



**REQUEST FOR APPLICATIONS:**  
**Great Plains IDeA-CTR Biomedical Informatics Big Data Pilot Program**  
**Application Deadline: January 31, 2018 | 5:00 PM**

<https://gpctr.unmc.edu>

The Great Plains IDeA-CTR Network (GP IDeA-CTR) is a collaboration of 8 institutions including: Boys Town National Research Hospital, North Dakota State University, University of Nebraska Kearney, University of Nebraska Lincoln, University of Nebraska Medical Center, University of Nebraska Omaha, University of North Dakota, and University of South Dakota.

The purpose of this funding program is to support preliminary studies demonstrating the use of large datasets in Clinical and Translational research. The goal is to support new investigators in obtaining extramural funding for use and integration of large data sets such as the NIH Big Data to Knowledge. Our intent with the Biomedical Informatics Big Data Pilot is to encourage use of pragmatic methods to enhance learning within healthcare.

Proposed projects must be clinical and/or translational research. Projects will be completed using large datasets. Examples of GP IDeA-CTR supported data sets include de-identified electronic health record data, the PCORnet Common Data Model, available specimen, tissue, or genomic biomarker repositories, among others. Human subject recruitment or the use of data sets with protected health information are not anticipated to be included within these studies.

Funding available through this program totals \$35,000. Awards will support projects that can be completed within one year. Two types of award are anticipated:

**Big Data Project Award:** Funding is available for one to two awards. The application must detail an existing or forming project team with resources including domain expertise and data analytic skills.

**Data Demonstration Award:** Applicants are to use funding to expose existing local data sets for shared use by other investigators. The project should demonstrate a replicable analytics process with sharable data that can be made available following FAIR Data Principles (**F**indable, **A**ccessible, **I**nteroperable, and **R**eusable). For more information about FAIR data principles and the NIH approach to their use see: Wilkinson, MD, et al. The FAIR Guiding Principles for scientific data management and stewardship. *Sci. Data* 3:160018 doi: 10.1038/sdata.2016.18 (2016) and <https://commonfund.nih.gov/bd2k/commons>.

**Applicable Research:** The technical scope of the research plan should relate Big Data applications to clinical and translational research.

Translational research is about moving applications for treatments, diagnostics and prevention from pre-clinical work to population level impact. Applicants are required to identify the level of translational research proposed using the T1 to T4 descriptions below.

- T1 Translation to humans: Seeks to move fundamental discovery into health application.
- T2 Translation to patients: Develops health applications with implications for evidence-based practice.
- T3 Translation to practice: Investigates the movement of evidence-based guidelines to health practices.

T4 Translation to communities: Investigates the impact of evidence-practice and policies to population health impact/investigators providing communities with the optimal intervention.

According to the NIH [BD2K initiative](#), the term 'Big Data' "is meant to capture the opportunities and challenges facing all biomedical researchers in accessing, managing, analyzing, and integrating datasets of diverse data types that are increasingly larger, more diverse, and more complex, and that exceed the abilities of currently used approaches to manage and analyze effectively." In that initiative, the NIH also states that these data types "may include imaging, phenotypic, molecular (including various '-omics'), exposure, health, behavioral, and the many other types of biological and biomedical and behavioral data." Big data for this RFA is defined as data that meet at least two of the four V's: (1) high volume, (2) high velocity, (3) high variety, and (4) face veracity issues.

For additional questions regarding whether your research satisfies the definition of clinical-translational, please contact your local institutional program coordinator (see 'Participating Institutions and Contacts' below). Alternatively, if you have questions about whether your research be considered big data, you may contact Dr. James McClay at [jmccclay@unmc.edu](mailto:jmccclay@unmc.edu) or Dr. Babu Guda at [babu.guda@unmc.edu](mailto:babu.guda@unmc.edu).

**Health Priorities:** Applicants must propose work that utilizes large datasets. Special attention will be given to projects that address regional priorities as defined by the GP IDeA-CTR Community Advisory Board. Priority areas are:

- Behavioral health including, mental health, substance abuse (e.g., opioids and alcohol), and violence as a public health issue,
- Obesity treatment and prevention,
- Injury prevention,
- Technologies and models to improve health access including the evaluation of new or existing tools (e.g., telehealth) with a focus on rural populations,
- Connecting clinical care and community services (e.g., schools, food banks, YMCAs, etc.),
- Addressing health disparities based on social determinants, race, ethnicity, and geography,
- Aging and Age-related cognitive impairment.

In addition, projects that make an impact on medically disadvantaged, underrepresented minority, and/or geographically or clinically isolated populations—and can introduce or evaluate new tools or technologies useful in these populations—are of high interest. Highest priority will be given to those projects with greatest potential to achieve extramural funding to continue knowledge development.

### Eligibility

- Current full-time faculty appointment at a participating institution,
- Eligible to apply for NIH funds (i.e., US citizen or a permanent resident),
- Focus on relevant clinical and/or translational research.

