

ARPA-H: The Mission

Advanced Research Projects Agency for Health (ARPA-H)

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President Biden's Vision

"ARPA-H will **pursue ideas that break the mold on how we normally support fundamental research and commercial products** in this country."

"Ideas so audacious that people say they just might work only if, only if, we could try. Well, we're about to try in a big way."

– President Biden Remarks, March 18, 2022



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A graphic with a blue background and a faint image of the White House. At the top is a circular icon of the White House. Below it, the title "DELIVERING BIPARTISAN PROGRESS" is written in large, bold, white capital letters. Underneath the title, in smaller white capital letters, is "THROUGH PRESIDENT BIDEN'S UNITY AGENDA". The central image shows President Joe Biden standing with three other people (two men and one woman) in front of the White House. Overlaid on the bottom half of the image are four dark blue rectangular boxes, each containing a white checkmark icon and a line of text. At the bottom right, the URL "WH.GOV/SOTU" is displayed in white capital letters.

DELIVERING BIPARTISAN PROGRESS

THROUGH PRESIDENT BIDEN'S UNITY AGENDA

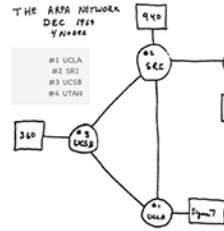
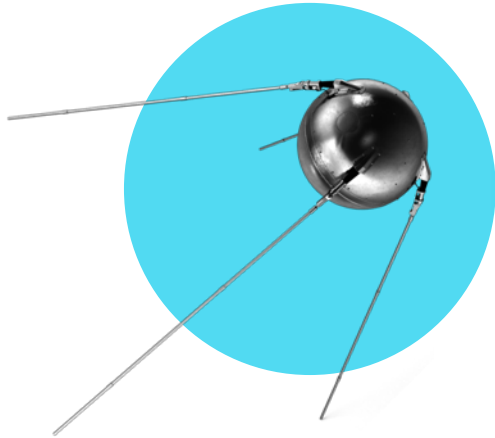
- ✓ Made it easier for doctors to prescribe effective treatments for opioid addiction
- ✓ Passed a gun safety law making historic investments in youth mental health
- ✓ Launched ARPA-H to drive breakthroughs in the fight against cancer, Alzheimer's, and diabetes
- ✓ Expanded benefits and services for veterans and their survivors

WH.GOV/SOTU

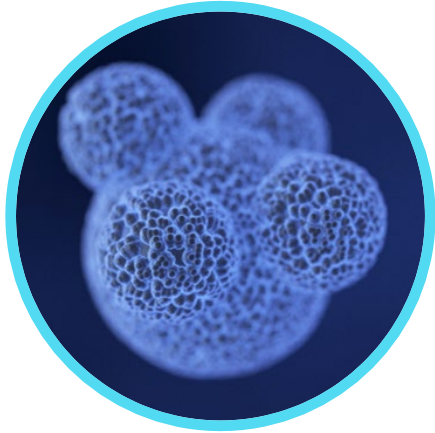
Mission

Accelerate better
health outcomes
for everyone.





ARPA-H: the ARPA Model at Work for Health



HOW?

**We are a unique
funding agency *by
design***

Function like a Business – Quickly,
Nimble, and Decisively.

Authorities. Contracts. Big Bets.



WHO?

**Problem-focused
Program Managers
drive innovation**

Facilitating the Future

**Change Agents. Our Performers.
Our Customers.**



WHAT?

