

HeartShare: Next-Generation Phenomics to Define Heart Failure Subtypes and Treatment Targets

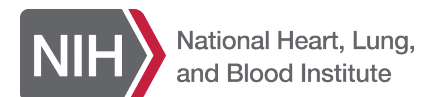
NHLBI Information Webinar

October 22, 2020 at 4:00pm EST

All participants are muted upon entry.

Questions can be submitted in the Q&A box to All Panelists.

This webinar will be recorded.



HeartShare: NHLBI Team

Program Office



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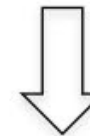
Check Related Notices

Department of Health and Human Services

Part 1. Overview Information

Participating Organization(s)	National Institutes of Health (NIH)
Components of Participating Organizations	National Heart, Lung, and Blood Institute (NHLBI)
Funding Opportunity Title	HeartShare: Next Generation Phenomics to Define Heart Failure Subtypes and Treatment Targets – Data Translation Center (U54 Clinical Trial Not Allowed)
Activity Code	U54 Specialized Center- Cooperative Agreements
Announcement Type	New
Related Notices	<p>October 22, 2020 - NOT-HL-20-822 -Notice of Change of Receipt Date for RFA-HL-21-016.</p> <p>October 09, 2020 - Notice of Technical Assistance Webinar and Frequently Asked Questions (FAQs) for NHLBI HeartShare RFA-HL-21-015 "Clinical Centers (U01)" and RFA-HL-21-016 "Data Translation Center (U54)". See Notice NOT-HL-20-819.</p> <p>NOT-OD-19-022 - Fast Healthcare Interoperability Resources (FHIR®) Standard.</p>
Funding Opportunity Announcement (FOA) Number	RFA-HL-21-016
Companion Funding Opportunity	RFA-HL-21-015 - HeartShare: Next-Generation Phenomics to Define Heart Failure Subtypes (U01 Clinical Trial Not Allowed), U01 Research Project – Cooperative Agreements
Number of Applications	See Section III. 3. Additional Information on Eligibility.

Change in Receipt Date
December 7, 2020



January 8, 2021

- 1. HEARTSHARE PROGRAM OVERVIEW**
2. CLINICAL CENTERS
3. DATA TRANSLATION CENTER
4. BUDGET DETAILS
5. REVIEW CRITERIA
6. Q&A

Circulation

WHITE PAPER

Research Priorities for Heart Failure With Preserved Ejection Fraction

National Heart, Lung, and Blood Institute Working Group
Summary

ABSTRACT: Heart failure with preserved ejection fraction (HFpEF), a major public health problem that is rising in prevalence, is associated with high morbidity and mortality and is considered to be the greatest unmet need in cardiovascular medicine today because of a general lack of effective treatments. To address this challenging syndrome, the National Heart, Lung, and Blood Institute convened a working group made up of experts in HFpEF and novel research methodologies to discuss research gaps and to prioritize research directions over the next decade. Here, we summarize the discussion of the working group, followed by key recommendations for future research priorities. There was uniform recognition that HFpEF is a highly integrated, multiorgan, systemic disorder requiring a multipronged investigative approach in both humans and animal models to improve understanding of mechanisms and treatment of HFpEF. It was recognized that advances in the understanding of basic mechanisms and the roles of inflammation, macrovascular and microvascular dysfunction, fibrosis, and tissue remodeling are needed and ideally would be obtained from (1) improved animal models, including large animal models, which incorporate the effects of aging and associated comorbid conditions; (2) repositories of

