

## News, Opportunities and Deadlines for July 2023

### IDeA Southeast Regional Conference 2023

**Event Name:** IDeA Southeast Regional Conference 2023

**Where:** Columbia, South Carolina

**When:** September 15-17, 2023

**Register:** [https://secure.touchnet.net/C21544\\_ustores/web/product\\_detail.jsp?PRODUCTID=5940](https://secure.touchnet.net/C21544_ustores/web/product_detail.jsp?PRODUCTID=5940)

**\*\*Abstracts due August 4\*\***



Financial support may be available for LBRN PUI students or faculties to attend conferences if deemed necessary (conference presentation, paper submission).

Please contact the Program Administrator, Danielle Stanfield, for more information.

### 6th LBRN Data & Protein Science Bootcamps







# LBRN Data & Protein Science Bootcamps

**DSBBBC Bootcamp**  
Data Science, Bioinformatic, Biocomputation and Biostatistics Core  
  
HPC resources & user environment  
Bioinformatics data analyses  
Deep learning basics

Gene cloning  
Protein expression  
Purification  
Characterization

**MCBC Bootcamp**  
Molecular and Cellular Biology Core



This summer, the LBRN will host boot camps organized by the Data Science, Bioinformatic, Biocomputation and Biostatistics Core (**DSBBBC**) and the Molecular and Cellular Biology Core (**MCBC**). These two boot camps will be offered back-to-back so that students and faculty can maximize their training. The DSBBC bootcamp will focus on Data Science (high performance computing resources and bioinformatics analyses) and the MCBC bootcamp will focus on gene cloning, protein expression, purification, and characterization. The tentative dates for this are **July 31-August 4**. All expenses (travel, housing, tuition, per diem for meals, etc.) will be covered for LBRN campuses.

**Event Date: July 31 - Aug 4, 2023**

**Event Time: 9am to 4pm**

**Deadline: Deadline June 30, 2023, 4:30pm**

**Location: LSU, Digital Media Center / LSU, Wilson Laboratories**

Due to the nature of the training, seats are limited.

*For more information or to register, please use the following links:*



## HPC Training



### **Wednesday, July 26, 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> 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>.

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## The Albany Conversations at Louisiana Tech University

**Please join the Next Gen. Conversations.**

**Albany at Tech**

**Tuesday June 11 to Saturday June 25, 2024**

**Louisiana Tech University**

After a very successful 40 year series of Conversations at SUNY Albany, the Next Gen. Conversations will be held at Louisiana Tech

If you would like to organize a session or just attend please fill out the google interest form: <https://forms.gle/xoDFN9qhBRKY0EXC7>

Additional information is at <https://coes.latech.edu/albany-conversations/>



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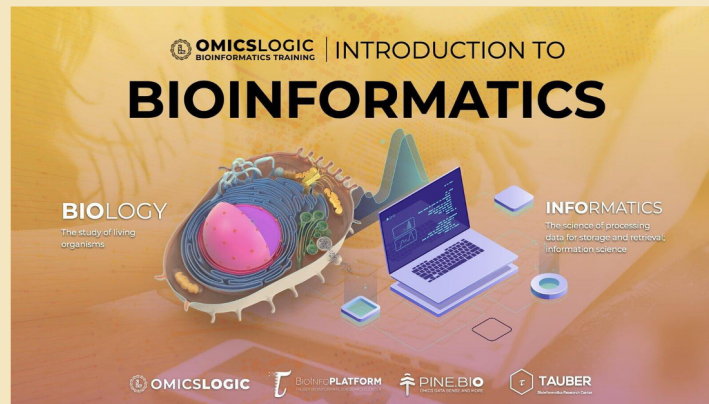
## **Big Data Bioinformatics & Data Science Training for LBRN students**

