Research!America Annual Meeting

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Marking Our Milestones: The Power of Partnership

Congratulations!

Thirty years of committed support to biomedical research funding …

NHLBI Appropriations

<table>
<thead>
<tr>
<th>Fiscal Year (FY)</th>
<th>Appropriations ($, billions)</th>
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<td>FY12</td>
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<td>FY14</td>
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... enabling priorities set in a shared Strategic Vision formed by a diverse community.
Moving from Vision to Implementation: Highlights of NHLBI Strategic Priorities

Objective 1: Normal Biology
Objective 2: Pathobiology, Onset, & Progression of HLBS diseases
Objective 3: Population Differences
Objective 4: Precision Medicine
Objective 5: Novel Diagnostics & Therapeutics
Objective 6: Clinical & Implementation Research
Objective 7: Data Science
Objective 8: Workforce & Resources

Population Differences: Unfinished Business
Novel Therapeutics: Sickle Cell Disease
Clinical Research: Cystic Fibrosis
Strategic Focus on the Unfinished Business of Health Disparities: Social Determinants in High-Risk Populations

70% reduction in deaths from heart disease since 1950.

Disparate burden of death and disease persists in high-risk populations.

Objective 3: Population Differences

U.S. County-Level Mortality From CVD

(both sexes, 2014)

Place Matters
Overlapping Risk Profiles

Obesity
Opioid Use Disorders
Diabetes
CVD
HIV


From Lab Bench to Patient Beside: A Strategic Focus on Translation and Implementation Toward Novel Therapies

Objective 6: Clinical & Implementation Research

Cystic Fibrosis as model for the power of citizen science partnerships in the battle against rare diseases.

- CFTR gene identified.
- NIH-funded research reveals implications of CFTR mutations.
- Patient-powered networks catalyze clinical trials.
- Public-private partnerships with patients develop new therapies.

A patient community prompts discovery of CF disease mechanisms. Clinical trials follow, eventually leading to individualized patient therapies.

Two year-old Avalyn is among the CF patients who may be helped by targeted drugs.

Credit: Brittany Mahoney
NIH Director’s Blog

National Heart, Lung, and Blood Institute
Advancing Novel Treatment Strategies: Bending the Curve on the Path to Cures for Sickle Cell Disease

Identify and support the most promising genetic therapies for scalable cures.

Objective 5: Novel Diagnostics & Therapeutics

Sickle-shaped Hemoglobin

Normal Hemoglobin

Genetic techniques to correct SCD mutation

Gene Addition

Gene Correction

HbF Induction
NHLBI Circle of Partners -- A Diverse Community Creating a Common Wealth of Science for Public Health Impact

- Patients & Researchers
- Policymakers & Govt Agencies
- Academic Health Centers
- International Organizations
- Community Organizations
- Primary Care
- Private Sector
- Professional Societies/Foundations
- Patients Citizen-Science

Turning Discovery Into Health