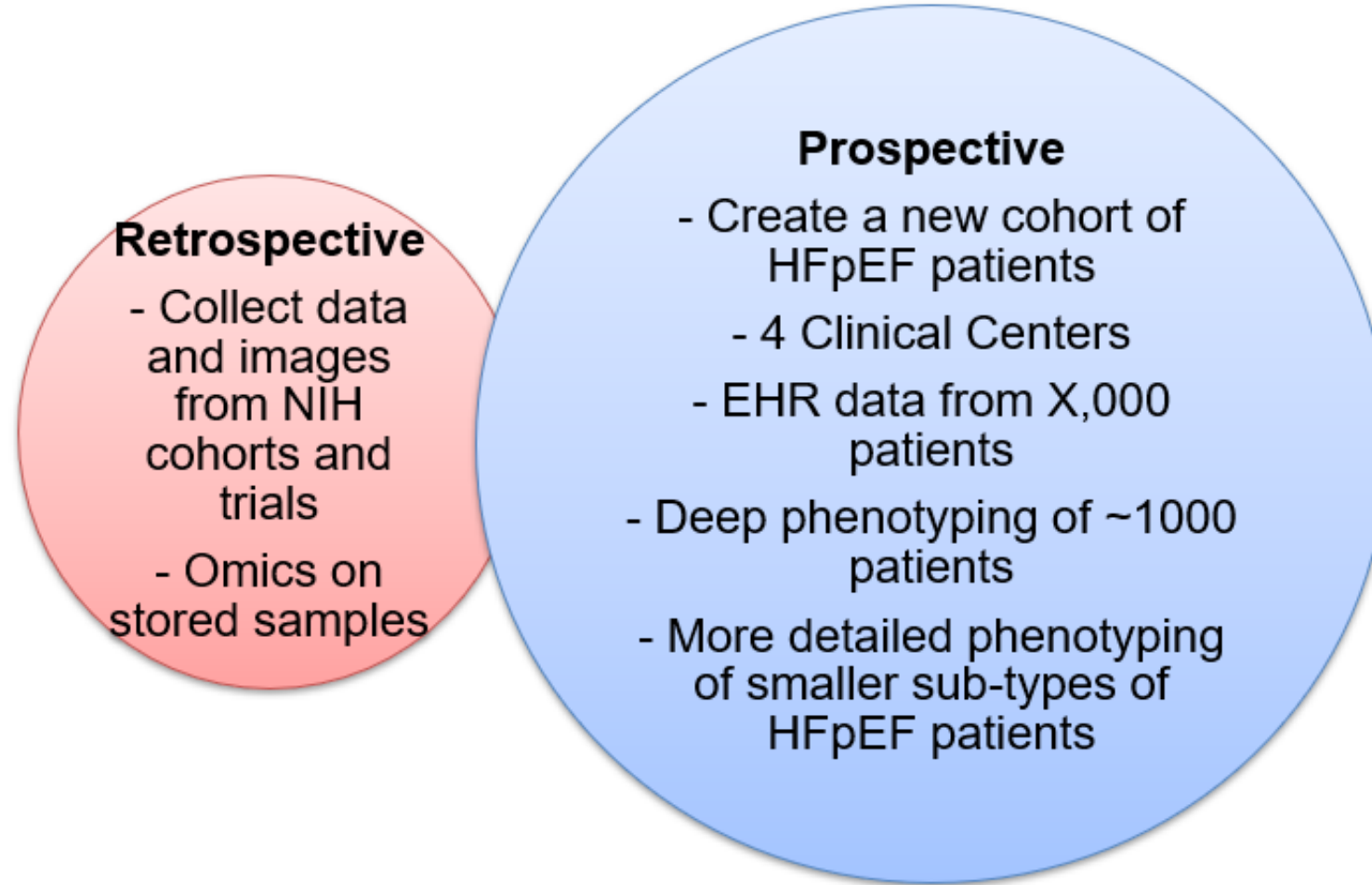
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HeartShare's goal is to conduct large-scale analysis of phenotypic data, images, and omics to characterize mechanisms of HFpEF and identify therapeutic targets.