**We are seeking
radical change**

Moonshots for Health

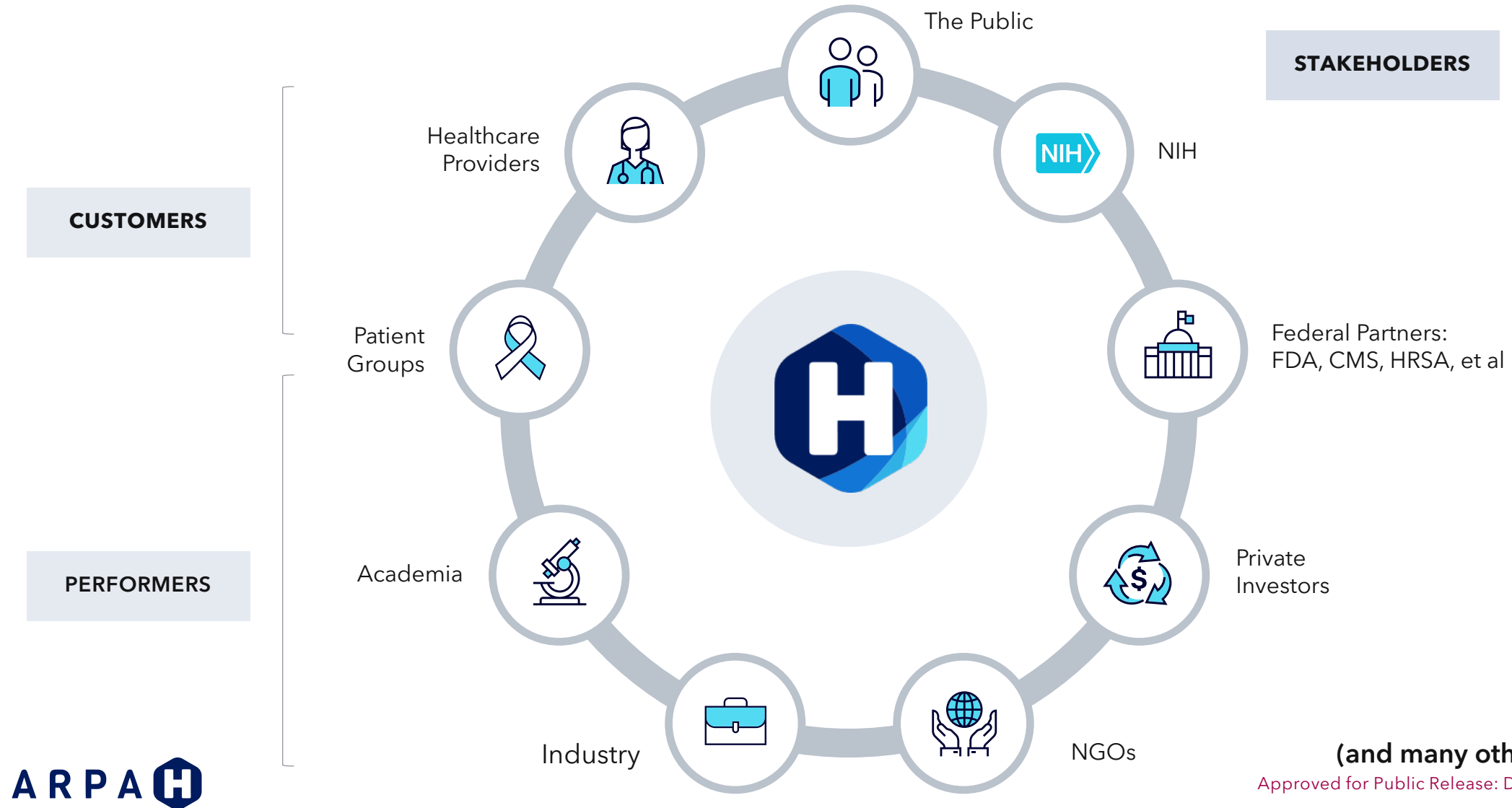
Risks. Urgency. Real-world Impact.

The Program and Program Manager Flywheel

The ARPA-H portfolio is:
(1) a reflection of the PMs
(2) dynamic, and
(3) will – and should! – change frequently