Live Orientation on June 18, 2023, at 1 PM CST

- LSU BIOMMED SUMMER PROGRAMS

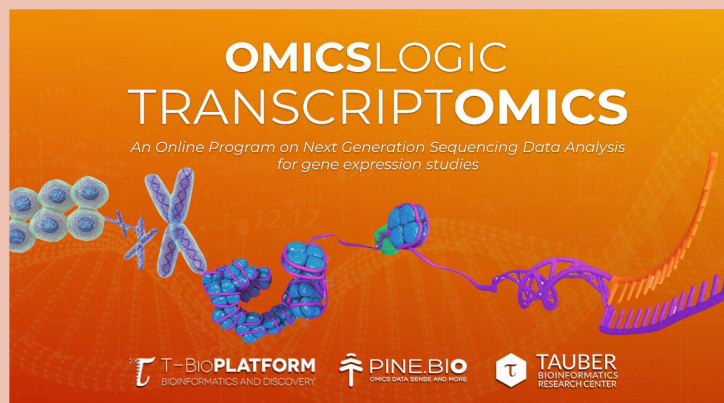
While learning biotechnology, biochemistry and immunology (among other things) might be your passion, in every one of these domains analysis of experiments and clinical data is of a growing importance. While many prefer to rely on external experts to analyze their data, the understanding of basic principles behind such analysis is critical to be able to extract meaningful and reliable information that is critical for discovery. Research in life sciences is seeing an exponential growth in data volume, complexity and variability, placing bioinformatics, or data science for biological data, central to the learning path of anyone in this field.

## INTRODUCTION TO BIG DATA BIOINFORMATICS



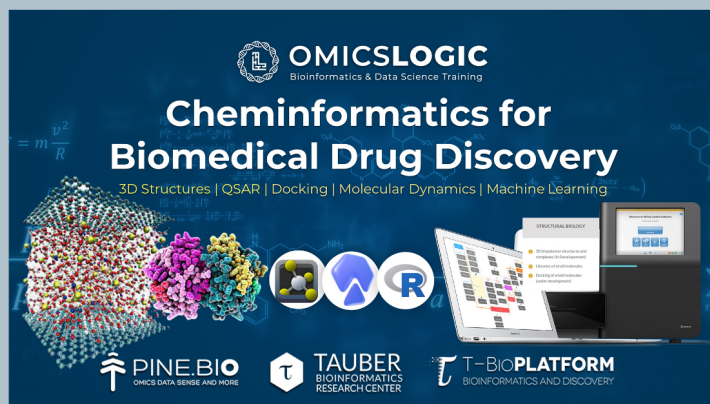
- Introduction to methods for Genomics, Metagenomics, and Transcriptomics Data Analysis.
- Beginner level

## TRANSCRIPTOMICS FOR BIOMEDICAL RESEARCH



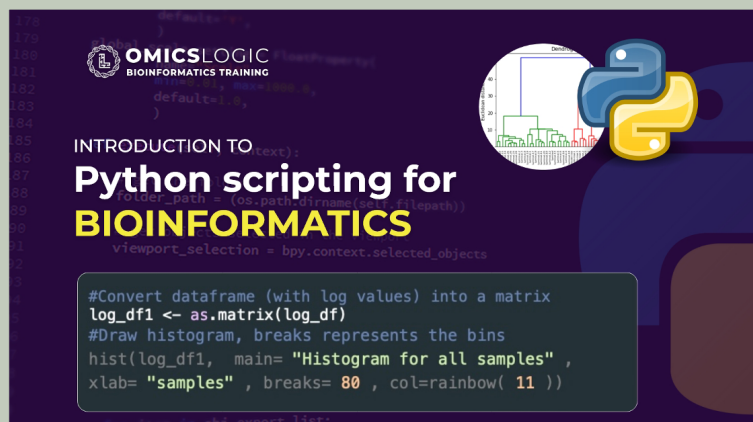
- Learn to analyze RNA-Seq data: From DGE analysis to pathway annotation, network visualization, & generating machine learning models
- Intermediate level

