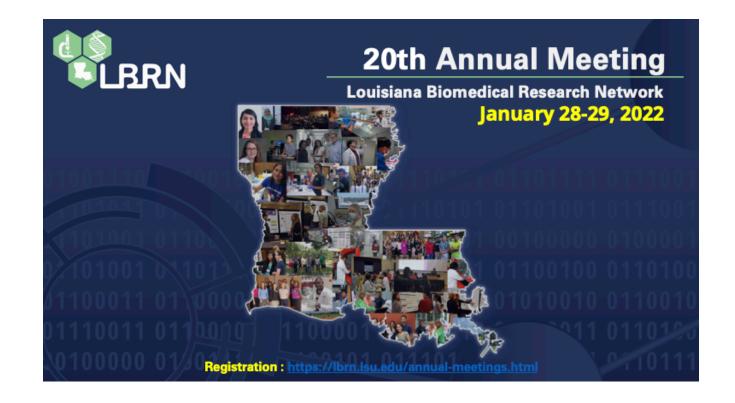
News, Opportunities and Deadlines for Jan. 2022

#### **20th LBRN Annual Virtual Meeting**

Event Date: January 28-29, 2022

All Deadlines: Presentation Deadlines have been met. Open Registration for attendance, must register to attend. Location: Virtual Meeting



Greetings!! LBRN team is pleased to announce that the 20<sup>th</sup> Annual LBRN Meeting will be held virtually on the 28<sup>th</sup> and 29<sup>th</sup> of January, 2022. The virtual format has been necessitated owing to COVID-19 related safety measures. As was the case last year, in-spite of the unprecedented pandemic LBRN investigators and students have been carrying out active research in a responsible and safe manner. We are encouraged by their commitment and look forward to celebrating the wonderful research efforts by all involved. This is an open meeting and all are welcome, there is no registration fee. We invite the biomedical researchers from all over the state to participate.

Each year the LBRN program has an annual meeting in which program participants, committee members and

administrators meet to review individual research accomplishments and to discuss the overall program activity. Summer research faculty and graduate and undergraduate students are encouraged to present their LBRN sponsored research, and talks are scheduled to highlight sponsored research projects from partnered campuses across the state.

Oral Presenters: Full Project PIs, INBRE / COBRE Collaboration Supplemental Project PIs, LBRN Maternal Health Supplemental Project PIs, LBRN Graduate Students (Flash talks), and invited guests.

## **Tentative Agenda**



# 20<sup>th</sup> ANNUAL MEETING OF THE LBRN – 2022

#### Friday January 28th, 2022

#	Name	Project Type	Title	Time	
1	Konstantin Kousoulas / Ramesh Subramanian	Introduction		1:00 - 1:10 PM	
2	Nicolas Bazan - Director, Neuroscience Center of Excellence	Keynote	Redundancy and Resiliency Signaling for Neuronal Longevity Counteracts Alzheimer's Onset.	1:10 - 2:00 PM	
3	Urska Cvek / J. Steven Alexander	Women's Health	Stability in Inflammatory Bowel Disease	2:05 - 2:30 PM	
4	Nektarious Barabutis / Yogesh Saini	INBRE- COBRE	Protective Role of Activating Transcription Factor 6 (ATF6) against endothelial barrier dysfunction	2:35 - 3:00 PM	

#### BREAK

3:00 - 3:10 PM

5	Charles Irvin - Director, Vermont Lung Center	Keynote	Scientific Misconduct: Crime & Punishment	3:10 - 4:00 PM
6	Poster Session 1			4:00 - 5:00 PM
7	Poster Session 2			5:00 - 6:00 PM

Saturday, January 29 <sup>th</sup> , 2022					
#	Name	Project Type	Title	Time	
1	Oliver Garden - Dean, LSU School of Veterinary Medicine	Dean's Remarks	LSU Vetmed Overview	8:15 - 8:30 AM	
2	Matt Lee - Interim Executive Vice President and Provost - LSU	Provosťs Remarks	Welcome remarks	8:30 - 8:45 AM	
3	Krzysztof Reiss - Program Director Center For Translational Viral Oncology	Keynote	Molecular pathways involved in the development of brain tumors.	8:45 - 9:25 AM	
4	Jean Christopher Chamcheu	Full	Development of fisetin as a novel inhibitor co-targeting PI3K/AKT/mTOR/Rac1 and IL-17A for Treating Psoriasis	9:30 - 9:55 AM	
5	Georgios Matthaiolampakis	Full	miR-mediated Inhibition of Lung Cancer Progression	10:00 - 10:25 AM	

#### BREAK

10:25 - 10:40 AM

6	Siva Murru		Development of Pyrazoles and Pyrazolones as Anti-Cancer Agents: Design, Synthesis and Anti-Cancer Activity Studies	10:40 - 11:05 AM
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7	Devaiah Kambiranda	Full	Proteasomes/immunoproteasome: Role of lipid rafts in compartmentalization / activation in e-cigarettes vapor exposed lung epithelial cells	11:10 - 11:35 AM
8	Kyle Piller	Full	Life in the fast lane: Testing for congruence among transcriptomic signatures	11:40 - 12:05 PM

