News, Opportunities and Deadlines for January 2023

Report : 21st LBRN Annual Meeting
January 20-21, 2023

The 21st LBRN Annual Meeting was held on 20-21 January 2023. We recorded 197 conference registrations for the event, 63 posters were presented by project PIs, graduate students, and undergraduates in our partners, and outreach campuses that are part of the LBRN system throughout the state of Louisiana.

The meeting hosted four invited speakers:
On Friday,
Louisiana’s Commitment to Biomedical Research and Training by Ms. Carrie Robison from Louisiana Board of Regents,
The Development of Oncolytic Viral Approaches to Cancer: A Historical Perspective and Current Opportunities by Dr. John H. Stewart from LSU School of Medicine, New Orleans, and
Innovating in the Era of One Health Through IDeAs by Dr. Oliver A. Garden from Louisiana State University School of Veterinary Medicine.

On Saturday,
The Art of Scientific Story Telling by Dr. Rafael E. Luna from Boston College.
Technical Session:
Four presentations from the LBRN Bioinformatics, Biostatistics and Computational Biology Core (BBCC) and another four presentations from the LBRN Molecular and Cell Biology Resources Core (MCBRC) followed by a variety of discussions over lunch.

Oral Presentation:
Seventeen academic oral presentations were presented by participants from eight different LBRN campuses, guest speakers, updates from the LBRN Project PI, and research conducted by summer program graduate students.

Poster Presentations:
Participants from 9 different LBRN campuses exhibited a total of 60 posters on the first day.

Poster & Presentation Award Winners:
Undergraduate Students
1st Place: Zachary Wiggins (ULM)
2nd Place (tie): Moosavi Behbahani (LSUS); Audrey Lashley (LSUS); Kade Malone (ULM)

Graduate Students
1st Place: Ethar Mudhish (ULM)
2nd Place: Arpan Chowdury (ULM)

Flash Talks
Zachary Wiggins (ULM) & Hailey Brokenberry (LSUS)

Pilot Project
Kazim Sekeroglu (SELU)

Full Project
Kyle Piller (SELU)
Duke University PRIME-PREP Program

PRIME-PREP

It is a new post-baccalaureate program introduced by Dr. Micah Luftig at Duke geared to train students traditionally underrepresented in science that are interested in pursuing graduate studies in the biomedical sciences. This is a yearlong program with lab-based research in an active, collegial environment with extensive career development opportunities and coaching with faculty and peer mentors. For more details please see this link below.

The application deadline is **Feb 17th** and the program begins in July.

Duke Preparing Research scholars In bioMEdical sciences (PRIME) Postbaccalaureate Research Education Program (PREP) is an National Institutes of Health (NIH) funded program that provides an immersive paid research experience in outstanding research facilities with leading investigators at Duke University Medical School.

This one year program also provides comprehensive professional development experiences and workshops to strengthen professional skills in order to excel in research and graduate school. Overall, this experience is designed to prepare individuals for admission into a biomedical sciences PhD program.

Duke PRIME-PREP provides focused research training opportunities for students from backgrounds historically underrepresented in science and medicine. In this NIH-funded program, we work closely with recent post-baccalaureate students to provide them with the skills necessary to excel in graduate training programs in the life sciences. Our goal is to equip those with the desire and motivation to become the next generation of life science researchers with the credentials required to achieve this.

For further information, please contact Micah Luftig at micah.luftig(at)duke.edu
LBRN OmicLogic Training Session
**Bioinformatics & Data Science**  
**Training for LSU & LBRN affiliates**  
**Live Orientation January 27, 2023, at 3 PM CST**

**Registration:**  
[https://redcap.lbrn.lsu.edu/surveys/?s=HL3JR8DXEL](https://redcap.lbrn.lsu.edu/surveys/?s=HL3JR8DXEL)

