News, Opportunities and Deadlines for March 2023

LBRN Summer Research Program

Louisiana Biomedical Research Network

2023 Summer Research Program

Applications due March 29

- Conduct biomedical research this summer at LSU Baton Rouge or Pennington Biomedical Research Center
- May 22 – July 28, 2023
- Housing provided for those traveling to study in Baton Rouge
- $4,000 award for Undergraduates
- $6,000 award for Graduate Students
- Up to $19,000 award for Faculty

Program presentations with Q&A Sessions will be via Zoom on:
Thursday 3/16 from 1-2 pm
Monday 3/20 from 10-11 am

Register here: https://redcap.link/53zwp5g1

lbrn@lsu.edu lbrn.lsu.edu
Program Information

Our Summer Research Program is a research based summer program for **faculty, graduate students and undergraduate students** attending a Louisiana college or university. The program will be held **May 22 – July 28, 2023**.

**Extended Deadline** for all materials is **March 29, 2023**.

The Louisiana Biomedical Research Network (LBRN) sponsors a summer research program in support of undergraduate students, graduate students and faculty from any Louisiana institute. The goal of our program and funding is to support biomedical research through an increase in graduate school admissions in these scientific fields and make Louisiana researchers more competitive in obtaining federal funding for research. We encourage applicants to seek mentors at the Louisiana State University A&M Baton Rouge Campus and Pennington Biomedical Research Center to take advantage of training activities and core resources.

The schedule for undergraduate students covers ten weeks during the summer; the summer program dates are May 22 – July 28, 2023. The schedule for graduate students and faculty is more flexible. It is
expected that an agreement be reached between the program participant (undergraduate student, graduate student or funded faculty) and the intended mentor. It is expected that the agreement to mentor an LBRN participant is a mutual one between the intended mentor and the funded participant.
The aim of this network is to enhance the quality of biomedical research conducted throughout the state of Louisiana by increasing access to state-of-the-art research infrastructure.

What do students say about the LBRN program?

- Overall great view into the research world that is not given at my home institution.
- Gaining research experience and developing new friendships.
- Learning techniques in lab because that will be something I take with me forever.
- It gives students an opportunity to work in a research lab and it also allows them to determine what career path to follow.
- I've learned so much about research. My mentor has been very effective in delivering post-grad information.
- My research experience has reinforced my plans for the future.

Program Date
May 22 - July 28, 2023

Awards
- Undergraduate and Graduate students will receive support of $4,000 and $6,000 respectively
- Housing is provided, if needed

Application Deadline
Monday, March 20th, 2023

If you would like to know more about this program, please go to Research Programs at: https://lbrn.lsu.edu/summer-research-program.html

If you have any questions, please contact Dr. Brent Standfield at lbrn@lsu.edu

Louisiana Biomedical Research Network is supported by an Institutional Development Award (IDeA) from the National Institute of General Medical Sciences of the National Institutes of Health grant number 5P20 GM103424-21, 3P20 GM109424-15S1 and the Louisiana Board of Regents for the purpose of improving the competitiveness of Louisiana biomedical researchers.

Phone: 225-578-9688
Email: LBRN@lsu.edu
Web: LBRN.lsu.edu
Who are we?

Louisiana Biomedical Research Network was established in September 2001 with funding by NIH, NCRR’s IDEA Networks of Biomedical Research Excellence Program (Grant P20RR16456) and National Institute of General Medical Sciences (Grant P20GM103424) and Louisiana Board of Regents, the LBRN program is committed to raising the research competitiveness of Louisiana researchers.

What do we do?

Louisiana State University A&M, in conjunction with the NIH/NIGMS, is hosting research opportunities for eligible faculty, graduate and undergraduate students in Bioinformatics, Computational Biology, and Cell and Molecular Biology. Our focus is providing research opportunities to faculty and students from primarily undergraduate institutes in the state of Louisiana. Those interested in working on projects at the interface between the biological and computational sciences are encouraged to apply to this program. Women and members of underrepresented minorities are urged to apply.

Who can apply?

• Full-time undergraduate and graduate students with at least a 3.0 GPA.
• Students enrolled in a College or University in Louisiana (excluding LSU and Tulane).
• Students with research interests in the Biological or Computational Sciences.
• Students who have completed the appropriate science or introductory courses.
• Students interested in attending graduate, medical or professional schools.

What do you get out of the LBRN program?

• Hands-on research experience in the laboratory and/or the field.
• Experience using different types of research instruments and techniques.
• Meet other young investigators from across the state and the country.
• Exposure to a wide range of ongoing research projects.
• Tips on scientific writing and presentation.

Where will research be done?