ARPA-H Accelerates the Entire Health Ecosystem

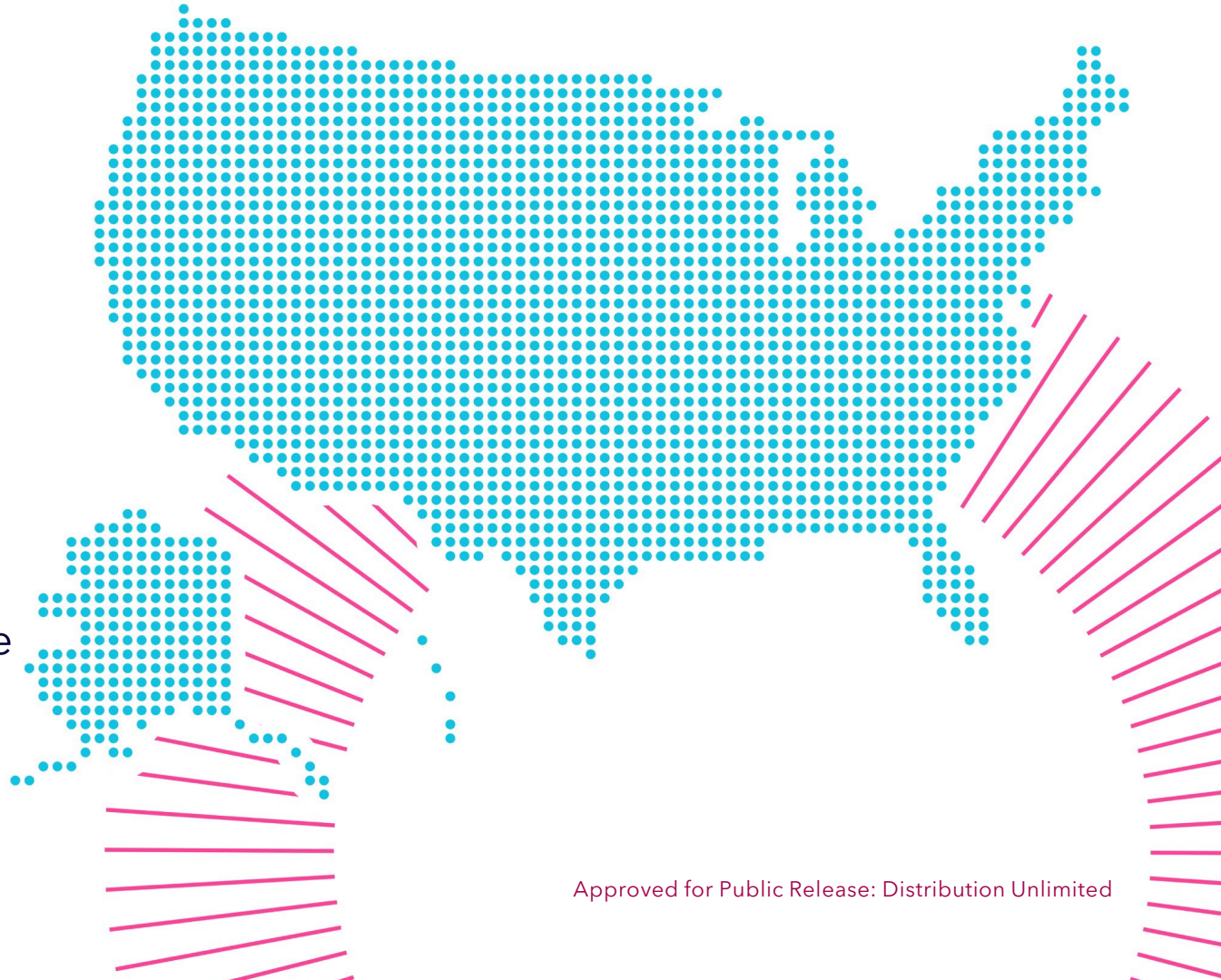


Our goal: Meet people where they are

ARPA-H was launched to **improve health outcomes for all Americans**. *Congress said we had to have 3 geographic sites.*

ARPA-H must **meet people where they are**, whether across communities and geographies. ARPA-H has a responsibility for all Americans, especially those that have been the hardest to reach.

ARPA-H is responsible for **delivering** transformational **health solutions**. This means making sure our programs **transition** into viable approved products and **translate** into practice.



ARPANET-H: Bridging Innovation and Customers Nationwide

1. Rapid Other Transaction Master Vehicle.

- For proposers: B2B style, simple templated process for project awards
- For the USG: increases R&D throughput by outsourcing some high effort grunt work

2. Health Ecosystem Convening Mechanism.

- Pull together collection of entities that don't typically work closely with one another. Many would not normally engage with USG.

3. Instant IDIQ-style Catalog of Resources.

- No additional contract awards needed. Events, design tools, collaboration space.