## CHEMINFORMATICS FOR BIOMEDICAL DRUG DISCOVERY



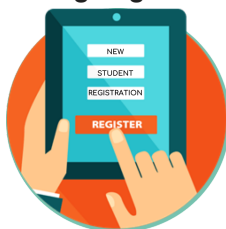
- Learn from Industry experts and leaders about the advancements in cheminformatics and modern drug discovery pipeline
- Advanced level

## BIOMEDICAL DATA SCIENCE USING PYTHON



- Learn about data science in Python, such as data wrangling, visualization, statistical analysis, & machine learning
- Advanced level

### Training Registration



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## Weekly Update from DRCB / NIGMS

### Updates from DRCB/NIGMS

#### Issue 140, 07/10/2023

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

- HEAL-funded Native Collective Research Effort to Enhance Wellness (N CREW) Program:
  - Addressing Overdose, Substance Use, Mental Health, and Pain ([OTA-23-007](#)). Applications Due: November 1.
  - Addressing Overdose, Substance Use, Mental Health, and Pain Native Research Resource Network ([OTA-23-008](#)). Applications Due: November 1.
- *Notice of Intent to Publish a NOFO: Community Partnerships to Advance Science for Society (ComPASS): Health Equity Research Hubs* ([NOT-RM-23-018](#)).
- Termination of the Requirement for COBRE, INBRE, IDeA-CTR, and NARCH Awards to Provide Supplemental Annual Reports through the Scientific Information Reporting System (SIRS) ([NOT-GM-23-046](#)).
- Supplement Program to Help Develop Alzheimers-Focused NIH Grants ([NOT-AG-23-032](#)).
- New N3C [PHASTR](#) questions released. Applications Due: July 31.
  - *Do molnupiravir or metformin show a reduction of severe outcomes of COVID-19, or for metformin, of Long COVID, using the N3C Data Enclave?*

##### Upcoming Events

- [SuRE Resource Center](#):
  - Subawards, Consultants, and Vendors, July 13, 3:00-4:30 pm ET. [Register here](#).
  - SuRE-First Application Bootcamp, July 18-19, 1:00-4:00 pm ET each day. [Register Here](#). [Bootcamp page](#).
- Virtual I-RED/SBIR Seminar, July 17, 11:00 am-12:00 pm ET. [Zoom link](#).
- Informational Webinar for MIRA-ESI, July 26, 1:00-2:30 pm ET. [Zoom link](#). See more information [here](#).

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#### Issue 139, 07/05/2023

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

- *Notice of Intent to Publish a NOFO: Community Partnerships to Advance Science for Society (ComPASS): Health Equity Research Hubs* ([NOT-RM-23-018](#)).
- Termination of the Requirement for COBRE, INBRE, IDeA-CTR, and NARCH Awards to Provide Supplemental Annual Reports through the Scientific Information Reporting System (SIRS) ([NOT-GM-23-046](#)).
- Supplement Program to Help Develop Alzheimers-Focused NIH Grants ([NOT-AG-23-032](#)).
- New N3C [PHASTR](#) questions released. Applications Due: July 31.
  - *Do molnupiravir or metformin show a reduction of severe outcomes of COVID-19, or for metformin, of Long COVID, using the N3C Data Enclave?*

- Interactive Digital Media (IDM) Biomedical Science Resources for Pre-College Students and Teachers ([PAR-23-213](#)). Applications Due: September 5.
- Assessing Real-World Effectiveness and Implementation of Telehealth-Guided Provider-to-Provider Communication among Rural Communities ([NOT-HL-23-083](#)). *Eligible for IDeA Co-Funding*. Applications Due: October 5.

## Upcoming Events

- Virtual I-RED/SBIR Seminar, July 17, 11:00 am-12:00 pm ET. [Zoom link](#).
- [SuRE Resource Center](#):
  - Subawards, Consultants, and Vendors, July 13, 3:00-4:30 pm ET. [Register here](#).
  - SuRE-First Application Bootcamp, July 18-19, 1:00-4:00 pm ET each day. [Register Here](#). [Bootcamp page](#).
- Subawards, Consultants, and Vendors, July 13, 3:00-4:30 pm ET. Register here.
- Informational Webinar for MIRA-ESI, July 26, 1:00-2:30 pm ET. [Zoom link](#). See more information [here](#).