• Work will be done in established laboratories at LSU Baton Rouge, LSU School of Veterinary Science, and Pennington Biomedical Research Center. Please contact the LBRN Program Office for details.

Research Forum

The program culminates in a professional poster session (Summer Undergraduate Research Forum, SURF) where each participant presents the results of their summer project along with participants from multiple REU programs.

Student Scholar Program

Eligible students will have the opportunity to continue their mentored research during the academic year.

Future Plans

Participants are encouraged to attend local or regional science meetings to present their research.

Mailing address

Louisiana Biomedical Research Network
School of Veterinary Medicine
Louisiana State University
VMED 3110, Baton Rouge, LA 70803

Apply LBRN Summer Research:

COE-TIIDHS Seminar

Tulane University Center for Biomedical Informatics & Genomics
Knowledge-guided automated machine learning for data science
March 20, 2023 | 3:00PM – 4:00PM

Abstract
Machine learning has finally emerged as a useful tool for big data analytics. This is due to decades of research that have provided powerful algorithms and the availability of plentiful computing resources. Despite these advances, machine learning is not widely accessible due to a steep learning curve and numerous decisions that need to be made when building an analytics pipeline. In response to these challenges, we developed one of the very first automated machine learning (AutoML) methods for the discovery of high-performing pipelines without human intervention. Our Tree-based Pipeline Optimization Tool (TPOT) is programmed in Python and is freely available as open-source. We will give an overview of the TPOT method, its evaluation and benchmarking, and its application to big data. We will end with some thoughts about integrating expert biomedical knowledge into the AutoML process with a focus on risk prediction for Alzheimer’s disease.

Biography
Dr. Moore completed a Ph.D. in Human Genetics and an M.A. in Statistics at the University of Michigan. In 1999 he went to Vanderbilt University where he held an Ingram Professorship and served as founding Director of the Advanced Computing Center for Research and Education. He then went to the Geisel School of Medicine at Dartmouth College in 2004 where he held the Third Century Professorship and served as founding Director of the Institute for Quantitative Biomedical Sciences. In 2015, he joined Penn Medicine at the University of Pennsylvania as the founding Director of the Institute for Biomedical Informatics and Senior Associate Dean for Informatics. He joined Cedars-Sinai in 2021 as the founding Chair of the Department of Computational Biomedicine. His research on artificial intelligence methods for the analysis of biomedical data has been continuously funded the NIH for more than 20 years. He is an elected fellow of the American College of Medical Informatics, the International Academy of Health.
2023 Mid-South Biophysics Symposium

Initiated in 2008, the Mid-South Biophysics Symposium began as an annual meeting for biophysics researchers in Mississippi. Since then, it has grown to include enthusiastic researchers from states all over the south, including Alabama, Arkansas, Louisiana, Tennessee, and Texas. The aim is to build collaborations and partnerships throughout the mid-south and provide networking and speaking experiences to the trainees. This year’s one-day event will be held on May 22, 2023 at The University of Mississippi in Oxford, Mississippi. There will also be a welcome dinner the night before for all attendees who can make it.

Where: University of Mississippi, Oxford, MS
When: Monday, May 22, 2023
Website and Abstract Portal: http://biophysics23.com
Abstract Priority Deadline: April 21, 2023
Where: University of Mississippi, Oxford, MS
When: Monday, May 22, 2023
Website and Abstract Portal: http://biophysics23.com
Abstract Priority Deadline: April 21, 2023

Platform Talks | Trainee Poster Session | Networking

Keynote Speaker
Marija Zanic, Ph.D., Vanderbilt University
Associate Professor of Cell and Developmental Biology
Associate Professor of Chemical and Biomolecular Engineering
Associate Professor of Biochemistry

HPC Training

The schedule for the Spring 2023 HPC Training is available
Our first HPC training will be held on Wednesday, March 22 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, March 22, 2023: Introduction to Python**
Python is a high-level programming language, easy to learn yet extremely powerful. This training will provide an introduction to programming in Python. The subjects include basic Python syntax, Python classes used in object-oriented programming. Basic Python modules for scientific computing and plotting will also be introduced. During the training, simple Python programs will be provided for demonstration.

*Prerequisites:*
Basic understanding of a programming language is assumed but not required.

Next HPC training:

**Managing Software Packages with Conda Virtual Environment**
Date   March 29, 2023  
Time   9:00 AM - 11:00 AM  
Place   Zoom Online  
Description   Conda is an open source package management system and environment management system. It quickly installs, runs and updates packages and their dependencies. It also easily creates, saves, loads and switches between environments on your computer. Though initially created for Python, Conda now becomes a powerful tool to manage software packages in general.