2 New Hubs Announced



Dallas, Texas



Customer Experience Hub

Drive trust with users and communities using a human-centered approach

*Led by **ATI & Lyda Hill**
Philanthropies*



Greater Boston Area, MA



Investor Catalyst Hub

Guide performers through the marketplace, to include business considerations and regulatory complexities

*Led by **VentureWell***

ARPANET-H Network: Bridging Disparate Pieces of the Health Ecosystem, Powering Communities via ARPA-H

Stakeholder and Operations Hub

National Capital Region



Customer Experience Hub

Dallas, Texas



Investor Catalyst Hub

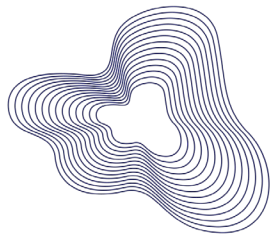
Greater Boston, MA

Illustrative Spokes



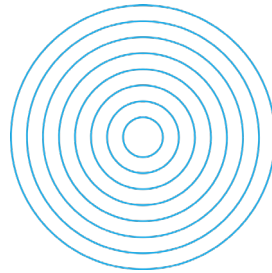
Mission Focus Areas and Ideation

Further ARPA-H investment in these areas will generate **asymmetrical benefits** to the health ecosystem



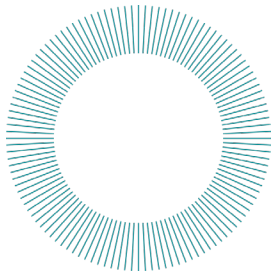
Health Science Futures

Expanding what's technically possible



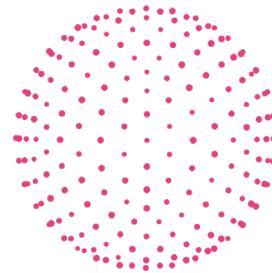
Scalable Solutions

Reaching everyone quickly



Proactive Health

Keeping people from being patients



Resilient Systems

Building integrated healthcare systems

Ideation at ARPA-H

- **Programs:** Initiated by Program Managers to address major health challenges.
- **Projects:** Sourced from community via the Open Broad Agency Announcement (BAA), enabling grassroots innovation.

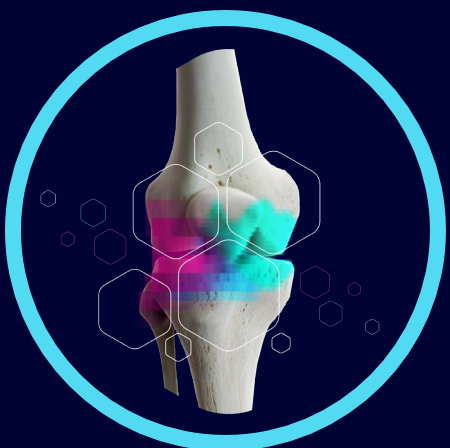


Become a Program Manager

ARPA-H is seeking to hire Program Managers that will bring well-defined problems to ARPA-H and build the teams to solve them.



ARPA-H's Initial Investments: Imagine if...



NITRO

Novel Innovations for Tissue Regeneration in Osteoarthritis

What if we could make our joints heal themselves?



REACT

Resilient, Extended, and Automated Cellular Therapies

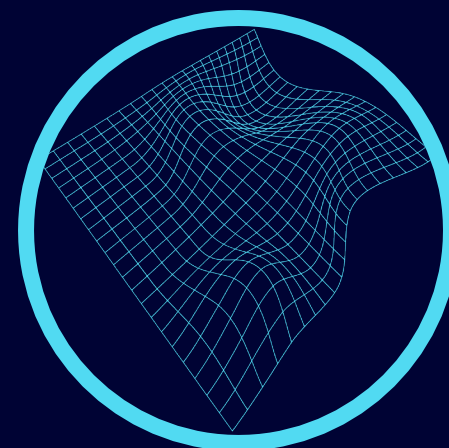
What if your body could make its own medicine?



DIGIHEALS

Digital Healthcare Security

What if we had resilient healthcare infrastructure with advanced digital security for data, software, and devices?



BDF

Biomedical Data Fabric

What if new data integration tools made it possible to get more value out of the health research data produced by thousands of labs and hospital centers?