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>BEGINNER</strong></td>
<td>Learn about data science in R, such as data wrangling, visualization, statistical analysis, and machine learning. The training will focus on importing &amp; understanding various data types, transforming them into categorical variables, and continuous data, and extracting meaningful patterns for visualization.</td>
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<tr>
<td><strong>INTERMEDIATE</strong></td>
<td>Learn from industry experts and leaders about the advancements in cheminformatics and modern drug discovery pipeline (Alpha-foxa, Docking, Simulations, Project) in this mentor-guided cheminformatics for biomedical drug discovery program.</td>
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<tr>
<td><strong>INTERMEDIATE</strong></td>
<td>Learn about data science in Python, such as data wrangling, visualization, statistical analysis, &amp; machine learning. The training will focus on statistical techniques, dimensionality reduction, machine learning, data visualization techniques, deep learning, network analysis, and interactive visualization with Plotly.</td>
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<tr>
<td><strong>INTERMEDIATE</strong></td>
<td>To learn and get trained by industry experts and case study-based approach to utilize medical informatics data (HER, Tests, Medical Scans) by applying Data Science and Machine Learning to positively impact the patient-physician.</td>
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**Cheminformatics for Biomedical Drug Discovery**  
**Machine Learning for Health Informatics**

Limited seats will be covered by LBRN or LSU School of Veterinary Sciences, pricing details and program delivery and registration via GeneLab on OmicsLogic: [http://edu.omicslogic.com/lsu-biommed](http://edu.omicslogic.com/lsu-biommed)

Application for LBRN registration can be submitted using following link
NIH Office of Data Science Strategy (ODSS) and Office of Research for Women's Health (ORWH) will fund COBRE awards in their areas of interests, in addition to regular IDeA funding.

Centers of Biomedical Research Excellence (COBRE) Phase 1 (P20 Clinical Trial Optional), to build research capacity in data sciences (NOT-GM-23-011) and women’s health (NOT-GM-23-012) in IDeA states.

These NOSIs highlight the Office of Data Science Strategy’s interest in supporting meritorious applications on data science relevant to biomedical research, and the Office of Research on Women’s Health’s interest in supporting a meritorious application on women’s health.

Next application receipt date: January 30, 2023
Earliest start date: December 2023
Welcome to ORWH’s “FOA Friday,” which features funding opportunity announcements (FOAs) and notices about research that ORWH is directly supporting or otherwise providing funding for. The posts also include FOAs and notices from other NIH Institutes, Centers, and Offices (ICOs), as well as other agencies in the U.S. Department of Health and Human Services. The FOAs and notices featured are related to the health of women, women in biomedical careers, and/or the study of sex and gender.

**NOSI: Administrative Supplements for Research on Sex and/or Gender Influences (Admin Supp Clinical Trial Optional)**

([NOT-OD-22-030](#))

Application due date: January 26, 2023

**Community Partnerships to Advance Science for Society (ComPASS): Coordination Center (U24 Clinical Trial Optional)**

([RFA-RM-23-001](#))

Application due date: January 27, 2023

**NOSI: Supporting Women’s Health Research in IDeA States through the Centers of Biomedical Research Excellence (COBRE) Phase 1 Program**

([NOT-GM-23-012](#))

Application due date: January 30, 2023

**NOSI: Research on the Health of Women of Understudied, Underrepresented and Underreported (U3) Populations (Admin Supp Clinical Trial Optional)**

([NOT-OD-22-208](#))

Application due date: January 31, 2023

**Advancing Methods for Safe, Noninvasive, Real Time Assessment of Placenta Development and Function Across Pregnancy (R01 Clinical Trial Not Allowed)**

([PAR-22-237](#))

Application due date: February 5, 2023

**NOSI: Implementation Science to Advance Maternal Health and Maternal Health Equity for the**
IMPROVE initiative  
(NOT-HD-22-043)  
Application due date: February 6, 2023

Advancing Methods for Safe, Noninvasive, Real Time Assessment of Placenta Development and Function Across Pregnancy (R21 Clinical Trial Not Allowed)  
(PAR-22-236)  
Open date: January 16, 2023  
Application due date: February 16, 2023

NOSI: Administrative Supplement for Research and Capacity Building Efforts Related to Bioethical Issues (Admin Supp Clinical Trial Optional)  
(NOT-OD-23-018)  
Application due date: February 17, 2023

Team Science Leadership Scholars Program (LSP) in Women’s Health, Autoimmune and Immune-Mediated Diseases  
(RFA-AMPAIM-LSP-22-001)  
Application due date: February 20, 2023

NOSI: Research on Gender Measurement (Admin Supp Clinical Trial Optional)  
(NOT-OD-23-029)  
Application due date: February 28, 2023

Request for Information (RFI): Innovative approaches to prevent mental health problems and promote mental wellness in populations that experience health disparities  
(NOT-OD-23-030)  
Response due date: March 1, 2023

Visit ORWH's full list of sponsored funding opportunities and notices. We encourage you to explore the websites of the many ICs across NIH to stay up to date on the latest grants and funding information. You can also visit the NIH Grants & Funding website and subscribe to the NIH Guide.

