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NIGMS/NIH

The IDeA Program: New Features & Activities for New Needs

Northeast Regional IDeA Meeting, June 16-18, 2023

DRCB Staff in Attendance

- **Federico Bernal, Ph.D., Program Director**
- **Crina Frincu, Ph.D., Program Director**
- **Olga Kovbasnjuk, Ph.D., Program Director**
- **Yang Zhou, Ph.D., Program Director**

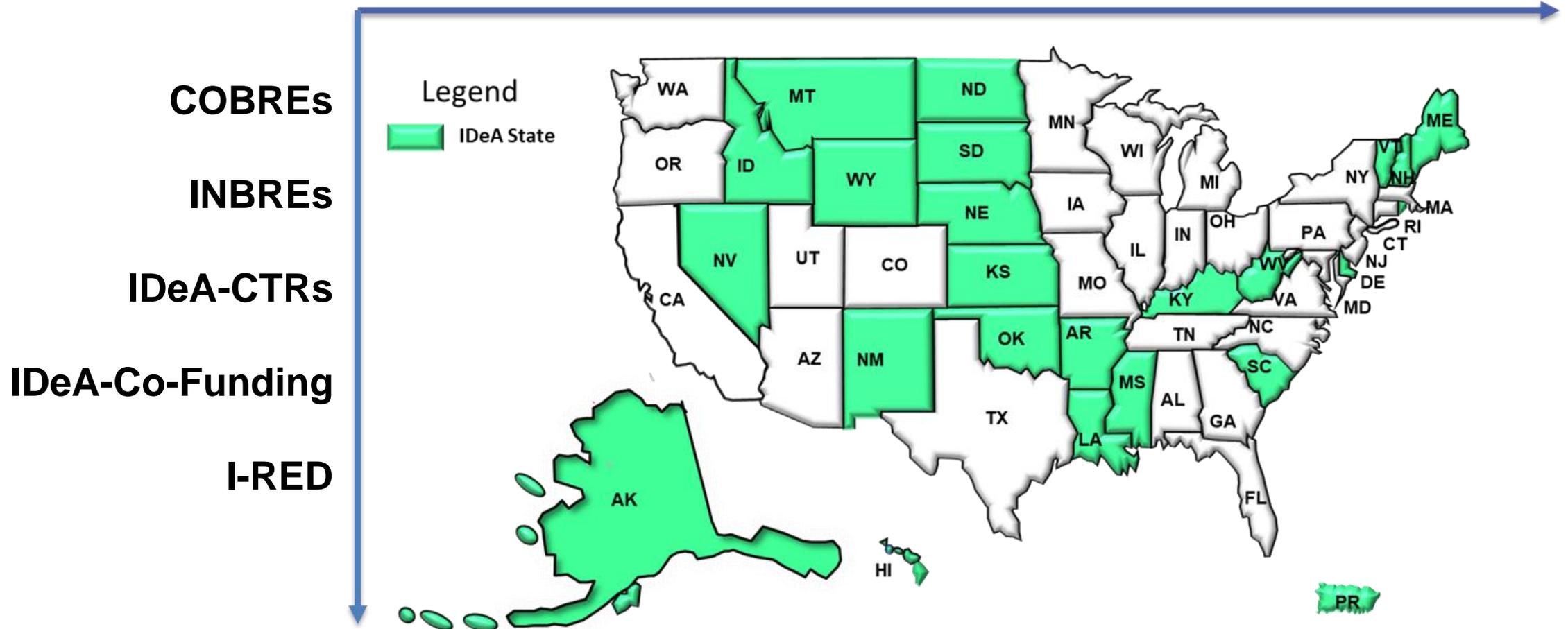
IDeA Program Supports Research Capacity Building

- **Competitive basic, clinical, behavioral, and translational research in all NIH Institutes and Centers' mission areas**
- **Research workforce development**
- **Infrastructure enhancement**

FY	IDeA Appropriations
2023	\$425,956,000
2022	\$410,453,000
2021	\$396,573,000
2020	\$386,573,000
2019	\$361,573,000
2018	\$350,575,000
2017	\$333,361,000
2016	\$320,840,000
2015	\$273,325,000
2014	\$273,325,000
2013	\$261,554,421