### Participating Institutions and Contacts:

- Boys Town Natl. Research Hospital (BTNRH) – Lori Leibold ([lori.leibold@boystown.org](mailto:lori.leibold@boystown.org))
- North Dakota State University (NDSU) – Mark McCourt ([mark.mccourt@ndsu.edu](mailto:mark.mccourt@ndsu.edu))
- University of Nebraska at Kearney (UNK) – Kimberly Carlson ([carlsonka1@unk.edu](mailto:carlsonka1@unk.edu))
- University of Nebraska-Lincoln (UNL) – David Hansen ([dhansen1@unl.edu](mailto:dhansen1@unl.edu))
- University of Nebraska Medical Center (UNMC) – James McClay ([jmccclay@unmc.edu](mailto:jmccclay@unmc.edu))
- University of Nebraska at Omaha (UNO) – Sara Myers ([samyers@unomaha.edu](mailto:samyers@unomaha.edu)) or Ann Fruhling ([afruhling@unomaha.edu](mailto:afruhling@unomaha.edu))
- University of North Dakota (UND) – Jonathan Geiger ([jonathan.geiger@med.und.edu](mailto:jonathan.geiger@med.und.edu))
- University of South Dakota (USD) – Robin Miskimins ([robin.miskimins@usd.edu](mailto:robin.miskimins@usd.edu))

## **Application Process and Requirements (including key dates)**

1. Call for applications (December 2017)
2. Consult with BERD Core (<https://www.unmc.edu/publichealth/centers/ccorda/request.html>) or another biostatistics resource before submitting application. Consultation for this application process will be completed without charge.
3. Application Deadline (January 31, 2018)
4. Selection Announcement (April 2018)
5. GP IDeA-CTR Data Management Workshop (Spring / Summer 2018)
  - a Funds are released after completion of all training and submission requirements
6. Project Begin Date (July 1, 2018)
7. Annual Scientific Meeting (October 2018)
8. Project Completion Date (June 30, 2019)

## **Proposal Format and Guidelines:**

1. Cover Letter:
  - a Project name
  - b Name of Academic Partner
  - c Academic Partner's institution
  - d Name of Community Partner and/or organization
2. Proposal (no appendices):
  - a Significance (1/2 page)
  - b Innovation (1/2 page)
  - c Description of the dataset. You may attach the data dictionary as an appendix (1/2 page)
  - d Approach – algorithms, data management plans, dissemination plans (1 page)
  - e Expected Outcomes and Future Directions (1/2 page) with funding target
3. Letter of Support from partner and/or organization, if applicable
4. Proposed budget (see below for form and guidelines)
5. NIH Biosketch from all research partners (download format from: <https://grants.nih.gov/grants/forms/biosketch.htm>)

Proposals will include the following information within the above format:

- 1) What hypothesis is being tested
- 2) What dataset is being used and how it will be obtained
- 3) What procedures will be followed
- 4) How the data will be analyzed
- 5) What national extramural grant the pilot is intended to support and when you plan to submit

We anticipate these data sets to be de-identified. Therefore, the studies would be expected to be IRB exempt. If your study requires an IRB application, this must be completed prior to NIH approval.

## **Application Submission**

Applications should be saved in pdf format and submitted via:

<https://unmcredcap.unmc.edu/redcap/surveys/?s=WJDNPEA3HM> by 5 pm CST on January 31, 2018. Should you have difficulty with your submission, contact Carol Geary at [carolr.geary@unmc.edu](mailto:carolr.geary@unmc.edu).

## **Review Process and Scoring**

1. Proposals will be reviewed and scored by reviewers selected by the IDeA-CTR Biomedical Informatics KCA.
2. Proposals and scores will be submitted to the GP IDeA-CTR Steering Committee and External Advisory Committee for approval.

3. Highest reviewed proposals will be sent to NIH for final approval (IRB approval is required by NIH if applicable).
4. Selections will be announced.

Proposals are scored on a scale of 1 (exceptional) to 9 (poor). All five sections outlined within the proposal are scored based on this method. In addition, applications will be scored according to how well the project addresses a Research Priority indicated by our Community Advisory Board .

### **Funding**

If selected, funding will be made available to your institution or organization following above approvals and receipt of all necessary regulatory documentation.

### **Post-selection Requirements**

All recipients of Big Data Awards will be asked to attend the GP IDeA-CTR Data Management Workshop and the Annual Scientific Meeting. During the Annual Scientific Meeting they will present their project/results. For those outside of the region in which the Annual Scientific Meeting is held, travel funds will be provided.

### **Questions**

If you have any questions regarding this process, contact Carol Geary at [carolr.geary@unmc.edu](mailto:carolr.geary@unmc.edu) or the Great Plains IDeA-CTR Office at [gpctr@unmc.edu](mailto:gpctr@unmc.edu) or 402.552.2260.

DETAILED BUDGET FOR FULL PROPOSAL		Dates:		
		FROM	THROUGH	
NAME	FRINGE RATE*	SALARY REQUESTED	FRINGE BENEFITS*	TOTAL COST
<i>*Not to exceed fringe allowable rate from applicant's institution; Must provide institutional documentation of fringe rate</i>				
<b>SALARY SUBTOTAL</b> →				\$
RESEARCH EXPENSES <i>(Itemize by category)</i> **				
CONSULTANT COSTS				
EQUIPMENT				
SUPPLIES				
TRAVEL				
OTHER EXPENSES				
BUDGET JUSTIFICATION:				
<b>OTHER EXPENSES SUBTOTAL</b> →				\$
<b>TOTAL DIRECT COSTS FOR BUDGET PERIOD</b>				\$
<p><i>Applications must include an itemized budget. Allowable costs include the following types of expenses: (a) research supplies, equipment and technical personnel; (b) statistical services including personnel and computer time (if required services are not available from the UNMC CCORDA) and (c) support from IDeA-CTR core facilities and data resources. These funds may not be used for administrative salary support. Funds may not be used for foreign travel or to support construction / renovations. Although stipends for graduate students and post-doctoral trainees are not allowed, wages and salary support are allowed.</i></p>				