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**HPC Training**

The schedule for the Spring 2023 HPC Training is available at [http://www.hpc.lsu.edu/training/tutorials.php](http://www.hpc.lsu.edu/training/tutorials.php).
Our first HPC training will be held on Wednesday, January 18 at 9:00 AM. Due to concern about the COVID-19, all training sessions are Zoom online events from 9:00AM to 11:00AM. The sessions will be recorded for later review.

**Note that all HPC trainings will start at 9:00AM.**

**Wednesday, January 25, 2023: HPC User Environment 1, Job Management on HPC Clusters**

**Wednesday, February 01, 2023: HPC User Environment 2, Job Management on HPC Clusters**

This training provides an overview of the HPC/LONI general account and allocation policies, hardware and software environments, queuing system, compiling programs, writing submit scripts, running and monitoring jobs on HPC systems.

This training is a *mandatory* two-day training event for all HPC/LONI new users held on January 25 and February 01.

Prerequisite: Familiarity with Linux/Unix commands and editors.

Next HPC Training:

**Wednesday, February 08, 2023: Basic Shell Scripting**

For anyone who works in a Linux/Unix environment, a working knowledge of shell scripting is essential and will boost their efficiency and productivity tremendously. For this tutorial, we will focus on bash as it is one of the most popular shells. This tutorial will include topics such as creating simple bash scripts, flow control, command line arguments, regex, grep, awk and sed. This is a practical tutorial, so we will provide examples and/or hands-on exercises for most of the covered materials.

*Prerequisites:* Access to a Linux/Unix based environment, i.e. Linux (VirtualBox images), Mac OSX and Windows with Cygwin or Bash installed.

Please visit [http://www.hpc.lsu.edu/training/tutorials.php](http://www.hpc.lsu.edu/training/tutorials.php) for more details and register using the link provided. Users will be provided with a zoom link in their registration confirmation email. Please see the system requirements at [https://support.zoom.us/hc/en-us/articles/201362023-System-Requirements-for-PC-Mac-and-Linux](https://support.zoom.us/hc/en-us/articles/201362023-System-Requirements-for-PC-Mac-and-Linux).

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Funding Opportunity from NSF
Building Research Capacity of New Faculty in Biology (BRC-BIO)

Supports pre-tenure faculty in the biological sciences at institutions that traditionally do not receive significant NSF funding in this field, including minority-serving institutions, predominantly undergraduate institutions and R2 institutions.

Synopsis

With a focus on enhancing research capacity and broadening participation of new faculty of biology at minority-serving institutions (MSIs), predominantly undergraduate institutions (PUIs), and other universities and colleges that are not among the nation's most research-intensive institutions, the Directorate for Biological Sciences (BIO) offers the Building Research Capacity of New Faculty in Biology (BRC-BIO) program. The BRC-BIO program aims to a) broaden participation by expanding the types of institutions that submit proposals to BIO, and b) expand opportunities to groups underrepresented in the biological sciences, including Blacks and African Americans, Hispanics, Latinos, Native Americans, Alaska Natives, Native Hawaiians and other Pacific Islanders, and persons with disabilities, especially those serving at under-resourced institutions. Awards will provide the means for new faculty to initiate and build independent research programs by enhancing their research capacity. These projects might also include biology-focused research collaborations among faculty within the same institution, across peer-, or research-intensive institutions, or partnerships with industry or other non-academic partners that advance the candidate's research program. By providing this funding opportunity, BIO recognizes the national urgency to broaden, strengthen, and diversify the science, technology, engineering, and mathematics (STEM) workforce. In particular, these awards will build capacity for research at institutions that have a primary focus on teaching and undergraduate education, or that have limited capacity for research. Projects should enable the establishment of sustainable research programs for faculty and also enrich undergraduate research experiences and thereby grow the STEM workforce. BRC-BIO welcomes proposals from principal investigators who share NSF's commitment to diversity, equity, and inclusion.