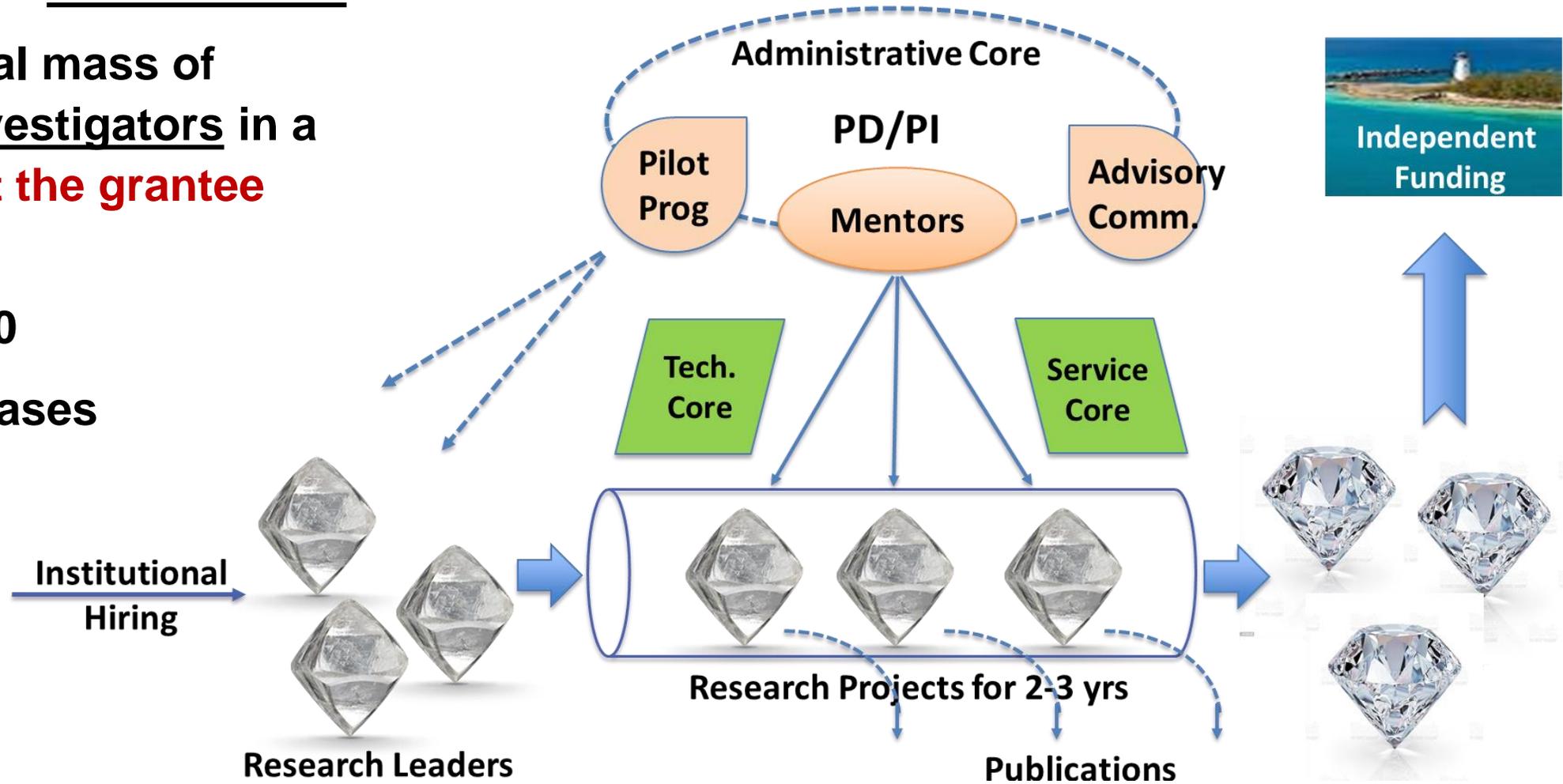
Maximizing Impact through Creativity, Synergy, & Efficiency

Collaborations & Participation in NIH-Wide Initiatives



COBRE: Centers of Biomedical Research Excellence

- Develop research infrastructure
- Develop a critical mass of independent investigators in a research area **at the grantee institution**
- 1st award in 2000
- **Three 5-year Phases**
 - 1: Establish
 - 2: Strengthen
 - 3: Sustain



COBRE: Significant Programmatic Changes

- **Scope:** A research area that the applicant institution is committed to build
- **Advisory Committee:** A single advisory committee, including a senior institutional leader & 3 external members (COBRE 2 may keep all EAC members [NOT-GM-23-047](#))
- **Institutional Cap:** An institution may have up to 4 active COBRE 1 and 2 awards ([NOT-GM-23-040](#))
- **PI Eligibility:** An active research grant in the research area of the COBRE
- **Research Project Leader (RPL) Eligibility:** Faculty investigators who are ESIs or NIs as defined by the NIH
- **Strengthening the Pilot Project Program (PPP):** Required for Phase 2
- **Commitment beyond COBRE:** Phase 3 must have a sustainability plan – sustainability of the research area at the institution and not of the Center itself; can use Phase 3 funds for recruitment of faculty and staff