For HPC users, installing and managing software packages without super user permission is often a challenge. Conda is especially useful for these tasks. In this training, we will discuss how you can use Conda and virtual environments to install and manage software packages on our clusters, including frequently requested examples such as Tensorflow and PyTorch. We will also share some useful tips, such as sharing virtual environment with group members and using Conda to manage software packages beyond Python (e.g., R / Perl).

*Prerequisites:*
Basic understanding of the shell commands and python programming language is assumed but not required.

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).
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).
Weekly Update from DRCB / NIGMS

Updates from DRCB/NIGMS

Issue 123, 03/13/2023
NIH Funding Opportunity and/or Policy Announcements

- Availability of Administrative Supplements to Advance the Use of Electronic Health Records for Research (NOT-GM-23-035). Applications Due: May 15.
- Support the Exploration of Cloud in NIH-supported Research (NOT-OD-23-070). Applications Due: April 11.
- Support Collaborations to Improve the AI/ML-Readiness of NIH-Supported Data (NOT-OD-23-082). Applications Due: May 16.

Upcoming Events

- Business Fundamentals for Core Facility Administrators course series:
  - **Session 2**—Guidance in Managing Biomedical Core Facilities: Operations, **TODAY**, Monday, March 13, 2:00-3:30pm ET. [Register Here](#).
  - **Session 3**—Guidance in Managing Biomedical Core Facilities: Enhance Data Management and Service Core Use, Monday, April 10, 2:00-3:30pm ET. [Register Here](#).
  - **Session 4**—Guidance in Managing Biomedical Core Facilities: Financial Management, Monday, May 15, 2:00-3:30pm ET. [Register Here](#).
  - **Session 5**—Guidance in Managing Biomedical Core Facilities: Value Assessment And Contributions To The Academic Mission, Monday, June 12, 2:00-3:30pm ET. [Register Here](#).
  Slides and recording of Session 1 are available on the [website](#).
- Workshop on Inclusive Participation in Clinical Research, March 30-31, 11:00am-5:00pm ET. [Register Here](#).
- Workshop on Innovative Approaches to Improve Maternal Health, May 8-9, 9:00am-6:00pm ET. [More Info](#) and [Register Here](#).

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Issue 122, 03/06/2023
NIH Funding Opportunity and/or Policy Announcements
• RFI: Innovative approaches to prevent mental health problems and promote mental wellness in populations that experience health disparities (NOT-OD-23-030). Responses Due: March 1.
• RFI: Re-envisioning U.S. Postdoctoral Research Training and Career Progression within the Biomedical Research Enterprise (NOT-OD-23-084). Responses Due: April 14.

Upcoming Events

• INBRE Pre-Application Webinar, Tuesday, March 7, 2:00-3:30pm ET. Zoom Link.
• Business Fundamentals for Core Facility Administrators course series:
  ○ Session 2—Guidance in Managing Biomedical Core Facilities: Operations, Monday, March 13, 2:00-3:30pm ET. Register Here.
  ○ Session 3—Guidance in Managing Biomedical Core Facilities: Enhance Data Management and Service Core Use, Monday, April 10, 2:00-3:30pm ET. Register Here.
  ○ Session 4—Guidance in Managing Biomedical Core Facilities: Financial Management, Monday, May 15, 2:00-3:30pm ET. Register Here.
  ○ Session 5—Guidance in Managing Biomedical Core Facilities: Value Assessment And Contributions To The Academic Mission, Monday, June 12, 2:00-3:30pm ET. Register Here.
  Slides and recording of Session 1 are available on the website.
• Workshop on Inclusive Participation in Clinical Research, March 30-31, 11:00am-5:00pm ET. Register Here.
• Workshop on Innovative Approaches to Improve Maternal Health, May 8-9, 9:00am-6:00pm ET. More Info and Register Here.

Issue 121, 02/27/2023

NIH Funding Opportunity and/or Policy Announcements

• RFI: Innovative approaches to prevent mental health problems and promote mental wellness in populations that experience health disparities (NOT-OD-23-030). Responses Due: March 1.
• RFI: Re-envisioning U.S. Postdoctoral Research Training and Career Progression within the Biomedical Research Enterprise (NOT-OD-23-084). Responses Due: April 14.
• INBRE FOA (PAR-23-100). Applications Due: June 26.
• Administrative Supplements to Support the Exploration of Cloud in NIH-supported Research (NOT-OD-23-070). Applications Due: April 11.

