health protection for buildings. Founded in Silicon Valley by the original Meta team, Poppy has a track record of developing and commercializing breakthrough technologies including from government R&D programs such as IARPA FUSE and ARPA-H BREATHE. Poppy's pioneering approach to technology development for the built environment has earned the company recognition as one of Fast Company's Top 10 World's Most Innovative Design Companies, alongside industry leaders Ford and Samsung.
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