Resilient, Extended, and Automated Cellular Therapies (REACT)

Vision: Develop a platform that enables patients to easily manage chronic diseases: an implanted Living Pharmacy, controlled by the patient, would automatically produce therapies long-term; an implanted Living Sentinel would inform the patient of the state of their disease

Technology focus areas:

- Resilient cellular factories that produce therapy on demand from inside the body
- Bioelectronic devices to control the cellular factories
- Sentinel cells that track hormones or cytokines
- Improved encapsulation to protect the device from the immune system

How to apply:

- Stay tuned for the solicitation; submit abstract and, if invited, full proposal
- Visit our program website to register for Proposers' Day and to learn more about REACT

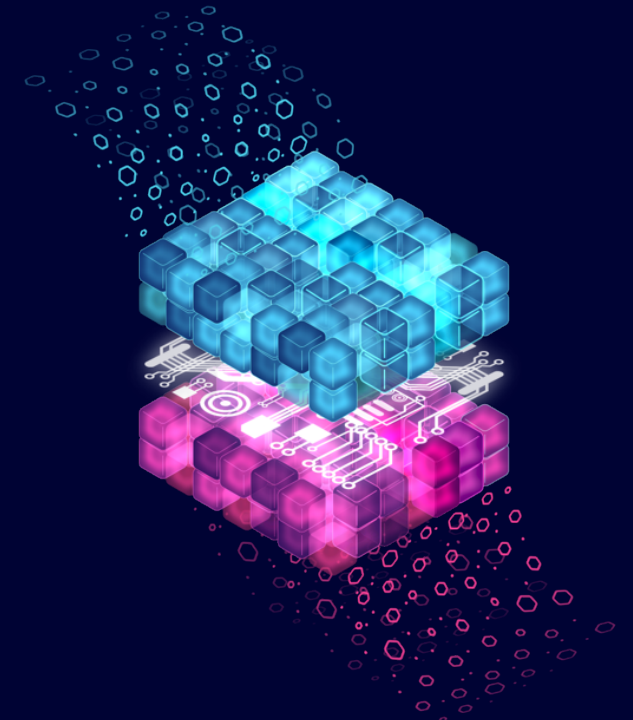
Important dates:

- **November 16, 2023:**
Proposers' Day
- **November 30, 2023:**
Abstracts due

Link to
REACT
webpage



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What if your body could make its own medicine?

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



Dr. Andy Kilianski,
Program Manager



Proposers' Day:

November 17, 2023

Visit the QR link to sign up
and learn more

Vision: Develop the toolkit that makes broadly effective and evolution-resistant vaccines against viral pathogens possible for all.

Approach: Harness cutting-edge computational methods alongside unprecedented scales of biochemical and immunological data.

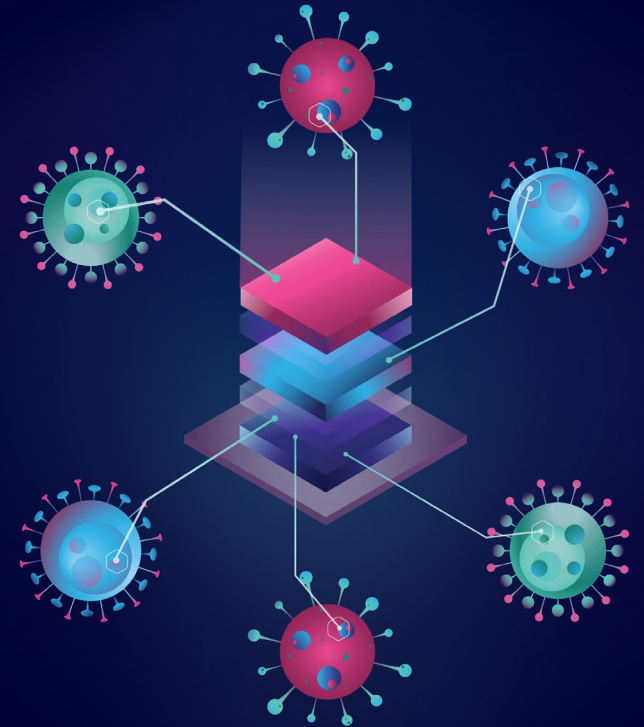
Why ARPA-H? Create a fast-track vaccine development pipeline that'll neutralize whole classes of viruses using groundbreaking tools not yet to be applied in vaccine R&D.