Strategic Alliances to Fund More COBREs

NOT-GM-23-011

- Supporting **Data Sciences Research** in the IDeA States through the COBRE Program
- NIH Office of Data Science Strategies (ODSS) will fund additional COBRE awards with its own funds

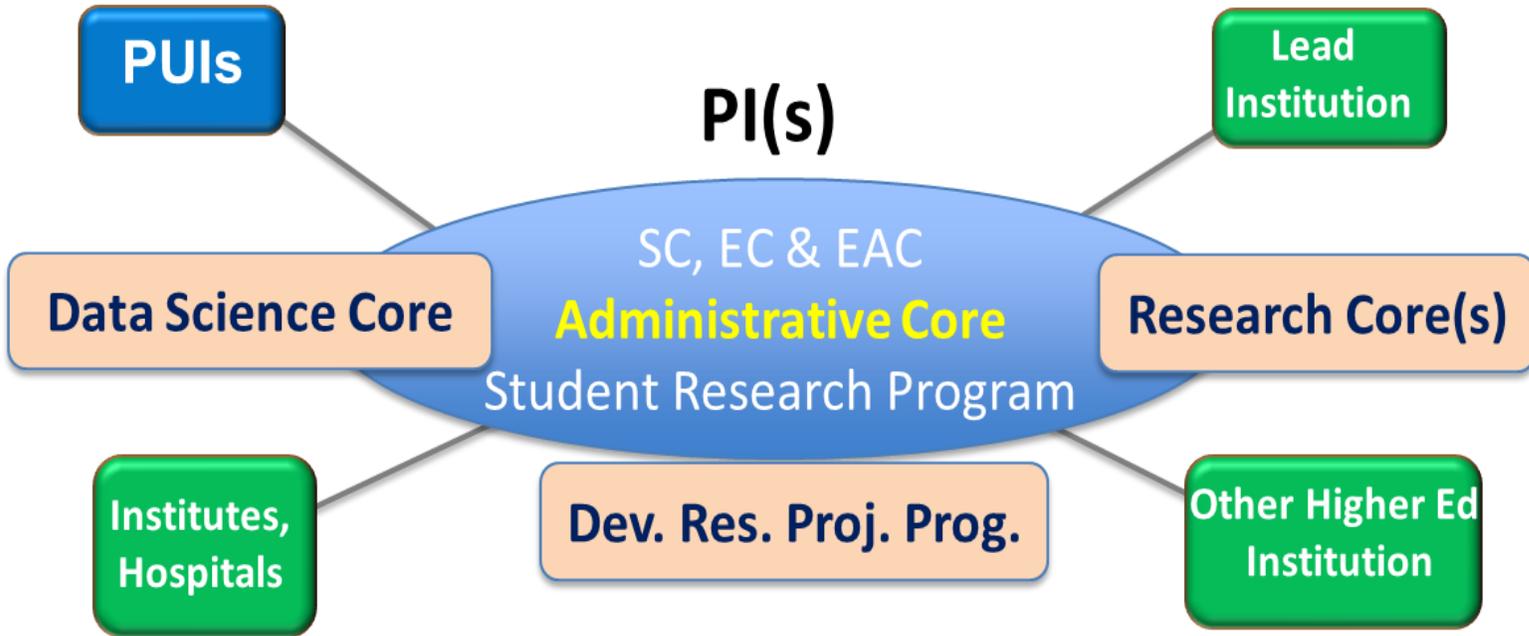
NOT-GM-23-012

- Supporting **Women's Health Research** in the IDeA States through the COBRE Program
- NIH Office of Research for Women's Health (ORWH) will fund additional COBRE awards with its own funds

INBRE: IDeA Networks of Biomedical Research Excellence

Build biomedical research capacity through:

- Faculty research and research mentoring
- Student participation in research
- Infrastructure development/enhancement
- One award per state



INBRE: Significant Programmatic Changes

- **Membership:** All higher education institutions and organizations involved in biomedical research (not capped at 6-8)
- **Scope/Faculty Research:** All areas of biomedical research (not a single theme/area)
- **Student Research:** Student Research Program may support students year-round to work with preceptors who may or may not be DRPP awardees;
- **Data Science Core:** Build Data Science expertise to support research and education
- **Curricula Development:** May support faculty to incorporate research into curricula
- **PI:** multiple PIs, including those from different institutions, are encouraged
- **Steering Committee (SC):** Each partner institution is represented by a senior institutional officer as a member of the SC

IDeA Program Collaborations

[NOT-GM-22-001](#) Notice of Special Interest (NOSI): Availability of Administrative Supplements to INBRE Awards to Fund Research Collaborations