Proposals in response to this solicitation must be submitted to the Division of Biological Infrastructure (DBI) in the Directorate for Biological Sciences (BIO).

Program contacts

BRC-BIO Working Group; BRC-BIO@nsf.gov
Updates from DRCB/NIGMS

Issue 115, 01/17/2023
NIH Funding Opportunity and/or Policy Announcements

- Reminders of January Deadlines:
  - COBRE Phase 1 (PAR-22-250). Applications Due: January 30.
  - Supporting Data Sciences Research in IDeA States through COBRE Phase 1 Program (NOT-GM-23-011). Applications Due: January 30.
  - Supporting Women’s Health Research in IDeA States through COBRE Phase 1 Program (NOT-GM-23-012). Applications Due: January 30.
- Support for existing data repositories to align with FAIR and TRUST principles and evaluate usage, utility, and impact (NOT-OD-23-044). Applications due: March 01.
- Effectiveness of Implementing Sustainable Evidence-Based Mental Health Practices in Low-Resource Settings to Achieve Mental Health Equity for Traditionally Underserved Populations (PAR-23-092). Applications Due: February 05.
- Biomedical Research Facilities (PAR-23-045). Application Due: February 24.

Issue 114, 01/09/2023
NIH Funding Opportunity and/or Policy Announcements

- Reminders of January Deadlines:
  - COBRE Phase 1 (PAR-22-250). Applications Due: January 30.
  - Supporting Data Sciences Research in IDeA States through COBRE Phase 1 Program (NOT-GM-23-011). Applications Due: January 30.
  - Supporting Women’s Health Research in IDeA States through COBRE Phase 1 Program (NOT-GM-23-012). Applications Due: January 30.
- COBRE Phase 2 (PAR-23-063). Applications Due: May 29.
- Support for existing data repositories to align with FAIR and TRUST principles and evaluate usage, utility, and impact (NOT-OD-23-044). Applications due: March 01.
- Effectiveness of Implementing Sustainable Evidence-Based Mental Health Practices in Low-

- Biomedical Research Facilities (PAR-23-045). Application Due: February 24

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**Issue 113, 01/03/2023**

**NIH Funding Opportunity and/or Policy Announcements**

- Reminders of January Deadlines:
  - COBRE Phase 1 (PAR-22-250). Applications Due: January 30.
  - Supporting Data Sciences Research in IDeA States through COBRE Phase 1 Program (NOT-GM-23-011). Applications Due: January 30.
  - Supporting Women’s Health Research in IDeA States through COBRE Phase 1 Program (NOT-GM-23-012). Applications Due: January 30.

- Biomedical Research Facilities (PAR-23-045). Application Due: February 24

- COBRE Phase 2 (PAR-23-063). Applications Due: May 29.

- Notice of Change to First Application Due Date in PAR-23-030 Leading Equity and Diversity in the Medical Scientist Training Program (NOT-GM-23-027).

- New Inbox for Inquiries Related to Federal Financial Reports (FFRs) and Financial Closeout (NOT-OD-23-035).

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**LBRN Cores Support Form**

LBRN Bioinformatics, Biostatistics, and Computational Biology Core (BBCC) and Molecular and Cell Biology Resources Core (MCBRC) remind you that they are available for questions and contact via our LBRN Cores website. If you're not sure who to reach out to, you can ask via our website [Cores Contact form](#) and we will get back to you with the appropriate resource to do the best we can to answer your question. Look for the "Cores Contact" on the Cores page.
LBRN Cores

BBC

The Bioinformatics, Biostatistics, and Computational Biology Core (BBC) of the Louisiana Biomedical Research Network (LBRN) serves to train and support project investigators and their teams across Louisiana, and to lead and support translational research activities at the forefront of biomedical science. Its team uses both established and custom computational tools, operating at computational scales ranging from the mundane to analyses engaging many hundreds of computer cores.