Technology Focus Areas

1. High-throughput biochemical analysis and protein function engineering
2. Antigen design and modeling pipelines for vaccine development
3. Proof-of-concept translational candidate development and clinical trials



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**What if we could eliminate viruses as
current and future health threats?**

New Open BAA Awards



CUREIT

Curing the Uncurable via RNA-Encoded Immunogene Tuning

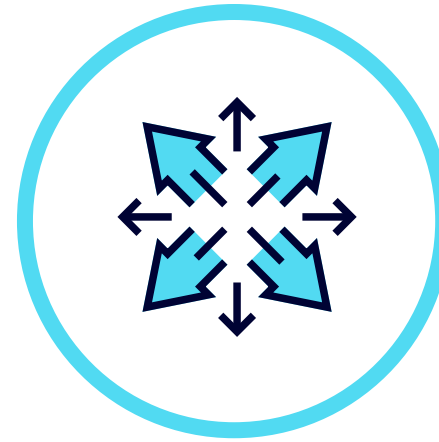
What if incurable, debilitating diseases could be easily treated through mRNA-encoded therapies that tune your immune system?



HEART

Health Enabling Advancements through Regenerative Tissue Printing

What if we could 3D print a human heart in an hour?



CDTR

Stem Cell-Derived Thymus Rejuvenation

What if thymus function and immunity could be restored by a simple injection?

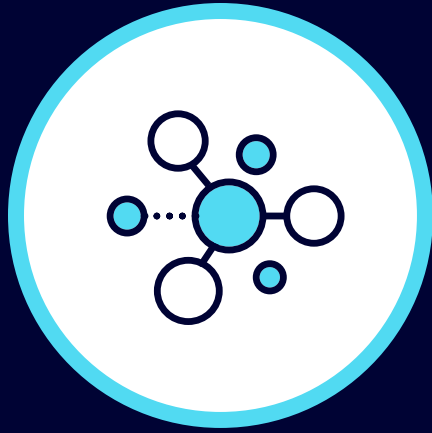


DARTS

Defeating Antibiotic Resistance through Transformative Solutions

What if we could identify antibiotic-resistant bacteria in minutes?

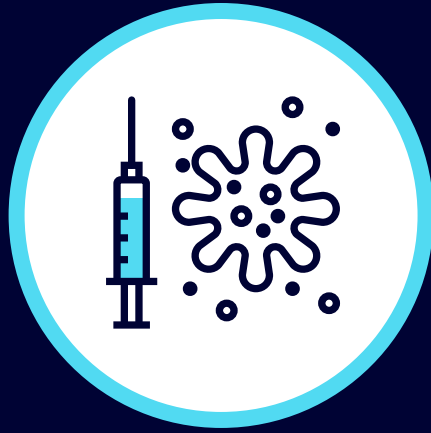
Recent Announcements on ARPA-H Cancer Efforts



THOR

Targeted Hybrid Oncotherapeutic Regulation

What if we could boost therapy response rates to peritoneal or solid tumor malignancies from 10% to 50%?



SPIKEs

Synthetic Programable bacteria for Immune-directed Killing in tumor Environments

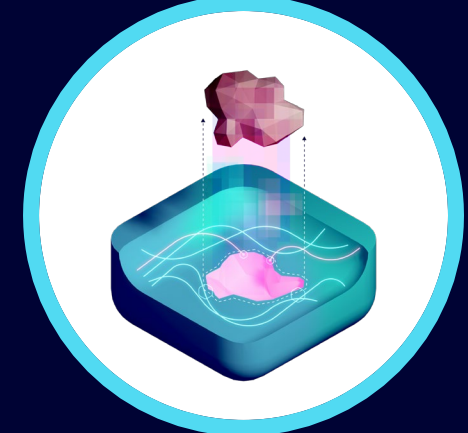
What if programable bacteria could be directed to kill cancer inside the body?



CODA

Cancer and Organ Degradome Atlas

What if a single system could detect a broad range of cancers at the earliest stages of formation?



PSI

Precision Surgical Interventions

What if surgeries fixed problems flawlessly, the first time?

Engage with ARPA-H



Submit your Project Idea

Calling for proposals to outline breakthrough research and technological advancements to improve health outcomes across patient populations, communities, diseases, and health conditions



Become a Program Manager

ARPA-H is seeking to hire Program Managers that will bring well-defined problems to ARPA-H and build the teams to solve them.