Funds are intended for INBREs to develop collaborations between investigators at the INBRE partner institutions and investigators supported by one of the following programs: COBRE, IDeA-CTR, IDeA co-funded R01s and R15s, IDeA States Pediatric Clinical Trials Network (ISPCTN), Clinical and Translational Science Awards (CTSA) and Native American Research Centers for Health (NARCH) awards to organizations located in IDeA states

Due Date, January 31, every year

[NOT-GM-23-034](#) Notice of Special Interest (NOSI): Availability of Administrative Supplements to IDeA Awards to Fund Team Science Development Projects

This NOSI aims to support the development of team science projects that bring together two or more investigators from IDeA states with different perspectives and expertise to address complex basic, behavioral, clinical and/or translational research questions with complementary approaches.

Cloud-Computing Presents Opportunities for Biomedical Researchers

- Biomedical research is becoming increasingly data-driven
 - Need: access to big data and data analytical/storage capacities
 - Opportunity: broad access to data and data analytical capacity will enable investigators and students with limited research resources to participate in cutting-edge research
- Cloud computing may be the game changer that breaks the insurmountable barrier of operating HPC facilities at every institution and provides such access
- NIGMS strives to bring Cloud computing to the large number of investigators and students at under-resourced institutions and help unleash their talents

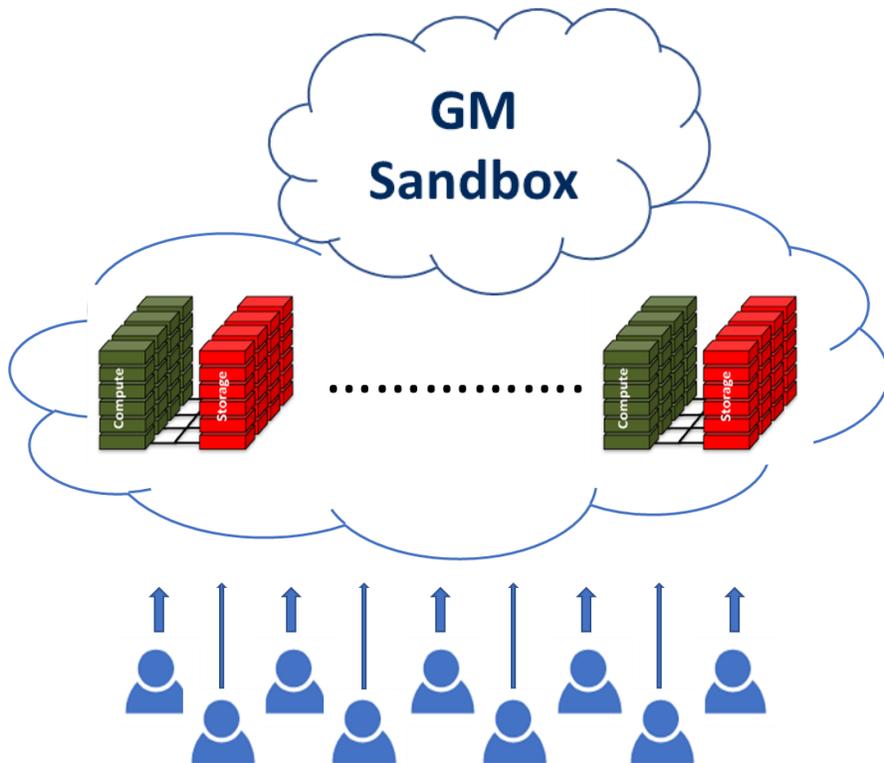
INBRE Leads Democratization of Cloud Computing for Biomedical Research

- A collaboration of NIGMS, NIH ODSS/STRIDES, Google-GCP, Amazon-AWS, Deloitte, and GM-funded investigators
- Training on Cloud computing fundamentals of INBRE investigators and students by GCP/AWS through 60 six-hour interactive sessions (500 participants)
- Migrating the IDeA National Resource for Quantitative Proteomics' data operation from its mainframe server to the Cloud

“This cloud environment has been absolutely transformative for our resource.” *Alan Tackett*

- **Building the NIGMS Sandbox: A Cloud-Based Learning Platform**

The NIGMS Sandbox, A Cloud-based Learning Platform



Objectives

- A learning environment for users to learn how to navigate the Cloud
- A collection of modules each covering a technology or research method
- Interactive, enabling user self-learning and processing users' own research data on their own pace
- Accessible by large number of users with limited or no cost