Upcoming Events

• Business Fundamentals for Core Facility Administrators course series: Session 1—Guidance in Managing Biomedical Core Facilities Supported by NIH Funding, Monday, February 27, 2:00-3:30pm ET. Register Here.
• INBRE Pre-Application Webinar, Tuesday, March 7, 2:00-3:30pm ET. Zoom Link.
• Workshop on Inclusive Participation in Clinical Research, March 30-31, 11:00am-5:00pm ET. Register Here.
NIH hybrid workshop on Innovative Approaches to Improve Maternal Health, May 8-9, 9:00am-6:00pm ET. More Info and Register Here

Issue 120, 02/21/2023

NIH Funding Opportunity and/or Policy Announcements

- RFI: Innovative approaches to prevent mental health problems and promote mental wellness in populations that experience health disparities (NOT-OD-23-030). Responses Due: March 1.
- RFI: Re-envisioning U.S. Postdoctoral Research Training and Career Progression within the Biomedical Research Enterprise (NOT-OD-23-084). Responses Due: April 14.
- INBRE FOA (PAR-23-100). Applications Due: June 26.
- Administrative Supplements to Support the Exploration of Cloud in NIH-supported Research (NOT-OD-23-070). Applications Due: April 11.
- Biomedical Research Facilities (PAR-23-045). Applications Due: February 24.

Upcoming Events

- Responsible Management and Sharing of American Indian/Alaska Native Participant Data under NIH Policy webinar, Tuesday, February 21, 1:00 pm ET. Register Here.
- Responsible Management and Sharing of American Indian/Alaska Native Participant Data under NIH Policy webinar, Tuesday, February 21, 1:00pm ET. Register Here.
- CDC Framework for Program Evaluation in Public Health Listening Session for AI/AN webinar, Wednesday, February 22, 2:30pm ET. Register Here.
- TWD Safe and Inclusive Training Environments, Wednesday, February 22, 2:00pm-4:30pm ET. Register Here.
- Business Fundamentals for Core Facility Administrators course series: Session 1—Guidance in Managing Biomedical Core Facilities Supported by NIH Funding, Monday, February 27, 2:00-3:30pm ET. Register Here.
- INBRE Pre-Application Webinar, Tuesday, March 7, 2:00-3:30pm ET. Zoom Link.

NIH Extramural Nexus

- Recommendations for Proactively Addressing Authorship Disputes
In my research days, there was a time when a colleague did not want to be an author on one of our papers. They contributed to the work but disagreed with parts of the draft manuscript. It was an honest disagreement, one that we discussed professionally. I was not offended and could see where they were coming from. Long story short, we agreed they would not be an author on the final submitted paper, and life went on.

Sometimes disagreements about authorship cannot be avoided, and many have likely seen it up close. They can be handled thoughtfully and appropriately. But when they are not, they may lead to serious consequences for the people and research involved. Here, we will look at this issue more closely and reflect on how to proactively address them.

We tend to see three main ways authorship disputes happen. Sometimes a researcher (usually more junior) feels they should have been included as an author on the submitted manuscript but were not. In other disputes someone is included on a paper, but they never agreed to its content. Then there are disagreements about authorship order. The last situation appears to be more prevalent in **biomedicine** where the order may be dictated by the amount or nature of someone’s contributions, compared to other fields like **economics or mathematics** where the author order tends to be alphabetical.

Some of these authorship disputes come to our attention as **research misconduct** or **harassment/discrimination** allegations. A researcher may claim that an article was plagiarized if they are not included as an author, and thus not appropriately accredited for their work. Others may feel discriminated against for being left off the paper. Some may feel harassed if they are pressured into being an author when they do not want to be.

--- continue reading

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• *Number of Postdoctoral Researchers Supported by NIH Grant Awards FY 2017-FY 2022*

In this post we show the estimated number of postdoctoral researchers (“postdocs”) supported in recent years by NIH grants. We gathered these data in coordination with the Advisory Committee to the Director’s (ACD) **Working Group on Re-envisioning NIH-Supported Postdoctoral Training**.

NIH can support postdocs and graduate students through the Ruth L. Kirschstein National Research Service Award (NRSA) program, which offers fellowship (“F”) and training (“T”) awards that are limited to United States citizens. However, most NIH support for postdocs and graduate students comes from non-NRSA research project and research center awards.

Several years ago my colleagues published an “**enumeration study**” which found that by Fiscal Year (FY) 2010 progress reports NIH supported 29,702 postdocs (see Table 2 there), inclusive of NRSA-supported fellows and trainees. The study was labor-intensive as it occurred at a time when many progress reports were submitted non-electronically and the all-personnel report was not yet mature. Implementation of the modern electronic progress report **began in FY2012** with more comprehensive use announced by the **agency in FY 2015**.
We used administrative grants data, which are derived from electronic administrative data. Data on research staff other than Principal Investigators came from progress reports; recipients are asked to provide information on all personnel who contribute at least one calendar-month per year on any given project.