Collaborate with Us

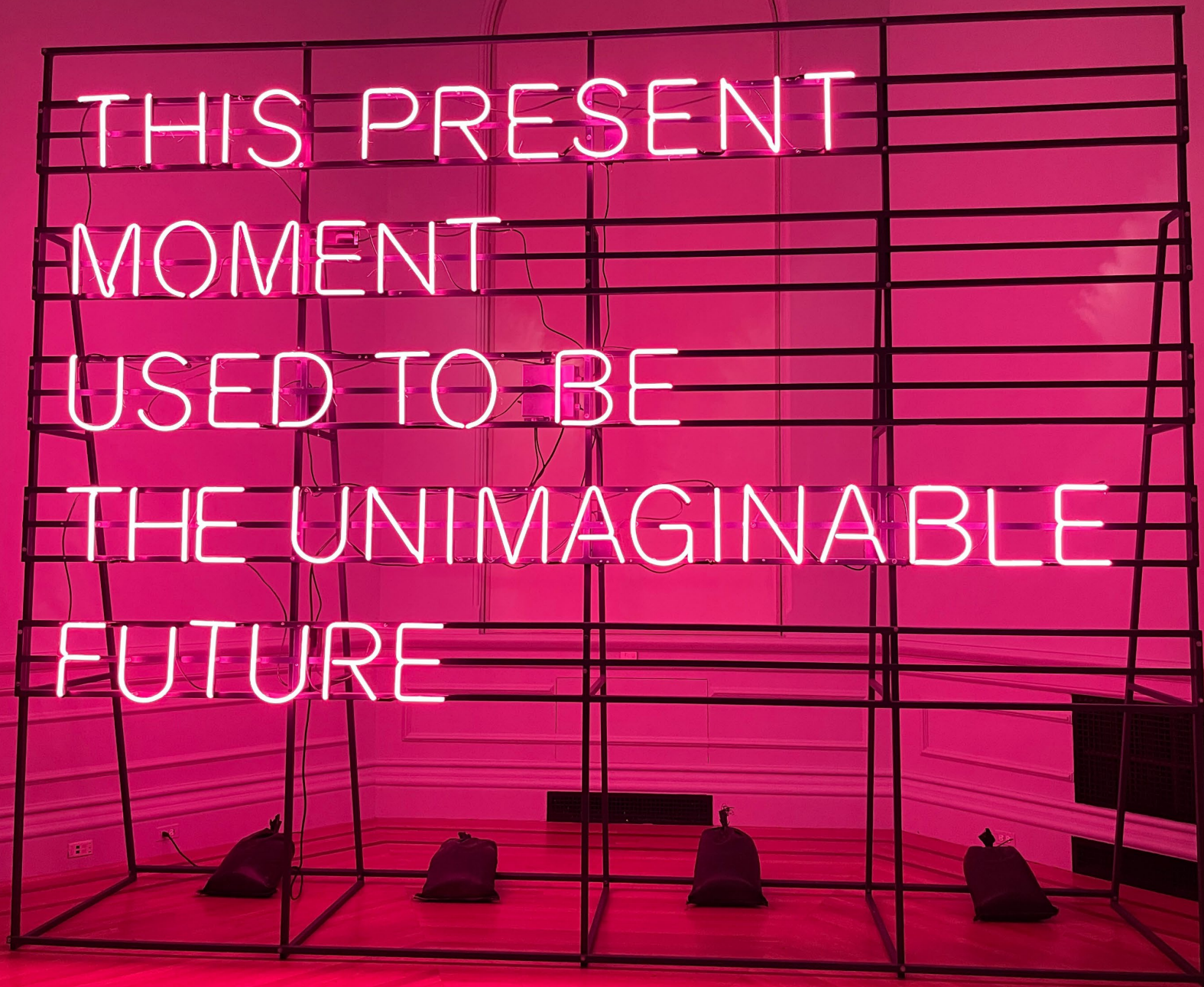
We want to partner with State and Federal governments, community health centers, patients, caregivers, patient advocate groups to ensure we are delivering on our mission

Keep Up to date with the ARPA-H
Vitals Biweekly Newsletter





@ARPA_H



Alicia Eggert
This Present Moment
2019 - 2020
Currently @ The Renwick Gallery
Washington, DC