

Maternal and Pediatric Precision in Therapeutics Hub MPRINT Hub



Pre-Application Webinar for:

RFA-HD-21-025: MPRINT Knowledge and Research Coordination Center (KRCC)

RFA-HD-21-026: MPRINT Centers of Excellence in Therapeutics (CETs)

**Obstetric and Pediatric Pharmacology
and Therapeutics Branch (OPPTB)**



Eunice Kennedy Shriver National Institute
of Child Health and Human Development

Best Pharmaceuticals
for Children Act



Eunice Kennedy Shriver National Institute
of Child Health and Human Development



Speakers & Panelists

- **Aaron Pawlyk, PhD**, Chief, Obstetric and Pediatric Pharmacology and Therapeutics Branch (OPPTB), NICHD
- **MPRINT KRCC P30 Program**: Lesly Samedy Bates, PharmD, PhD, OPPTB
- **MPRINT CET P50 Program**: Zhaoxia Ren, MD, PhD, OPPTB
- **Grants Management Specialist**: Mario Martinez, MPH
- **Scientific Review Officer**: Christiane M. Robbins, PhD



Outline



MPRINT Hub Overview

Background
Key Dates



KRCC P30 Specifics

Application
Components



CET P50 Specifics

Application
Components



Q & A Session

Frequently Asked
Questions
Open Floor



Background

What is the MPRINT Hub?

- National resource to aggregate, present and expand the available knowledge, tools, and expertise in maternal and pediatric therapeutics to the broader research and drug discovery and development communities.
- Grant Mechanism with:
 - Center Core Grant (P30) - Knowledge and Research Coordination Center (KRCC)
 - Specialized Centers (P50) - Centers of Excellence in Therapeutics (CETs)
- Emphasis on:
 - Enhancing the availability of knowledge, regulatory science, and drug development tools
 - Facilitating safer, more inclusive, and more cost-effective trials
 - Increasing knowledge around use of existing drugs and enable novel drug development



Background

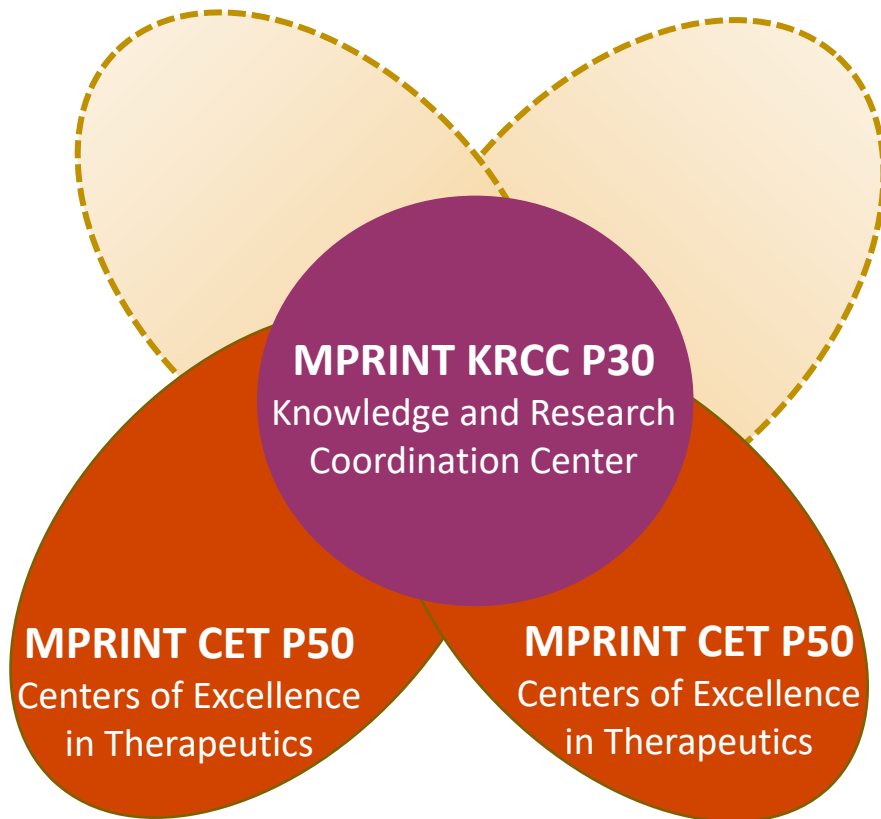
“Maternal and Pediatric Therapeutics” is defined as:

- Therapeutic treatment of obstetric and breastfeeding conditions;
- Physiological changes that occur in a woman’s body that impact the distribution or effects of administered therapeutics;
 - During pregnancy, the post-partum period, and during lactation
- Passage of drug from mother to fetus during pregnancy and to child during breastfeeding,
- Therapeutic treatment of pediatric disease
 - Particularly unique pediatric conditions or pharmacodynamic differences from adult disease;
- Physiological changes that occur across the entire spectrum of pediatric development that impact the distribution or effects of administered therapeutics
 - From birth through adolescence



Hub Model

Purpose of Each Center



MPRINT KRCC P30:

- administrative structure
- technical and scientific infrastructure
- responsible for knowledge aggregation and dissemination.

MPRINT CET P50:

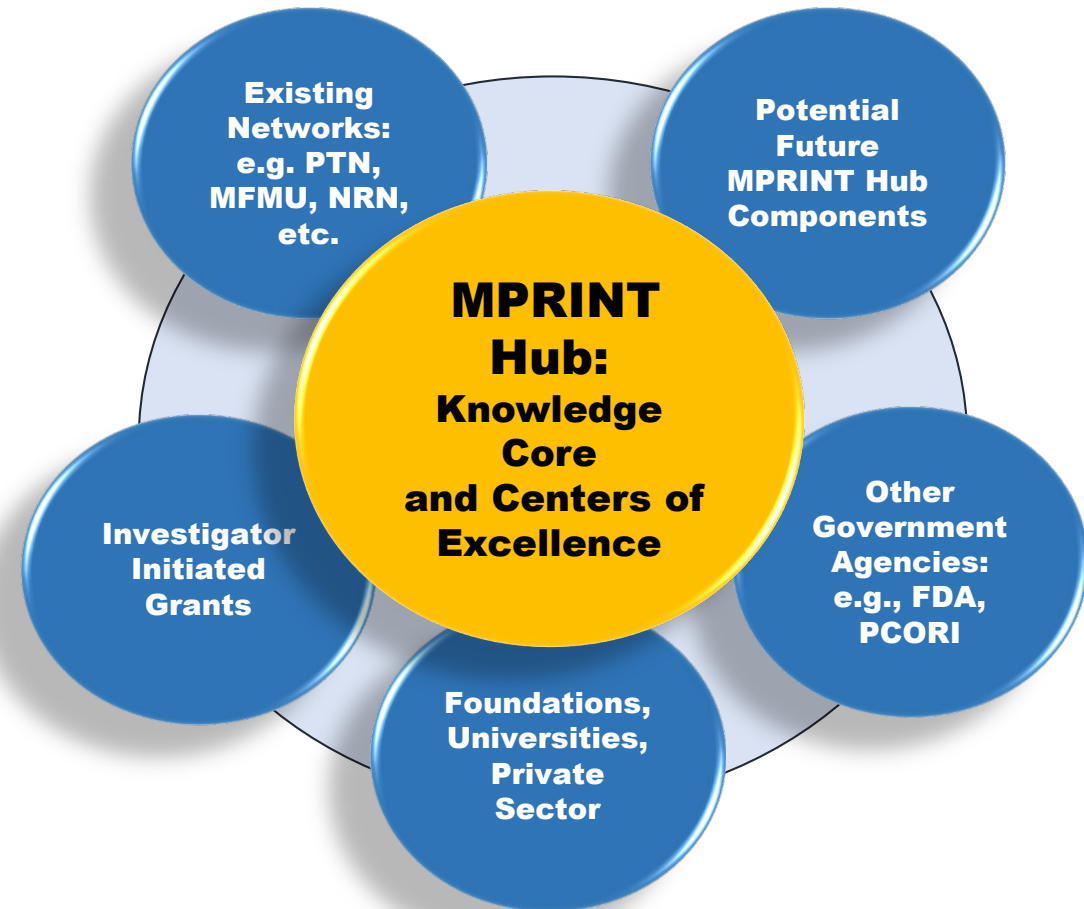
- address key knowledge deficits
- conduct/facilitate novel clinical, translational, basic, and/or data sciences research.