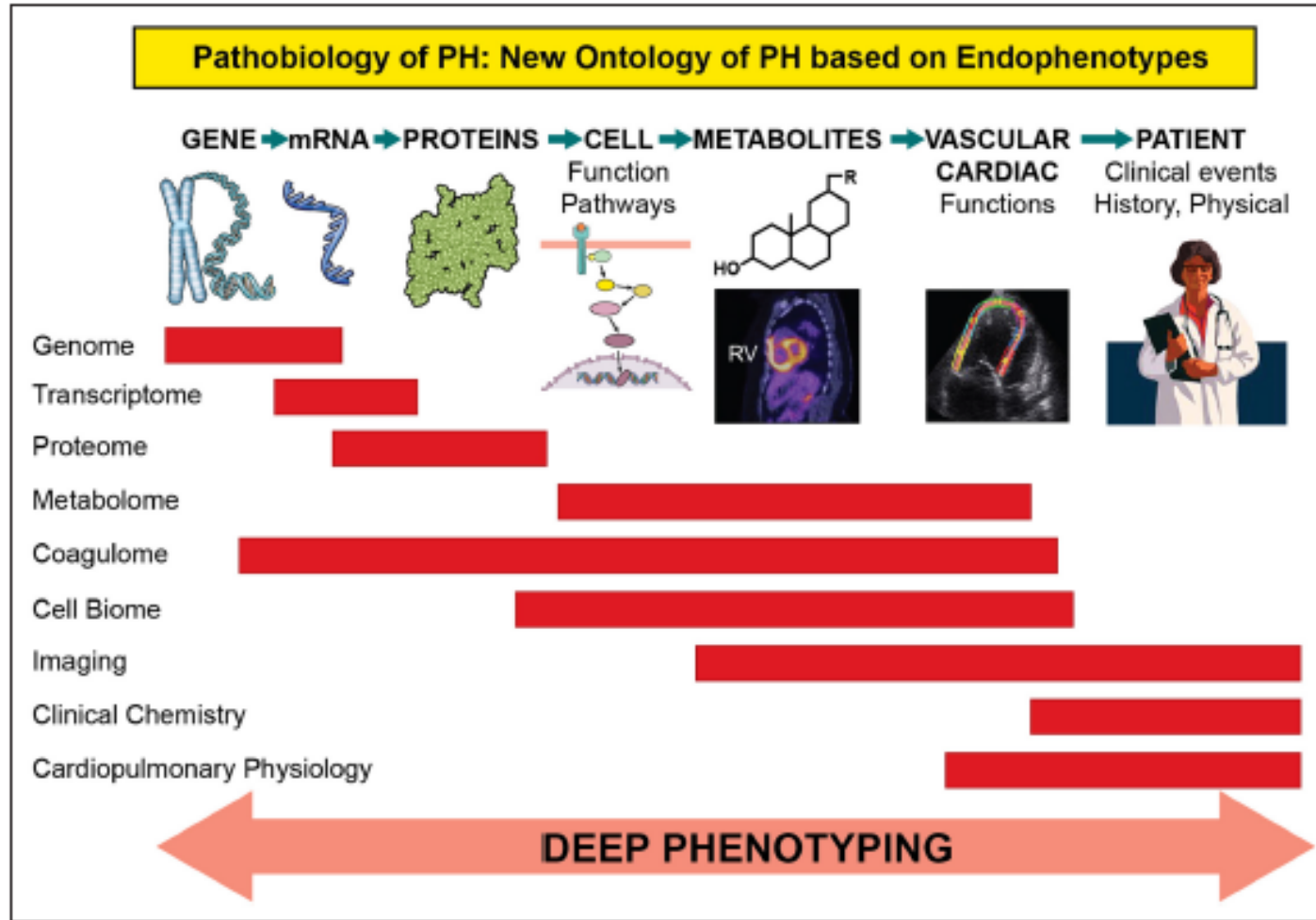
Retrospective

- Collect data and images from NIH cohorts and trials
- Omics on stored samples

HeartShare's goal is to conduct large-scale analysis of phenotypic data, images, and omics to characterize mechanisms of HFpEF and identify therapeutic targets.



PVDomics, a NHLBI phenomics program for pulmonary vascular disease, provides a model for HeartShare



Unique Research Approaches

- Partnering with patients
- EHR and multiple data types
- Open science
 - NIH Data Management and Sharing Activities Related to Public Access and Open Science (<https://osp.od.nih.gov/scientific-sharing/nih-data-management-and-sharing-activities-related-to-public-access-and-open-science/>)
 - Ensure data resources follow FAIR principles (to make data findable, accessible, interoperable, and reusable) consistent with the NIH strategic plan for data science (<https://datascience.nih.gov/strategicplan>)

Diversity Plan

- Patient recruitment
- NHLBI Policy for the Inclusion of Women, Minorities, and Participants Across the Lifespan in Clinical Research (<https://www.nhlbi.nih.gov/grants-and-training/policies-procedures-and-guidelines/nhlbi-policy-inclusion-women-and-minorities-clinical-research>)
- We encourage research teams to be diverse in terms of gender, race, ethnicity

1. HEARTSHARE PROGRAM OVERVIEW
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Clinical Center Key Responsibilities

- NHLBI intends to support up to 4 CC's
- Enrollment and retention of participants
- Novel data collection strategies
- Planning and conducting a common phenotyping protocol
- Participation in the Steering Committee

Clinical Center Application Components

Organization and Recruitment Plan

- Recruitment plans for 250 patients per site
- Patient engagement and use of mobile technology
- Experience with EHR data acquisition
- Teams should have complementary expertise