Over time, NRSA support for postdoctoral fellows and trainees has declined while support for graduate students has increased, especially in recent years (Figure 1).

*Figure 1: Numbers of fellows and trainees supported through the NRSA program from FY1998 to FY2022. Panel A refers to postdocs, while Panel B refers to predoctoral students. The vertical dotted lines refer to the beginning (FY1998) and end (FY2003) of the NIH-doubling and to the year of budget sequestration (FY2013).*
Ending After May 11, 2023: Common Rule Exceptions to the Use of a Single IRB for Multi-site Research

The Secretary of the U.S. Department of Health and Human Services (HHS) is planning for the Federal Public Health Emergency (PHE) for COVID-19, declared under Section 319 of the Public Health Service (PHS) Act, to expire at the end of the day on May 11, 2023.

The extramural community is reminded that as of that date NIH will no longer be able to grant single IRB exceptions for multi-site research that is subject to the revised Common Rule cooperative research provision under the Office for Human Research Protections (OHRP) Determination of “Exception to the Single IRB Review Requirements for Certain HHS-Conducted or -Supported Cooperative Research Activities Subject to the 2018 Requirements During the Coronavirus Disease 2019 (COVID-19) Public Health Emergency.”

As indicated by OHRP in their Important Updates about the COVID-19 Single Institutional Review Board (IRB) Exceptions, as of the date of the conclusion of the public health emergency, the COVID-19 Single IRB exception will expire and cannot be applied to additional studies. All exceptions that have been granted by NIH prior to May 11, 2023, will be effective for the duration of the research or the time they were granted, as indicated in the determination letters. For more information, please see NOT-OD-23-097.

To ensure that sIRB exception requests for research that is subject to the revised Common rule cooperative research provision can be reviewed and a determination made prior to May 11, 2023, NIH suggests submitting any new exception requests no later than March 31, 2023 per the process outlined in NOT-OD-21-006.

FOA or NOFO – It’s All About Funding

What’s in a name? A Funding Opportunity Announcement (FOA) by any other name would sound as sweet.

NIH advertises available grant support through funding opportunities that provide information on the award, who is eligible to apply, the evaluation criteria for selection of an awardee, required components of an application, and how to submit an application.

In an effort to standardize terminology across the government, NIH is joining other federal agencies in using the term Notices of Funding Opportunities (NOFOs) rather than Funding Opportunity Announcements (FOAs). You will see both terms in use while we work to update our websites and resources.

Avoid FOMO (Fear of Missing Out) and apply to a NOFO today! NIH funding opportunities can be found on Grants.gov and in the NIH Guide for Grants and Contracts.
You Are Invited: NIH Listening Sessions on the Postdoc Training System

NIH welcomes community input on the status of the postdoctoral training system through four public virtual listening sessions between March 8 – March 20, 2023. Register to attend and share your input!

Last week NIH announced a Request for Information (RFI) inviting the research community to give input on the state of postdoctoral research training and career progression infrastructure in biomedical science developed by a working group of the NIH Advisory Committee to the Director. In support of the RFI, NIH is hosting a series of listening sessions to hear from the community about their experiences as postdoctoral trainees and perspectives on the current infrastructure. Additionally, NIH is interested in hearing potential promising solutions to the fundamental challenges faced by the postdoctoral trainee community.

The working group will host four public virtual listening sessions to get input from the extramural research community on specific themes:

- Wednesday, 3/8 12:30 – 1:30 p.m. ET: Role, duration, structure, and value of the academic postdoc (including impacts on underrepresented populations)
- Friday, 3/10 1:30 – 2:30 p.m. ET: International trainee concerns
- Friday, 3/17 12:30 – 1:30 p.m. ET: Compensation and benefits (including childcare and dependent care)
- Monday, 3/20 1:30 – 2:30 p.m. ET: Job security, career prospects, and quality of life

To attend some or all of these sessions, register now! In addition to the listening sessions, NIH welcomes responses to a concurrent Request for Information (RFI), open through April 14, 2023.

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, Biomathematics, 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 compute 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 unifying 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

Please complete the questions below.

Thank you!

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Indicate which core(s) that best fits / you'd like to contact:

- [ ] Administrative Core
- [ ] Bioinformatics, Biosciatistics, and Computational Core
- [ ] Molecular and Cell Biology Resources Core
- [ ] Other/Not Sure

select all that apply

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.

* must provide value

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.
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](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:

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

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