

ARPA-H Initiatives at a Glance: Major Projects and Project Objectives as of August 2024

Programs

Performance and Reliability Evaluation for Continuous Modifications and Useability of Artificial Intelligence (PRECISE-AI)

- Address the need for capabilities that automatically detect and mitigate declines in the accuracy of Machine Learning (ML) models used in healthcare.

Launched 08/29/2024: [Press Release](#)

Platform Optimizing SynBio for Early Intervention and Detection in Oncology (POSEIDON)

- Increase cancer survival rates and decrease cancer-related costs by developing over-the-counter cancer detection in two technical areas: 1) sensors and diagnostic tools that enable detection of over 30 tumors from a single test; 2) low-cost at-home cancer screening kits that would dramatically expand the availability and accessibility of cancer testing.

Launched 08/01/2024: [Press Release](#)

Groundbreaking Lymphatic Interventions and Drug Exploration (GLIDE)

- Develop new therapies that target abnormal lymphatic growth and function, utilizing advances in tissue regeneration, radiology and minimally invasive surgical procedures, and imaging to address disorders that arise from untreated lymphatic disorders.

Launched 07/31/2024: [Press Release](#)

Universal Patching and Remediation for Autonomous Defense (UPGRADE)

- Develop an autonomous cybersecurity solution that can proactively update devices across diverse hospital environments, advancing continuous patient care while reducing manual efforts and uncertainties in cybersecurity management.

Launched 05/20/2024: [Press Release](#)

Lymphatic Imaging, Genomics, and Phenotyping Technologies (LIGHT)

- Develop diagnostic tools to accurately assess the health of the lymphatic system, cutting down on misdiagnosed or undiagnosed dysfunction that affects millions of patients each year.

Launched 04/11/2024: [Press Release](#)

Building Resilient Environment for Air and Total Health (BREATHE)

- Create a scalable system capable of monitoring and responding to changes in indoor air quality using diagnostic and biosensor technology to assess the risk of airborne infection transmissions, irritants, and other ailments that impact quality of life.

Launched 04/10/2024: [Press Release](#)

Engineering of Immune Cells Inside the Body (EMBODY)

- Utilizing advances in gene therapy, develop treatments that eliminate time, cost, and access hurdles for patients with various immune system disorders.
Launched 04/02/2024: [Press Release](#)

Personalized Regenerative Immunocompetent Nanotechnology Tissue (PRINT)

- Utilizing advances in regenerative medicine and bioprinting technology, address chronic shortages in transplantable organs by 3D printing personalized, on demand organs that do not require lifetime use of immunosuppressive drugs.
Launched 03/27/2024: [Press Release](#)

Advanced Analysis for Precision cancer Therapy (ADAPT)

- Develop Biomarkers, derived from comprehensive tumor biology measurements and advanced computational approaches, which facilitate adaptation of treatments based on real-time identification of tumor traits.
Launched 03/07/2024: [Press Release](#)

Platform Accelerating Rural Access to Distributed and Integrated Medical Care (PARADIGM)

- Create a scalable vehicle platform to provide advanced medical services outside of the hospital setting to address rural healthcare access issues.
Launched 01/16/2024: [Press Release](#)

Transplantation of Human Eye Allografts (THEA)

- Build on decades of hard-won progress in eye science and neuroscience to achieve successful eye transplantation, with the goal of restoring sight to the blind and visually impaired.
Launched 01/11/2024: [Press Release](#)

Health Care Rewards to Achieve Improved Outcomes (HEROES)

- Develop a program that offers incentives to groups that improve the rates of specific health harms in geographic areas using a preventative care campaign.
Launched 01/09/2024: [Press Release](#)

Antigens Predicted for Broad Viral Efficacy through Computational Experimentation (APECx)

- Develop broadly effective vaccines to reduce the number of vaccinations and pre-empt the deadly impact of viruses responsible for cancer, pandemics, and other viral threats.
Launched 10/10/2023: [Press Release](#)

Resilient Extended Automatic Cell Therapies (REACT)

- Increase medication effectiveness by developing two devices: one that allows patients to receive personalized single or combination therapies and a second that provides real-time disease-related data to patients and doctors for tracking and making informed medication treatment decisions.
Launched 09/29/2023: [Press Release](#)

[ARPA-H BDF Toolbox](#)

- Create a single system to collect, share, and analyze data from thousands of sources to overcome issues with mismatched data sets and research siloes.