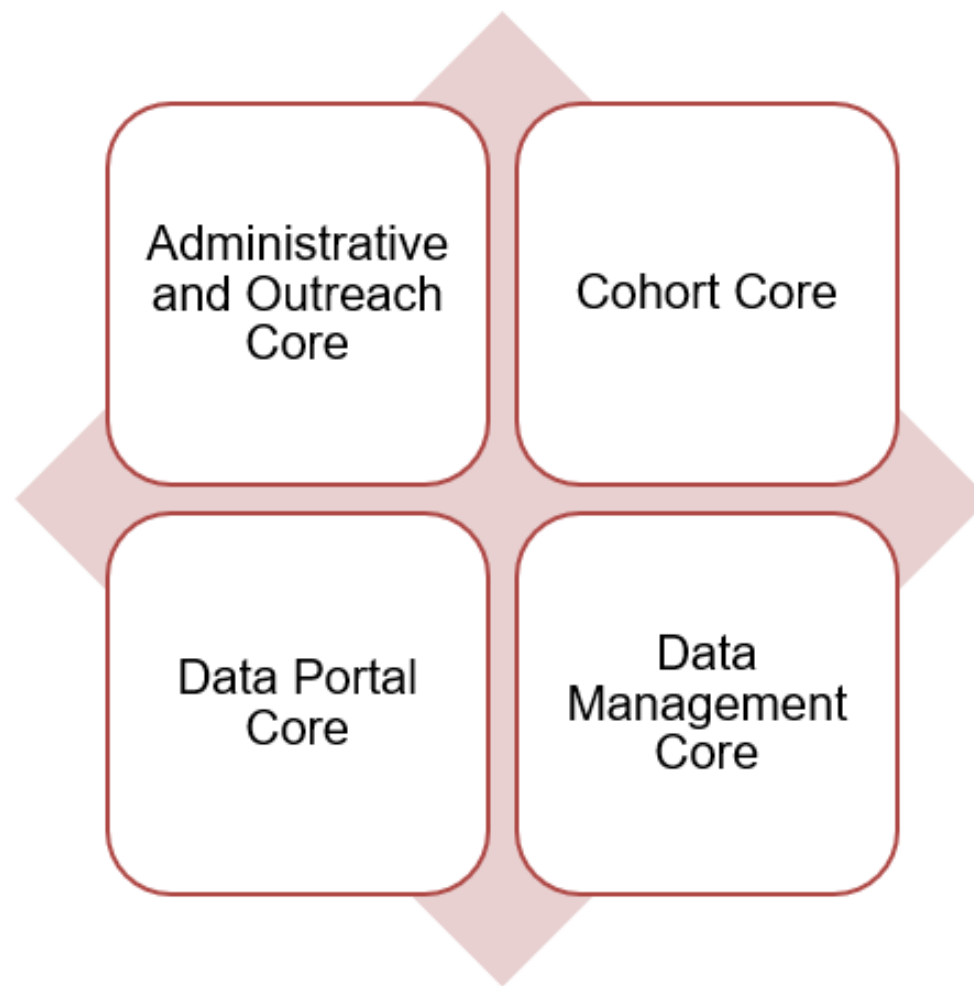
Phenotyping Proposal

- Describe standardized protocol for phenotyping on ~1000 participants
- “Deeper” phenotyping on subsets of HFpEF patients, including potential cores
- Final protocol/cores will be determined by Steering Committee
- TOPMed as a resource