MCBR

Molecular and Cell Biology Resources Core (MCBRC) provides an essential linkage among important basic fields of biomedical science, such as genetics, developmental biology, structural biology, immunology, neurobiology, and cancer biology. The MCBRC takes advantage of existing highly organized, centralized services and equipment facilities located primarily at the LSU flagship institution in Baton Rouge, effectively uniting these units toward the common goal of supporting biomedical research performed by PUI investigators. The MCBRC will provide technical and logistical support, enabling the ready exchange of information, ideas, technology, and research capabilities among PUI investigators. MCBRC will ensure that PUI researchers have full access to state-of-the-art equipment and modern research techniques and services.

Cores Training & Support

The cores provide one on one training. If you have a question or would like to talk about your training needs, you would like more information about services provided by the cores, or you would like to talk to someone in the core about how someone can assist you, please use Cores Contact link:
We are pleased to announce that the NIH Grants Policy Statement (GPS) was recently updated, replacing the December 2021 version as standard terms and conditions of award. The updated GPS applies to all awards issued on or after October 1, 2022. Consistent with longstanding federal regulations (45 CFR 75.303), institutions receiving NIH support will now be required to have internal controls to assure compliance with terms and conditions of award. These internal controls include behavioral codes of conduct to assure safe and healthful working conditions for their employees and foster work environments conducive to high-quality research.


· Update on Simplifying Review Criteria: A Request for Information

NIH has issued a request for information (RFI) seeking feedback on revising and simplifying the peer review framework for research project grant applications. The goal of this effort is to facilitate the mission of scientific peer review – identification of the strongest, highest-impact research. The proposed changes will allow peer reviewers to focus on scientific merit by evaluating 1) the scientific impact, research rigor, and feasibility of the proposed research without the distraction of administrative questions and 2) whether or not appropriate expertise and resources are available to conduct the research, thus mitigating the undue influence of the reputation of the institution or investigator.

Currently, applications for research project grants (RPGs, such as R01s, R03s, R15s, R21s, R34s) are evaluated based on five scored criteria: **Significance, Investigators, Innovation, Approach,** and **Environment** (derived from NIH peer review regulations 42 C.F.R. Part 52h.8; see Definitions of Criteria and Considerations for Research Project Grant Critiques for more detail) and a number of additional review criteria such as Human Subject Protections.
3 Ways to Prepare for the 2023 NIH Grants Conference

The NIH Grants Conference is just around the corner (February 1-2), but there’s plenty to do on the conference site now! This event is absolutely free, so register today. Once registered, visit the site and use our nifty tool to build your own personalized agenda, get a jump on viewing on-demand resources ahead of the conference, or explore the Exhibit Hall and make a plan to engage with staff from the NIH Institutes and programs during the conference. Don’t forget to save each of the dates on your calendar now: February 1 and February 2.

Here are three ways to prepare now to make the most of the conference and start the year strong, all available after logging in to the conference platform:

12 Days of Data Management and Sharing Tips & Resources
As we get closer to the January 25, 2023 effective date of the new NIH Data Management and Sharing (DMS) Policy, here are 12 tips and resources we would like to gift you – but you might have to supply your own partridge in a pear tree

- **1-page flyer** on the who, what, where, and when of the DMS Policy
- **2-part webinar series** on understanding the DMS Policy and digging deeper into what’s required
- **3 key steps** to implement the DMS Policy
- **4 sample DMS Plans** to assist as you develop a plan for your research, and an optional format page
- **5 minutes** is all it takes to determine what sharing policies apply to your research with this decision tool
- **6 elements** recommended for a robust DMS Plan, a key component for your funding application
- **7 examples of allowable costs** for data management and sharing
- **8+ slides** in our Implementing the DMS Policy slide deck
- **Fewer than 9 key differences** between the 2003 data sharing policy vs. the new DMS policy, illustrated on the policy comparison table
- **10 activities** that generally do and do not generate scientific data, including a complete list of activity codes generally subject to the DMS Policy
- **11+ FAQs** to address your questions, and who to contact for more information
- **Dozens of NIH-supported data repositories** and resources to help you find an appropriate repository for your research

**Free Crash Course in NIH Funding: 2023 NIH Grants Conference on Feb. 1-2**

Are you new to NIH grants and looking to better understand the processes and policies behind NIH funding? Or are you experienced and want to brush up on the latest policies and information? Consider this your personal invitation to the 2023 NIH Grants Conference, a free and virtual event on February 1-2, 2023. During this 2-day live event, NIH and HHS experts will share policies, resources, guidance, and case studies in informative and engaging sessions.