Launched 09/13/2023: [Press Release](#)

[Digital Health Security \(DIGIHEALS\)](#)

- Adapting proven technologies developed for national security so those technologies can be used to prevent cyberattacks and, if a widespread attack does happen to a medical facility, to lessen its effects to ensure patients continue to receive care.

Launched 08/17/2023: [Press Release](#)

[Precision Surgical Interventions \(PSI\)](#)

- Dramatically reduce instances in which a tumor is only partially removed, or damages hidden nerves, blood vessels, and other structures, contributing to enhanced surgical success in oncology and other fields.

Launched 07/27/2023: [Press Release](#)

[Novel Innovations for Tissue Regeneration in Osteoarthritis \(NITRO\)](#)

- Pioneer innovative approaches to assist the body in self-repairing joints.

Launched 05/18/2023: [Press Release](#)

Other Programs

[Chatbot Accuracy and Reliability Evaluation \(CARE\) \(Exploration Topic\)](#)

- Develop tools to better evaluate and address medical chatbot answers to improve their accuracy and efficiency when interacting with patients.

Launched 04/19/2024: [Press Release](#)

[Artificial Intelligence Cyber Challenge \(AixCC\)](#)

- In partnership with DARPA, develop AI-enabled tools and capabilities to find and fix problems in software that could leave critical medical infrastructure vulnerable to cyberattack.

Launched 03/21/2024: [Press Release](#)

[ARPA-H Sprint for Women's Health \(ARPANET-H\)](#)

- ARPA-H is participating in the White House's Initiative on Women's Health Research, announced in February of 2024. The initiative aims to close historical gaps in women's health research and pioneer new medical discoveries to improve women's health outcomes.

Launched 02/21/2024: [Press Release](#)

[Advancing Clinical Trial Readiness \(ACTR\) \(ARPANET-H\)](#)

- Enable 90% of eligible Americans who want to participate in a clinical trial the ability to participate within a half-hour of their home.

Launched 10/20/2023: [Press Release](#)

[Open Broad Agency Announcement Awardees](#)

- The ARPA-H Open Broad Agency Announcement (BAA) solicits proposals focused on areas of high potential and urgent need. For example:

Launched 03/15/2023: [Press Release](#)

- **Programmable Scalable Therapeutics for Immune-directed Cancer-killing (SPIKES)**

- Use genetically programmable bacteria to create a scalable and cost-effective cancer immunotherapy that precisely targets solid tumor cells, overcoming challenges in current cancer treatments.

Launched 09/26/2023: [Press Release](#)

- **ML/AI-Aided Therapeutic Repurposing In extended uses (MATRIX)**

- Develop a machine learning platform to rapidly identify existing medications that could be effective in treating rare diseases that have no current therapies.

Launched 02/28/2024: [Press Release](#)

Hubs

[ARPA-H Customer Experience Hub](#)

- Centered in Dallas, TX, this hub is built to develop health solutions that will be accessible, in demand, and readily adopted. This hub is focused on such objectives as identifying and addressing costly inefficiencies in healthcare and ensuring ARPA-H funding is producing cost-effective, meaningful advances.

Launched 09/26/2023: [Press Release](#)

[ARPA-H Investor Catalyst Hub](#)

- Centered in Cambridge, MA, this hub is built to provide connections between researchers and private venture investors to bring ideas and research to market faster.

Launched 09/26/2023: [Press Release](#)