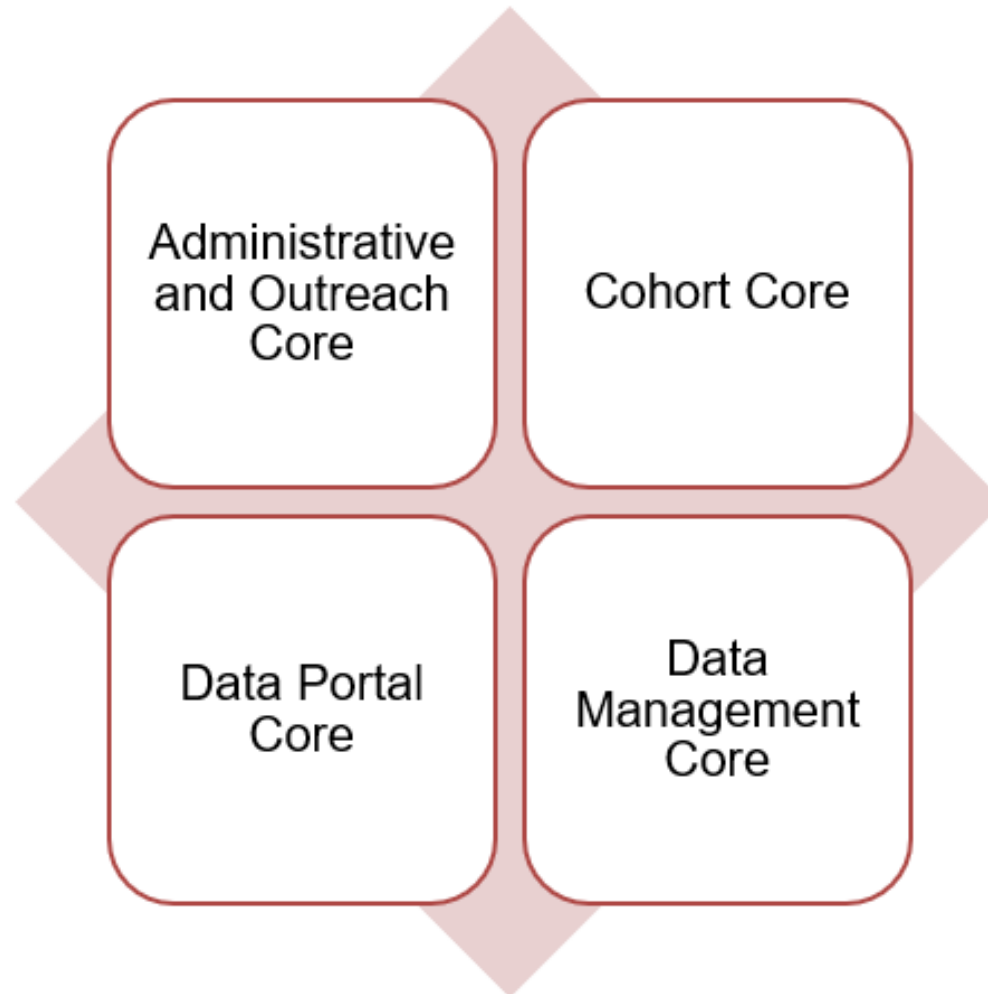
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DTC Components

- ❑ Program coordination
- ❑ Patient call center
- ❑ Disbursement of deep phenotyping costs to sites
- ❑ Research skills component

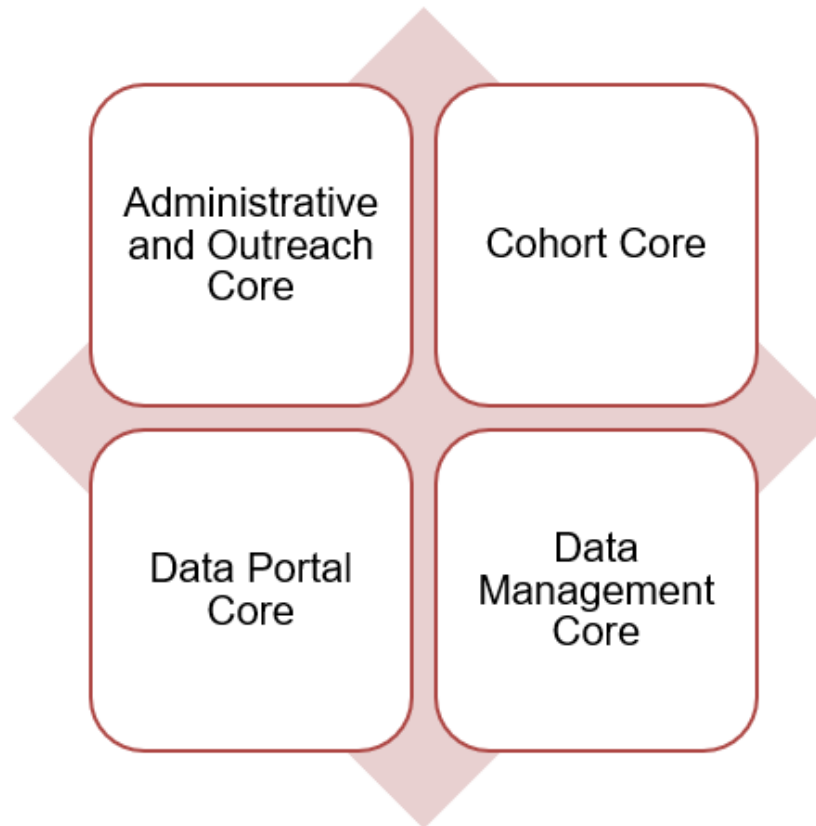


DTC Components



- ❑ Collection of retrospective data from NIH cohorts and trials
- ❑ Identify stored samples and coordinate omics