Save the dates and add the February 1 and February 2 events to your calendar for easy access.

Here are some highlights of what you can expect from the conference:

- **Learn** about NIH grants policies! The jam-packed agenda offers 2 days of sessions designed to clarify the NIH grants process and policies, and opportunities to engage with presenters through Q&A and chat features.
- **Interact** with NIH experts! the 1:1 Meet the Experts which are 20-minute chats between attendees and NIH staff, designed for more specific research and administrative questions.
- **Engage** and network with your peers! The attendee search feature allows you to filter through over 13,000 attendees to network and connect with colleagues. Networking Lounges are also available
for attendees to share tips and attend special events.

- **Gather** resources to use and share with colleagues! Explore the Exhibit Hall, where you'll encounter NIH staff and an abundance of resources located at over 45 NIH Institute, Center, and Special Program booths.

**Registration** is free and includes your personal “All Access Pass” to the virtual NIH Grants Conference 2022-2023 season. Once registered and logged into the conference site, you are free to explore the 2-day agenda, on-demand library of related resources, and create your personal schedule.

**International Collaborations: Advice from Experts**

Whether you're from a foreign organization looking to secure NIH funding, or a domestic researcher or institution partnering with a foreign collaborator, you'll find helpful information to get started in the International Collaborations: Policies, Processes, & Partnerships video. NIH experts walk you through the process of working with foreign entities through engaging case studies, panel discussions, and live Q&A. In addition, research officials from several Universities across the U.S. shared their perspective on building a supportive and successful environment for international collaborations as they also addressed questions from the audience.

Feel free to break out the popcorn and binge the whole video or check out these sections for the information you need:

- Understanding International Collaborations
- Subaward Agreements
- Collaborating and Partnering with Foreign Entities from a Scientific Perspective
- Foreign Interference (FI)
- Programs to Support International Collaborations: The University Perspective

For presentation slides and other resources, see the [event page](#). Stay tuned for more free NIH virtual events at the NIH Grants Conference: Funding, Policies, & Processes scheduled for February 1-2, 2023. Details on these upcoming events and past recordings can be found on the [NIH Grants Conference](#) website.

**Check for Fit, Before You Submit!**

It takes quite a bit of time to prepare and submit a grant application. Imagine spending that time only to find out later that you submitted to the wrong opportunity. Funding opportunity announcements (FOAs) contain a lot of information. Most applicants are very good at reading the FOA description to ensure a good topic fit, but let's look at a few less obvious items that are often overlooked.

- Does your application fit within the mission of one of the participating institutes or centers? If we
can’t make an assignment, your application will be withdrawn.

- Does your Type of Application (New, Resubmission, Revision, Renewal) appear in the Application Types Allowed section of the FOA?
- Is the clinical trials allowability indicator appropriate for your application? FOAs marked Clinical Trials Optional accept all applications whether or not they propose clinical trials. All other FOAs either prohibit or require clinical trials based on the indicator.
- Is your application within any budget or project period limits?
- Do you meet all the eligibility criteria in Section III of the FOA?

You must read and follow the entire FOA text. Please remember to check for fit, before you submit.
To support the LBRN / BBC Core community on LONI HPC systems, we have renewed our high-performance computing allocation for 2022 / 2023.

This can be utilized in lieu of individual investigators having to apply for and acquire their own allocations to access the HPC resources. If any of your campus members need access to high performance computing, please have them interface with Dr. Nayong Kim.

LBRN "Core Bucks"
The BBC Core and MCBR Core offer researchers the opportunity to earn “Core Bucks” to support faculty and students up to $1500. Requests for Core Bucks from Member Institutions must be initiated through the respective Core Contact on campus.

- **The Bioinformatics, Biostatistics, and Computational Biology Core (BBC Core)**

The BBC Core serves to train and support project investigators and their teams across Louisiana. It works to enable Louisiana Biomedical Research Network project PIs and their teams to employ Louisiana cyberinfrastructure (especially high performance computing), and to provide bioinformatics services, training, and educational support.