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## Issue 138, 06/26/2023

### NIH Funding Opportunity and/or Policy Announcements

- Termination of the Requirement for COBRE, INBRE, IDeA-CTR, and NARCH Awards to Provide Supplemental Annual Reports through the Scientific Information Reporting System (SIRS) ([NOT-GM-23-046](#)).
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## Upcoming Events

- [All of Us](#) Tribal informational presentations and discussions. Register [here](#).
  - **Session 4:** Data and Partnerships in *All of Us*, June 27, 1:00–3:00 pm ET.
- Virtual I-RED/SBIR Seminar, July 17, 11:00 am-12:00 pm ET. [Zoom link](#).
- [SuRE Resource Center](#):
  - Subawards, Consultants, and Vendors, July 13, 3:00-4:30 pm ET. [Register here](#).
  - SuRE-First Application Bootcamp, July 18-19, 1:00-4:00 pm ET each day. [Register Here](#). [Bootcamp page](#).
- Informational Webinar for MIRA-ESI, July 26, 1:00-2:30 pm ET. [Zoom link](#). See more information [here](#).

## • Case Study in Research Integrity – Banned From Supervising, Can’t Go in Lab, but No Impact on NIH Funded Research?

We have [seen](#) rising numbers of allegations related to [harassment, discrimination, and hostile work environments](#) since 2018 (when we first started tracking them). In many cases, we successfully work with recipient institutions to put appropriate measures in place to address unsafe working environments. These measures may include removing the principal investigator (PI) from the award or putting additional oversight measures in place. However, too often we hear from institutions that a PI has violated the institution’s policies and is no longer permitted to supervise students or staff, but there will be “no impact on NIH-funded work.”

We have a problem with this response. How can the NIH-funded work not be impacted if the PI has been found not suitable to supervise others? This situation causes us to worry not only about the safety of the lab environment, but also about the message that this behavior sends to the entire institution. We must ensure that NIH-funded research is being conducted in a [safe and respectful environment](#) conducive to high quality research.

Let’s look further. The example presented here is based on true experiences, with all identifiable information changed or removed. Please also keep in mind that in general [NIH makes awards to institutions](#). Our engagement is focused on institutions, who in turn employ researchers designated on NIH awards.

A lab technician in Dr. Jones’ lab was working, what seemed to be, excessively long hours with very little time for personal breaks, including lunch and dinner. Research personnel often work long hours you might be thinking, especially considering that Dr. Jones was a PI on multiple NIH grants with progress reports due and manuscripts planned. But this was going to the extreme, and other working conditions became more and more stressful.

[... continue to read](#)

## • Strengthening Integrity and Fairness in Peer Review Through New Required Trainings

Effective for the May 2024 council round (peer review meetings in early 2024), all reviewers will be required to complete trainings related to [review integrity](#) and [bias awareness](#) prior to serving on NIH peer review groups ([NOT-OD-23-156](#)). These trainings build on our long-standing commitment to maintaining [integrity and fairness throughout the review](#) process. The NIH Center for Scientific Review (CSR) developed the two interactive online training modules with significant input from dedicated [CSR advisory council working groups](#).

The “Bias Awareness and Mitigation” module (launched in 2021) is designed to raise reviewer awareness of potential sources of bias in review of grant applications and help reviewers take action to mitigate bias. Rather than addressing implicit bias generally, the training is uniquely targeted towards mitigating biases we have observed in peer review. The training is one of a number of CSR [initiatives](#) to ensure that the review process is fair and unbiased.