NIGMS Sandbox Version 1

Category	Module	Developer	
Introduction of Bioinformatics	Fundamentals of Bioinformatics	Dartmouth College	
	Single-omics	RNAseq	University of Maine*
		Proteomics	U. of Arkansas for Medical Sciences*
		DNA Methylation Analysis	University of Hawaii
		Transcriptome Assembly	MDI Biological Laboratory
		Genomic Annotation & Pathway Analysis	University of Nevada Reno
		ATACseq and Sc-ATACseq	U. of Nebraska Medical Center
Multi-omics and Metagenomics	Metagenomics of Biofilm	University of South Dakota	
	Multi-omic Analysis	University of North Dakota	
Machine Learning	Biomedical Image Analysis	University of Arkansas	
	Biomarker Discovery with ML/AI	University of Rhode Island	
Data Science Methodology	Biomedical Data Science	University of San Francisco	

NIGMS Sandbox: An Interactive Cloud-Based Learning Platform

- A webinar on the NIGMS Sandbox held on June 23rd
- [Slides](#) and [recording](#) of the [NIGMS Sandbox](#) Webinar are available on the [IDeA website](#)
- NIGMS funded programs (24 INBREs and 6 TWD) selected to test-use these modules, available through the NIH CloudLab at no-cost to INBRE faculty, staff and students
- Users in each cohort have ~6 weeks to navigate the Sandbox/Cloud Lab, with assistance from the STRIDES team, as needed
- Contact your INBRE Data Science Core Director to signup for the cloud credits

	Sign Up By	Cohort Starts	Credits Expire
COHORT 1	June 30	July 3	NEW: August 25
COHORT 2	NEW: August 25	NEW: August 26	NEW: October 9
COHORT 3	NEW: October 9	NEW: October 10	NEW: November 23

- Any questions about the NIGMS Sandbox Modules, no-cost credits, contact cloudlab@nih.gov

IDeA-Clinical and Translational Research (IDeA-CTR) Program

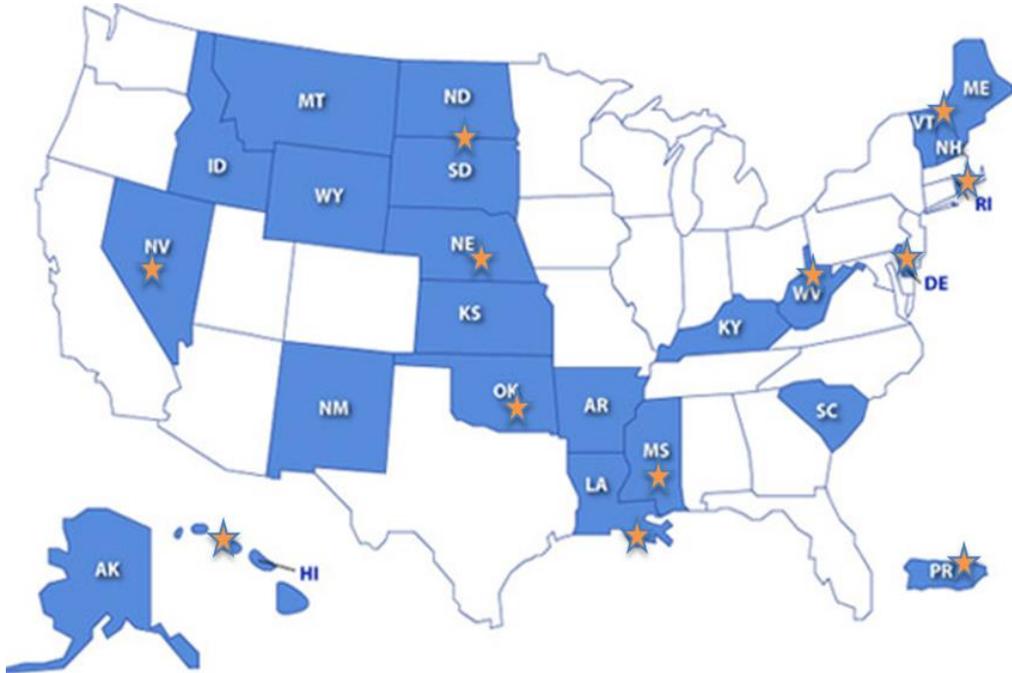
Objectives: Build Clinical and Translational Research Capacity in IDeA States by supporting state-wide or multi-state regional networks to:

- **Develop and expand infrastructure** for clinical and translational research
- **Develop research workforce** and enhance network institutions' ability to design and implement clinical and translational research programs
- **Coordinate clinical research activities** across IDeA institutions and organizations

IDeA-CTR Programmatic Changes: CTR Expansion

CTR-Development (CTR-D) Awards

- To build C&T research capacity in states and institutions that are not supported by IDeA-CTRs



IDeA-CTR → CTR-Network (CTR-N) Awards

NOFOs expected to be published in the coming weeks. First due date Nov 9 2023, then Oct 9 2024, 2025