The core provides bioinformatics training, conducts workshops, and provides bioinformatics analysis services. The core also provides access to the IBM Delta Cluster and has a dedicated BBC allocation for the high performance computing resources at LSU. The BBC Core maintains software licenses and access to Ingenuity Pathway Analysis (IPA), Partek Flow, DNASTAR, and Ion Torrent analysis software. In addition, several open source tools for bioinformatics such as bowtie, tophat, cufflinks, samtools, GATK, QIIME, DADA2, Phyloseq, etc. are installed and maintained.

Some examples of standard bioinformatics workflows that can be supported through core bucks requests:

- Gene Pathway Analysis
- RNA-Sequencing Processing and Analysis
- 16S rRNA Microbial Community Analysis
- ITS2 Fungal Community Analysis

Other workflows can be developed or adapted from existing software on an as needed basis.

For more information, see: https://lbrn.lsu.edu/cores.html#corebucks

- The Molecular and Cell Biology Resources Core (MCBR Core)

MCBR Core Services include both one-on-one training for faculty and students as well as workshops on topics like bioinformatics and protein purification.

Sample services:

1. Molecular Biology Reagent Equipment and Services
   - GeneLab provides conventional and next generation nucleic acid sequencing (NGS), and recombinant DNA Service. NGS equipment includes Torrent PGM, Ion Proton etc
   - NGS Services provides a reliable connection between NGS experiments and the analysis of NGS data

2. Protein Production, Purification and Characterization Laboratory
   - Protein Purification and Characterization includes semi automated Bio-rad profinia affinity chromatography system, AKTA Explorer FPLC system, and HPLC and ultracentrifugation equipment
   - Peptide Synthesis and purification
   - Protein-protein interactions are investigated using primarily Surface Plasmon Resonance (SPR) implemented on Biacore and ForteBio SPR equipment. Additional physicochemical characterization of protein-protein interactions is available through collaborations with the LSU Department of Chemistry.
• Gene-to-Protein-to-Antibody Services – you provide the gene, we return an antibody

3. Molecular Immunopathology Laboratory Services

• Pathology Services including necropsy procedures, gross and histopathological examinations and interpretation of immunohistochemistry and special stains performed by veterinarians and histology specialists
• Flow Cytometry and immunophenotyping Services
• Multiplex/Luminex complements immunophenotyping services for rapid and standardized analysis of soluble factors e.g., lymphokines, using bead based array technology.
• Microscopy – contains transmission and scanning electron microscopes, a laser dissection microscope, a Leica TCS SP2 for 3D fluorescence microscope, and a high-throughput digital slide-scanner.

For more information, see: https://lbrn.lsu.edu/cores.html#corebucks

NIH LBRN Acknowledgement

So that we can most effectively communicate the scope and results of our funding support, we would like to know when you are planning news announcements about IDeA awards or program activities and achievements…

When you produce such material, please be sure to identify the IDeA program, not just the INBRE, COBRE or sub-program, and to provide context about the program’s goals along the lines of:

The University of __________ has received $XXX from the National Institutes of Health (NIH) to support an Institutional Development Award (IDeA) Center of Biomedical Research Excellence. The IDeA program builds research capacities in states that historically have had low levels of NIH funding by supporting basic, clinical and translational research; faculty development; and infrastructure improvements.

In journal articles, news releases, or other materials about your program’s activities or achievements, please use funding acknowledgement language such as:

Research reported in this (publication, release) was supported by an Institutional Development Award (IDeA) from the National Institute of General Medical Sciences of the National Institutes of Health under grant number 5 P20 GM103424-21.

• In journal articles, oral or poster presentations, news releases, news and feature articles, interviews with reporters and other communications, acknowledge the IDeA program's full or partial support of the research. The citation in scientific publications should use the following format:
Research reported in this publication was supported by an Institutional Development Award (IDeA) from the National Institute of General Medical Sciences of the National Institutes of Health under grant number P20GM103424-21.

* If you wish to acknowledge NIH/NIGMS funding on your Web site or other communication product, you may use wording such as:

**Funded by an Institutional Development Award (IDeA) from the National Institutes of Health.**

or

**Funded by the LBRN (2P20GM103424-21) an Institutional Development Award (IDeA) from the National Institute of General Medical Sciences of the National Institutes of Health.**

*Please do not use the NIH or NIGMS logo to acknowledge funding, as these logos are only to be used for material produced by NIH and its components.*