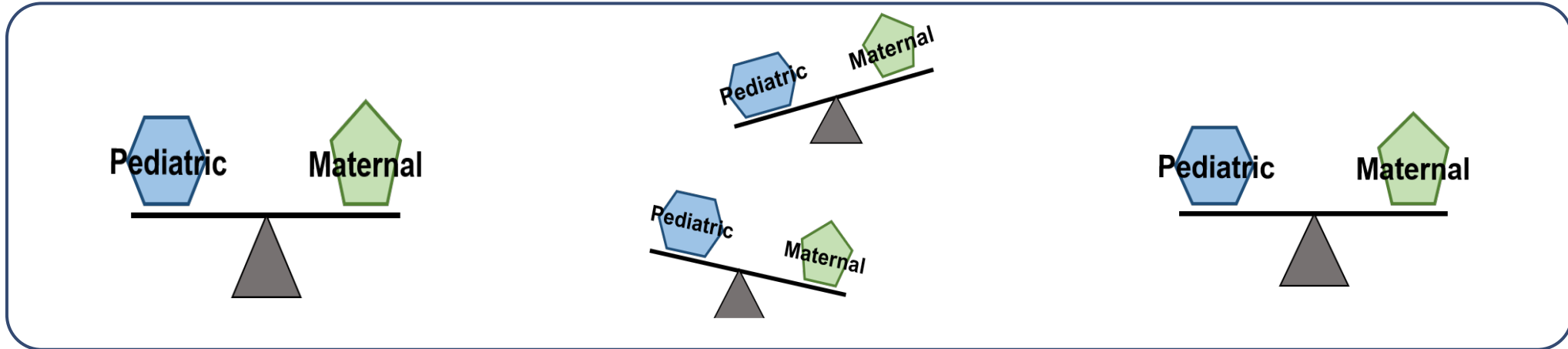
Big Picture: MPRINT Hub

MPRINT Hub is a service center and science catalyst:

- Provide knowledge and expertise to scientific community
- Serve as a platform for innovative multidisciplinary research
- Synergize with other resources and networks
- Catalyze and accelerate maternal and pediatric therapeutics towards precision medicine



Balancing the MPRINT Hub



MPRINT KRCC P30:

strong balance between maternal and pediatric pharmacology and therapeutics

MPRINT CET P50:

inclusion of studies relating to both maternal and pediatric therapeutic science

Overall:

equal distribution of study between maternal and pediatric pharmacology across the MPRINT Hub

Assurance that there is approximately equal distribution of study between maternal and pediatric pharmacology across the MPRINT Hub



Organization and Management of the MPRINT Hub

- Activities of the MPRINT KRCC and CETs will be undertaken with input from a Steering Committee composed of MPRINT Hub awardees in addition to feedback from the MPRINT Hub's External Program Consultants (EPCs) and the NICHD.
- External Program Consultants (EPCs) will be selected by the NICHD to review the functioning and progress of the Hub and ensure the Hub is operating optimally and efficiently.
- *Section IV. Application and Submission Information: Approach* - Describe how components will reprioritize and adjust activities, deliverables, timelines, and milestones on an annual basis (in the RPPR) based on feedback from the MPRINT Hub SC, External Program Consultants, and NICHD staff.
- The NICHD may negotiate changes to the MPRINT KRCC deliverables, timelines, and milestones as well as the process for their reprioritization prior to award.