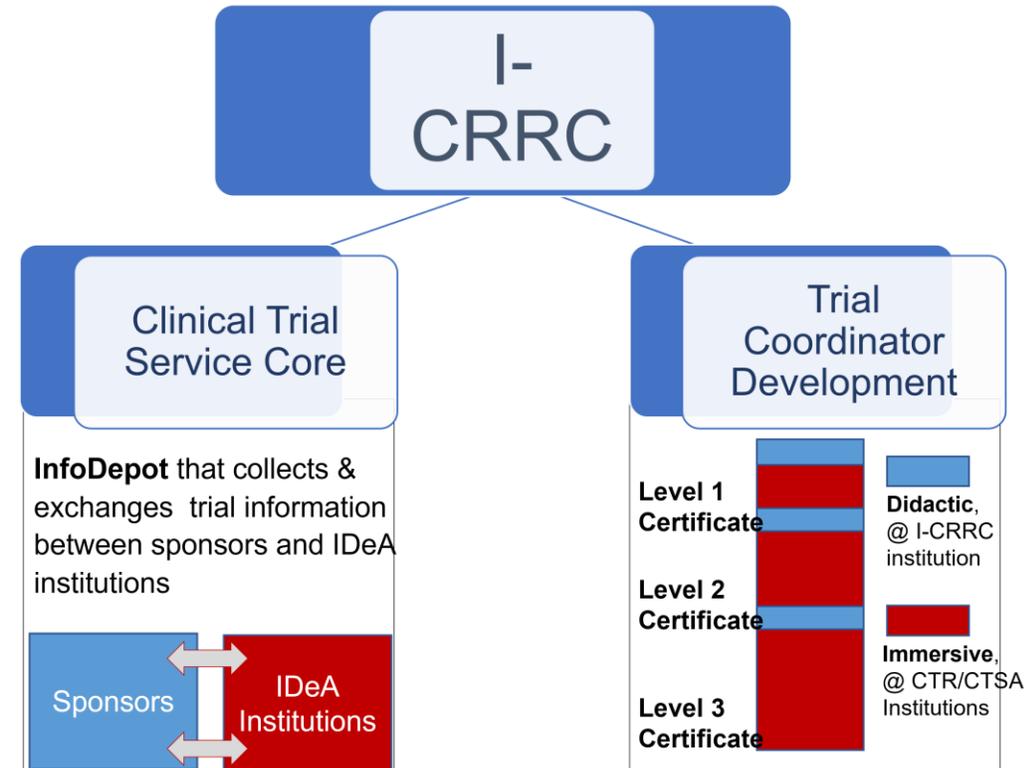
I-CRRC IDeA Clinical Research Resource Center: Just Funded at WVU!

Objective: To support CTRs and CTSAs in IDeA States by:

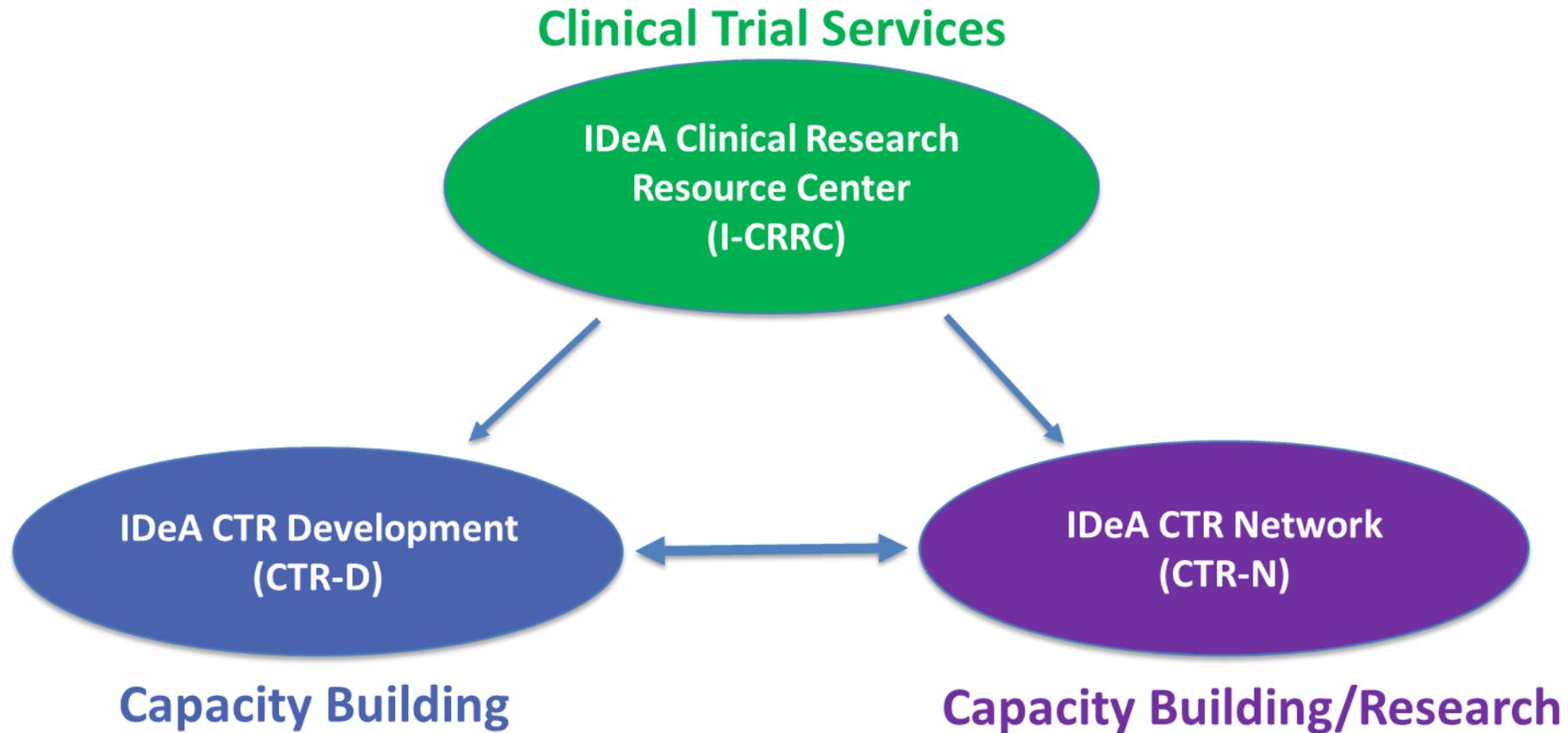
- Connecting trial sponsors and the IDeA clinical research community
- Strengthening IDeA states' clinical trial coordinator workforce

Long-Term Goals

- Bring more clinical trials to IDeA states
- Enable more people from IDeA states to participate in clinical trials
- Diversify clinical trials participation and help to reduce health disparity



A Strengthened C&T Research Network in IDeA States



Expanded IDeA Co-Funding

Co-fund R01, NIGMS-MIRA, and R15 applications submitted to all NIH ICs by IDeA state investigators that fall out of those ICs' paylines

- Collaborated with NIH ICs to appoint an IDeA-co-funding coordinator at each IC
- Increased allowable application nominations by each IC from 4 to 8 each year

Co-fund applications from IDeA institutions with NIH Office of Research Infrastructure Programs (ORIP)

- S10 shared instrumentation grants program
- S10 high-end instrumentation grants program
- S10 basic instrumentation grants program
- R24 equipment grants program

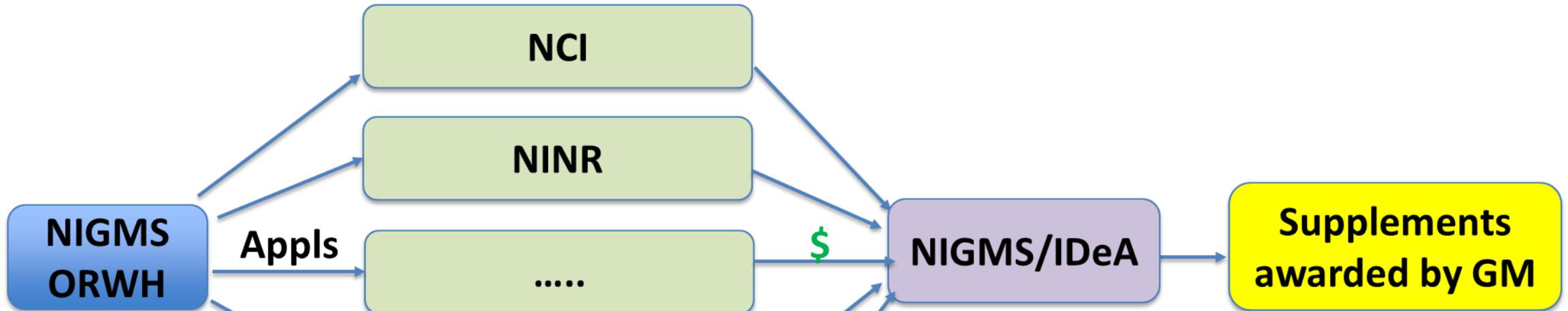
Supplements Expand the Impact of IDeA Funding

- **Supplements from other NIH Institutes/Centers/Offices** (Alzheimer's NOT-AG-23-032, *due date 10/1/2023*)
- **ODSS Data Science NOT-OD-23-123** *next due date April 1, 2024*
- **Equipment Supplements**