DTC Components



- ❑ Work with BioDataCATALYST to create a data portal interface specific to HeartShare
- ❑ Create a patient-facing interface
- ❑ Facilitate EHR data acquisition

- ❑ Coordinate all core activities
- ❑ Create an imaging repository for HFpEF research
- ❑ Develop procedures and standards for data curation and harmonization
- ❑ Data analysis

NHLBI Resources

- Trans-Omics for Precision Medicine (TOPMed)
 - <https://www.nhlbiwgs.org/>
 - See Projects/Studies tab (list of all TOPMed projects and type of omics) and Publications tab
- BioDataCATALYST
 - <https://biodatacatalyst.nhlbi.nih.gov/>

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HeartShare RFAs Use a Cooperative Agreement Mechanism

- A cooperative agreement (U) is frequently used for high-priority research areas that require substantial NIH program staff involvement.
- Most large programs are funded using U mechanisms.
- Substantial staff involvement includes:
 - Participating in study design or development
 - Overseeing all aspects of study performance
 - Serving on leadership committees
 - Helping to select contractors or other project staff
 - Coordinating or participating in data collection, analysis, and interpretation

HeartShare RFA Budgets

RFA-HL-21-015

- 4 Clinical Centers (CCs)
- U01
- Total Budget: \$200K direct costs per year in FY21-FY25 for each CC
- A CC's proposed deep phenotyping protocol can use estimated costs provided in the RFA



RFA-HL-21-016

- Data Translation Center (DTC)
- U54
- Total Budget: \$2.445M direct costs per year in FY21-FY25
 - Estimated deep phenotyping protocol costs are part of the DTC budget and will be reimbursed to sites as capitation:
 - Years 1-2: \$645K direct costs per year
 - Years 3-5: \$1.345M direct costs per year
 - Admin Core: \$1.245M direct costs per year for Years 1-2 and \$1.945M direct costs per year for Years 3-5
 - Data Portal and Data Management Cores: \$1.0M direct costs per year for Years 1-2 and \$500K direct costs per year for Years 3-5
 - Cohort Core: \$200K direct costs per year for Years 1-2

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HeartShare Review

Tony L. Creazzo, PhD – Scientific Review Officer
creazzotl@nhlbi.nih.gov

RFA-HL-21-015: HeartShare: Next-Generation Phenomics to Define Heart Failure Subtypes (U01 Clinical Trial Not Allowed)

RFA-HL-21-016: HeartShare: Data Translation Center (U54)

Applications will be reviewed in two separate review meetings – one for each RFA (dates to be determined)

Review meetings will occur March/April 2021

Letters of Intent (LOI) Due by December 8

Prospective applicants are asked to submit a letter of intent that includes the following information:

Descriptive title of proposed activity

Name(s), address(es), and telephone number(s) of the PD(s)/PI(s)

Names of other key personnel

Participating institution(s)

Number and title of this funding opportunity (RFA-HL-21-015, 016)

The letter of intent should be sent to:

Director, Office of Scientific Review

National Heart, Lung, and Blood Institute

Email: NHLBChiefReviewBranch@nhlbi.nih

Review Criteria Specific to FOAs

Note that under each standard scored review criterion (Significance, Investigators, Innovation, Approach, Environment), there are additional review criteria specific to these Funding Opportunity Announcements (FOAs).

The reviewers will be directed to consider these additional criteria in their evaluation and scoring of proposals.

RFA-HL-21-015: HeartShare Centers Review Criteria

Review Criteria Specific to this FOA – example:

Significance

Specific to this FOA:

If successful, will this CC make a significant contribution to the overall goals and objectives of the HeartShare Program? If successful, will the data and knowledge generated by this CC lead to a better understanding of HF phenotypes and treatment targets?

Review Criteria Specific to this FOA – example:

Approach

Specific to this FOA:

How feasible are the data collection, curation, and integration goals? How rigorous are the applicant's plans for managing study data? How achievable are the study's timeline and milestones? Does the plan provide ample opportunity for collaboration, integration, and interaction within the DTC, with the rest of the HeartShare Program, and the wider research community?

Key Dates:

December 8, 2020: Letter of Intent (LOI)

January 8, 2021: Application Due Date

March/April 2021: Review meeting

NHLBI May 2021 Council: June 8, 2021