Responsiveness

Revised slide 10-15-2020

Applications proposing projects below are not within the scope of these FOAs:



MPRINT KRCC P30 applications that:

- propose to conduct clinical trials;
 - propose non-computational research outside of the Optional Core;
- ** MPRINT KRCC P30 applications should focus on open access of its resources to investigators across the nation



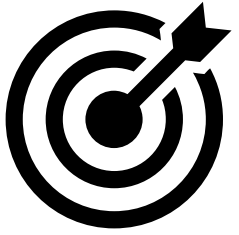
MPRINT CET P50 applications that:

- propose studies primarily for the purpose of changing clinical practice or resulting in labeling changes;
 - propose to conduct drug discovery efforts such as target identification, screening, or medicinal chemistry;
 - do not propose a Clinical Research Project (i.e., applications must have a Clinical Research Project);
 - focus on pre-clinical drug development activities such as IND-enabling studies;
 - focus on medical devices that do not directly relate to therapeutics;
 - propose mechanistic research on understanding normal biology or disease processes that is not clearly directed towards understanding knowledge deficits related to therapeutics.
- ** MPRINT CET P50 applications must propose a Clinical Research Project

** Projects NOT focused on maternal and pediatric pharmacology and therapeutics research as defined in RFAs **



Long Term Goals



- To promote increased understanding of the underlying biological heterogeneity relevant to therapeutics across the continuum of pediatric development and during and around pregnancy
- To improve regulatory science and the drug development process
- To maximize scientific exchange and accelerate research in the field of maternal and pediatric therapeutics
- ***NICHD Aspirational Goal:*** Facilitate application of **precision medicine approaches** in children by capitalizing on advances in genomics and by updating normative data on the growth and development of a diverse population of children, including those with intellectual, developmental, and physical disabilities.

https://www.nichd.nih.gov/sites/default/files/2019-09/NICHD_Strategic_Plan.pdf



Important to Note

- Individuals from underrepresented racial and ethnic groups as well as individuals with disabilities are always encouraged to apply for NIH support
- Applications should state how the Research Projects and Cores will promote the NICHD's 2020-2024 Strategic Plan (<https://www.nichd.nih.gov/about/org/strategicplan>)
 - In particular, research theme five's focus on advancing safe and effective therapeutics for pregnant and lactating **women** and **children**, including **those with disabilities**.
 - For pediatrics, how this relates to the priorities of the NIH's Best Pharmaceuticals for Children Act needs: (<https://www.nichd.nih.gov/sites/default/files/inline-files/2020PriorityListFeb20.pdf>);
- Read application instructions and review criteria thoroughly for each specific component
 - Clearly address the deliverables, timelines, and milestones and how they will be reprioritized and adjusted on an annual basis



Key Dates

- Letter of Intent Due Date October 30, 2020
- Earliest Submission Date October 30, 2020
- Application Due Date November 30, 2020 (by 5:00 PM
local time of applicant organization)

We strongly suggest applications are submitted a week in advance

- Scientific Merit Review March 2021
- Advisory Council Review May 2021
- Earliest Start Date July 2021





MPRINT KRCC P30

Knowledge and Research Coordination Center

Application Components

Eligibility Criteria

- Program Director/Principal Investigator (PD/PI)
 - Any individual(s) with the skills, knowledge, and resources necessary to carry out the proposed research as the (PD/PI)
- Applicants are free to apply to the companion FOAs
 - Applicant organizations may submit more than one application, provided that each application is scientifically distinct
- May propose multiple PDs/PI, multiple institutions/organizations
- Only Foreign **components**, as defined in the *NIH Grants Policy Statement*, **are** allowed
- Full and open competition



Letter of Intent

Minimum information

- MPRINT Title & RFA ID
- Principal Investigator(s) with contact information
- Other Key Personnel
- Participating Institutions
- Descriptive title of proposed activity

**Letter of Intent is not required and is not binding



Page Limitations & Required Components

Application Components	Page Limits	Required	Limitations
Overall	12	Yes	Max of <u>one</u>
Knowledge Portal: Use for Knowledge Base and Portal	12	Yes	<u>Max of one</u>
Pharmacometrics Core: Use for Pharmacometrics and Clinical Trial Design Core	12	Yes	<u>Max of one</u>
Outreach Core: Use for Outreach, Dissemination, and Training Core	6	Yes	<u>Max of one</u>
Logistics Core	6	Yes	<u>Max of one</u>
Optional Core	6	No; Optional	<u>Max of one</u>