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- **Women's Health NOT-GM-22-005** (with OD Office of Research on Women's Health) *due date October 17 2023, 2024* for all IDeA programs
- **EHR** (with NIH Office of Data Science Strategy) NOT-GM-23-035 for CTRs only
- **Team Science NOT-GM-23-034** for all IDeA programs

# Collaboration with ORWH: Women's Health Research in IDeA States



## 16 participating ICOs

|      |                           |
|------|---------------------------|
| FY20 | 19 awards/37 applications |
| FY21 | 15 awards/26 applications |
| FY23 | 26 Awards/42 applications |

# Efforts to Strengthen EHR-based Research

- **Fast Healthcare Interoperability Resources (FHIR) Training**
  - NIH seeks to promote the FHIR standard for EHR-based research
  - IDeA-CTRs were selected to help map out the way
  - Training of IDeA-CTR investigators started on May 2nd with more to come
- **Supplements to strengthen infrastructure for EHR-based research ([NOT-23-035](#))**
  - Adoption of FHIR-Compliant Software at clinical sites including PBRN clinics
  - Harmonizing EHR Data to a Single CDM
  - Use of FHIR in EHR workflows, and development of SMART-on-FHIR apps
  - **Made 9 awards to CTRs in FY23**

# Team Science NOT-GM-23-034

- **Purpose:**
- **Develop team science projects with different expertise from IDeA states to address complex basic, behavioral, clinical and/or translational research questions**
  - with complementary approaches that cannot be accomplished alone
  - catalyze development of new collaborations for joint applications to compete for collaborative funding opportunities, such as Team Science (RM1), Program Project (P01), or Collaborative Research (R01)
- **Received 132 applications from 23 IDeA states**
  - Cross-Institutional Collaborations within the same state or across IDeA states
  - Cross-Program Collaborations: COBRE-COBRE; INBRE-COBRE; CTR-COBRE
- **In the process of making the Team Science awards in FY23**

# Resources Developed for Investigators and Students

Available on NIGMS/DRCB Website

- A [DRCB Weekly Update](#) with information tailored for our programs is sent to PIs every Monday afternoon.
- [Interactive Dashboards](#) that track all IDeA awards with publicly available information in “real time” has been developed for the community
- An inventory of IDeA-supported core facilities has been developed for the community to take advantage of their services with IDeA discounts
- Pre-application Webinar recordings and slides for all Notices of Funding Opportunities

The screenshot displays the NIGMS/DRCB website interface. On the left is a vertical navigation menu with items: NIGMS Home, Research Areas, Research Training, Capacity Building, Grants and Funding, Science Education, News and Events, and About NIGMS. Below this are sections for 'Latest Program News/Events' (with a star icon and link to 'DRCB Weekly Updates'), 'Resources' (with a star icon and links to 'IDeA Interactive Portfolio Dashboard', 'NARCH Interactive Portfolio Dashboard', 'SCORE Interactive Portfolio Dashboard', 'SEPA Interactive Portfolio Dashboard', and 'IDeA-Supported Research Cores'), and 'Award Info'. The 'Award Info' section features a grid of award notices, each with a PDF icon and a title: 'NOT-GM-22-005 Women's Health NOSI', 'SARS-CoV-2 Surveillance NOSI Awards', 'Supplemental Awards for Women's Health in IDeA States', 'DRCB RADx-UP Awards (Phase 1)', 'Supplemental Award for NIAID Regional Biocontainment Laboratories (RBL)', 'AAMC webinar featuring the IDeA program', 'LEAD MSTP Webinar', 'NOT-GM-23-034 Team Science NOSI Webinar Slides', 'NOT-GM-23-034 Team Science NOSI Webinar', 'IDeA Clinical Research Resource Center', 'NOT-OD-23-123: NOSI to Enhance Institutional Data Science Capacity', and 'Building the NIGMS Sandbox for Cloud-based Learning'. A 'Related Info' section is also visible.

# Retirement of SIRS Reporting

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- **NOT-GM-23-046:** Termination of the Requirement for COBRE, INBRE, IDeA-CTR, and NARCH Awards to Provide Supplemental Annual Reports through the Scientific Information Reporting System (SIRS)
- **Annual Reporting Guidance** from NIGMS will be updated to provide details on how to best include and structure data in the RPPR

# **NISBRE 2024**

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**Mark your Calendars!**

***Biennial National IDeA Symposium of Biomedical  
Research Excellence (NISBRE)***

**June 16-20, 2024**

**Washington, D.C.**

# Thank you!

<https://www.nigms.nih.gov/research-areas/areas-of-research/research-capacity-building>

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