The “Review Integrity” module (launched in 2022) is designed to increase reviewer knowledge and awareness of review integrity throughout the NIH peer review process and provide reviewers with tools to prevent and report integrity breaches. Ultimately, the ability of peer review to identify the highest impact science depends on the integrity of the process. In addition, maintaining a peer

review process that is free from inappropriate influences is important for maintaining public trust in science. The critical role that reviewers play in protecting the integrity of the process is reiterated in NIH Guide Notice [NOT-OD-22-044](#). See also these [case studies in peer review integrity](#).

[... continue to read](#)

## • Using AI in Peer Review Is a Breach of Confidentiality

“As the scientific community continues to evolve, it is essential to leverage the latest technologies to improve and streamline the peer-review process. One such technology that shows great promise is artificial intelligence (AI). AI-based peer review has the potential to make the process more efficient, accurate, and impartial, ultimately leading to better quality research.”

We suspect many of you were not fooled into thinking that was us who wrote that statement. A well-known AI tool wrote those words after we prompted it to discuss using AI in the peer review process. More and more, we are hearing stories about how researchers may use these tools when reviewing others’ applications, and even writing their own applications.

Even if AI tools may have “great promise,” do we allow their use?

Reviewers are trusted and required to [maintain confidentiality](#) throughout the application review process. Thus, using AI to assist in peer review would involve a [breach of confidentiality](#). In a recently released [guide notice](#), we explain that NIH scientific peer reviewers are prohibited from using natural language processors, large language models, or other generative AI technologies for analyzing and formulating peer review critiques for grant applications and R&D contract proposals.

[... continue to read](#)

## • You’re Invited: Town Hall on Federal Demonstration Partnership NIH Data Management and Sharing Pilot

NIH is collaborating with the Federal Demonstration Partnership ([FDP](#)) on a [Data Management and Sharing \(DMS\) pilot](#). As part of Phase 1 of the pilot, which tested standardized DMS Plan templates including new web-based [DMPTool](#) templates to support generation of compliant plans, applicants and participating recipient institutions are invited to participate in a [Town Hall](#) between the FDP and the NIH staff on July 17, 2023. Please join us and provide your feedback on the DMS plan templates currently being tested.

Town Halls will be [recorded](#), and the recordings will be posted for those not able to join us live. Additional Town Hall times may be added after September 2023. We hope to see you there!

## • Crash Course in NIH Grants Fundamentals

Are you new to the world of NIH grants or looking for a refresher? We have curated playlists of our [YouTube](#) videos designed to provide an overview of the grants process, the different funding programs available, key tools to use as you develop your application, and grant writing advice straight from NIH staff.

Grab a snack and hit play on the topic you’re most interested in:

- [NIH Grants Fundamentals](#)
- [NIH Funding Programs](#)
- [Grant Application Tips](#)

## 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.



**Louisiana Biomedical Research Network**

About Cores Research Training & Education Resources Events

**LBRN Cores**

**BBC**

The Bioinformatics, Biostatistics, and Computational Biology Core (BBCC) 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 frontiers 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 compute cores.

**MCBRC**

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:

[Cores Contact](#)

# LBRN Cores Contact Form

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Please complete the questions below.

Thank you!

<b>Your Name</b> <small>* must provide value</small>	<input type="text"/>
<b>Your Email</b> <small>* must provide value</small>	<input type="text"/>
<b>Your Institution</b> <small>* must provide value</small>	<input type="text"/>
<b>Indicate which core(s) that best fits / you'd like to contact:</b> <small>* must provide value</small>	<div><input type="checkbox"/> Administrative Core <input type="checkbox"/> Bioinformatics, Biostatistics, and Computational Core <input type="checkbox"/> Molecular and Cell Biology Resources Core <input type="checkbox"/> Other/Not Sure</div> <p><small>select all that apply</small></p>
<b>Please describe what you would like to ask and the question will get routed to the appropriate person in the core or the administrative core will contact you to try to help who is the appropriate person to contact you.</b> <small>* must provide value</small>	<div><input type="text"/></div> <p><small>Expand</small></p>
<div>Submit</div>	

LONI HPC Allocation for LBRN



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](#).

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## 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>

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## 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.***

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