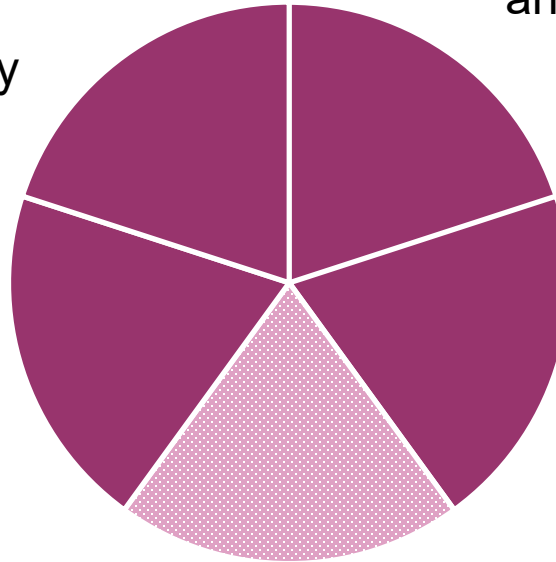
Components of the KRCC

Logistics Core

- Overall logistic and administrative coordination for KRCC, CETs and future components
- Will oversee use of the Opportunity Pool funds

Outreach, Dissemination, and Training Core

- Support of interactions between the MPRINT Hub and the broader scientific community



Knowledge Base & Portal

- Primary database, integrator, and analytical platform

Pharmacometrics and Clinical Trial Design Core

- Pharmacometric models and expertise for dose selection in maternal and pediatric clinical trials

Optional Core

- Provide support services for other Cores



Award Budget

- The budget amount is different for each of the RFAs
 - For the **MPRINT KRCC P30**, NICHD intends to commit **\$3,000,000** total costs (including subcontract F&A) in **Fiscal Year (FY) 2021** to fund 1 award
 - Total Costs include all Facilities and Administrative (Indirect) Costs
- Budget requests should reflect the actual needs of the proposed project
- The maximum project period is 5 years

** Be sure to review budget instructions for each specific component and overall



Instruction Highlights

Opportunity Pool

- Should budget for a total of \$500,000 total costs **per year** under the other expenses within the Logistics Core budget as a separate line in the composite budget
- Awardee-selected Opportunity Pool projects require prior approval by NIH prior to initiation

Data sharing

- Applicants should indicate their willingness to abide by all data deposition, quality control metrics, standardization, metadata requirements, data and software release, and public copyright license policies developed by the MPRINT Hub SC and approved by NICHD staff
- NICHD encourages the use of the Data and Specimen Hub (DASH) to store and access de-identified human data



Instruction Highlights

Data sharing (cont'd)

- **Specific Plan for Protocol, Tool, and Reagent Sharing**
 - Protocols, tools, and reagents must be broadly available and distributed at minimal cost.
 - Discuss plans for sharing and distribution of non-data resources, including models, protocols, biomaterials, and reagents, where applicable.
 - KRCC will work with all MPRINT Hub investigators to collect, curate, and disseminate information regarding tools and reagents, where applicable.
- **Specific Plan for Sharing Software**
 - A software dissemination plan is expected in applications that are developing software.

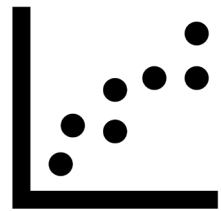


Review of Applications

- Peer review by an ad hoc review committee
- Organized by NICHD Scientific Review Branch
- Orientation given to reviewers
- Review criteria for each component of the KRCC

** Be sure to review **Section V. Application Review Information** of RFA for complete **Review Criteria**, as there are **Specific Review Criteria** for each component





MPRINT CET P50

Centers of Excellence in Therapeutics

Application Components

Eligibility Criteria

- Program Director/Principal Investigator (PD/PI)
 - Any individual(s) with the skills, knowledge, and resources necessary to carry out the proposed research as the (PD/PI)
- Applicants are free to apply to the companion FOAs
 - Applicant organizations may submit more than one application, provided that each application is scientifically distinct
- May propose multiple PDs/PI, multiple institutions/organizations
- Only Foreign **components**, as defined in the *NIH Grants Policy Statement*, **are** allowed
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Application Components	Page Limits	Required	Limitations
Overall	12	Yes	Max of <u>one</u>
Administrative Core	6	Yes	Max of <u>one</u>
Research Project(s)	12 (<i>each</i>)	Yes	Min of <u>two</u> ; Max of <u>three</u>
Support Core(s)	6 (<i>each</i>)	Yes	Min of <u>one</u> ; Max of <u>two</u>



Components of the CETs

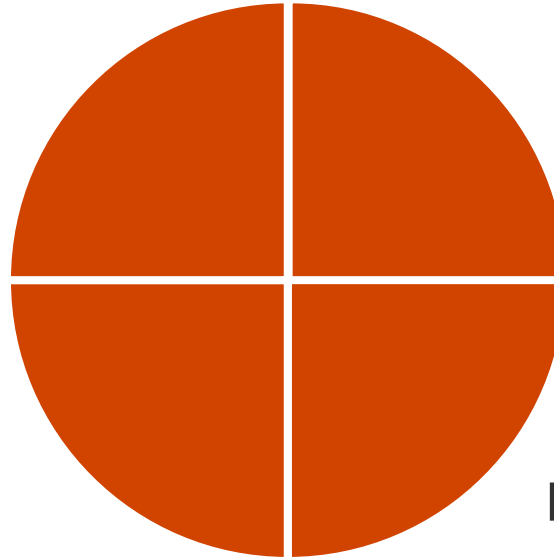
Minimum required

Administrative Core

- Provide oversight, support and management of Research Projects and Support Cores
- Will oversee a Support Pool
- Work and coordinate with the MPRINT KRCC's Outreach, Dissemination, and Training Core

Research Projects (#1)

- At least one research project must be a clinical research project



Support Cores

- Support the Research Projects within the proposed CET

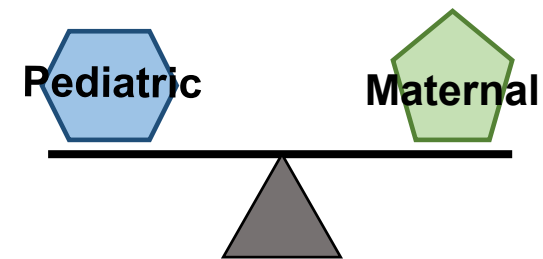
Research Projects (#2)

- May be a clinical, basic/translational, or data science project



Types of CET Individual Research Projects

- CETs may have more than one research theme
- **Requirements:**
 - At least **one** proposed Research Project must be a clinical research project.
 - All basic, translational, and/or data science projects must *thematically* be linked to the clinical project(s)
- Individual Research Projects or Support Cores may have either a maternal or pediatric focus **OR** the maternal and pediatric aspects may be woven throughout Cores and Research Projects of the application.



Award Budget

- The budget amount is different for each of the RFAs
 - For the **MPRINT CET P50**, NICHD intends to commit **\$2,500,000** total costs (including subcontract F&A) in **FY 2021** to fund **2 awards**
 - Total Costs include all Facilities and Administrative (Indirect) Costs
- Application budgets are limited to \$850,000 in direct costs per year (excluding subcontract F&A)
- Budget requests should reflect the actual needs of the proposed project
- The maximum project period is 5 years

** Be sure to review budget instructions for each specific components and overall



Instruction Highlights

Support Pool

- Should budget for a total of \$150,000 total costs per year in the Administrative Core budget
- Awardee-selected Support Pool projects require prior approval by NIH prior to initiation

Data sharing

- Applicants should indicate their willingness to abide by all data deposition, quality control metrics, standardization, metadata requirements, data and software release, and public copyright license policies developed by the MPRINT Hub SC and approved by NICHD staff
- NICHD encourages the use of the Data and Specimen Hub (DASH) to store and access de-identified human data



****Please see notice for correction in Resource Sharing Plan:**



Instruction Highlights

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Questions

MPRINT KRCC P30

Scientific and Research Program

- Lesly Samedy Bates, PharmD, PhD
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MPRINT CET P50

Scientific and Research Program

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Grants Management

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Scientific Review

- Sherry Dupere, PhD
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- duperes@mail.nih.gov





To be notified of release of the frequently asked questions (FAQs) and other updates, please sign up at:

<https://www.surveymonkey.com/r/MPRINT>

For more information on the MPRINT Hub visit:

<https://www.nichd.nih.gov/about/org/der/branches/opptb/mprint>