#### LUNCH

12:05 - 1:00 PM

Student Flash Talks – 4 minutes each					
10	Rizwana Begum	Summer	HSP70 and proteasomes coalesce in lipid rafts to regulate E-cigarette Vapor condensate induced inflammation		
11	Nandini Bidarimath	Summer	Pentachlorophenol induced transcriptome dynamics in human lung and liver Cells		
12	Chelsea Bock	Summer	Growth inhibitory and apoptotic effects of Graviola (Annona Muricata) fractions in human melanoma and non- melanoma skin cancer in vitro		
13	Eric Clifford	Summer	Drug Screen Trends in Emergency Rooms Among Childbearing-Aged Females	1:00 – 1:30 PM	
14	Denzel El Hage	Summer	Development of a pH-sensitive liposome formulation for targeted delivery of anticancer pyrazolones in lung cancer cells		
15	Tithi Roy	LBRN	The dietary antioxidant Fisetin suppresses Psoriasis-like characteristics in vitro and in vivo in an imiquimod-induced dermatitis in Balb/c mice: Involvement of the central mTOR signaling pathway		
16	April Wright	Full	Modeling Heterogeneous Data Sources for Time-Scaling Phylogenetic Trees	1:35 - 2:00 PM	
17	Srinivas Garlapati	Full	Mechanism of translation initiation in protozoan parasite Giardia lamblia	2:05 - 2:30 PM	
18	Vonny Salim	Full	Elucidation of Plant-Derived Drug Biosynthetic Pathways and Molecular Mechanisms as Anticancer Agents	2:35 - 3:00 PM	
	Awards and closing remarks				
EAC meet with Steering Committee 3:25 - 4:1					

Poster Sessions: All projects currently funded by the LBRN, Summer Graduate students are required to submit an abstract to participate in the poster session. LBRN Undergraduate Summer students and all biomedical researchers within the state of Louisiana are also expected to submit abstracts.

To recognize the efforts, we will continue the tradition of awarding:

- 1<sup>st</sup> and 2<sup>nd</sup> place award for Graduate and Undergraduate Posters,
- 1<sup>st</sup> place award for Graduate Flash talks,
- 1<sup>st</sup> and 2<sup>nd</sup> place awards for Project Posters and finally,
- 1<sup>st</sup> place award for Oral Presentations by Full project Pls."

## Please register on the link below



## FREE Bioinformatic training for LSU and LBRN students!

January 19, 2021

Fill out this form: <u>https://share.hsforms.com/1dTX\_HIzQ-uz0ExbdaoZrw3851z</u> to get zoom meeting invitation and email notifications about the LSU BIOMMED Spring Bioinformatics & Data Science Programs.

For more details, reach out to Farhana Musarrat, Ph.D., Post-Doctoral Researcher, Kousoulas Lab (fmusar1@lsu.edu | office 225-578-9084 | mobile 504-265-6777)

Program delivery and registration via GeneLab on OmicsLogic: http://edu.omicslogic.com/lsu-biommed

BIOINFORMATICS	Genomic and/or			
Started with Big Data Bioinformatics	Metagenomic Data Analysis	Biomedical Data Intermediate		
Beginner	Intermediate	Advanced		
Key topics, terminology, and applications in bioinformatics: from the basics of biology to methods of analysis for Big Data. Medical, Translational, and Basic Research Examples.	Introduction to methods for Genomics and/or Metagenomics Data Analysis. Practical Analysis, Visualization and Interpretation using a case study approach (user- friendly tools and some R).	Practical methods of data wrangling, analysis, visualization, statistical analysis, and machine learning as used in analysis of -omics data (GUI tools, R and Python)		
<ul> <li>Complete Assignments at Your Pace</li> <li>Online Chat and/or Email Assistance</li> <li>Q&amp;A sessions with Experienced Program</li> </ul>				

- ✓ Recorded Lectures and Written Courses!
- Integrated Online Environment for Practice and Research!
- Mentors!
   Program Certificates from LSU and LBRN Upon Completion!

## News: Division for Research Capacity Building, NIH

NIH National Institute of General Medical Science	es	Mr. Sk	
Capacity	Building		
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IDeA	NARCH	SuRE	SEPA

The Division for Research Capacity Building (DRCB) supports research, faculty development, research training, and research infrastructure improvements in states where levels of NIH research funding have

historically been low through administering the Institutional Development Award (IDeA). It also supports research directed by and research capacity building in Native American and Alaska Native tribal organizations through the Native American Research Centers for Health (NARCH) program, faculty development at institutions that primarily serves students from underrepresented groups in biomedical research through the Support for Research Excellence (SuRE) program, and science education through the Science Education Partnership Awards (SEPA) program. The division also oversees the STTR Regional Technology Transfer Accelerator Hubs for IDeA States.

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

- Administrative Supplements to INBRE Awards to Fund Research Collaborations (NOT-GM-22-001).
- NIGMS National and Regional Resources (PAR-22-065).
- Administrative Supplements to NIGMS Funded Awards for Building Cloud-Based Learning Modules (<u>NOT-GM-22-004</u>).
- Innovation Corps (I-Corps) at NIH Program for NIH and CDC Translational Research (PAR-22-073).

#### **Upcoming Events**

- Webinar: Building Cloud-Based Learning Modules (<u>NOT-GM-22-004</u>), Thursday, December 9, 2:00-3:30
   p.m. ET; Zoom information to follow.
- Pre-application webinar to discuss developing collaborative applications for INBRE supplements, December 20, 2:00-3:30 pm ET; Zoom information to follow.
- NIH <u>UNITE's listening sessions</u> to discuss racial & ethnic equity, December 2021-February 2022.

#### **Reports/News/Program Messages**

- Bristol Myers Squibb Foundation (BMSF) Diversity in Clinical Trials Career Development Program for early career physician investigators: informational webinars <u>December 7</u> and <u>January 6</u>. For more information.
- <u>Extramural Nexus</u>: New Site for Small Business Program and Academic Entrepreneurship Resources.
- <u>Extramural Nexus</u>: Capacity Building for the Future of Biomedical Research Webinar: <u>Recording</u> <u>Available</u>.
- Extramural Nexus: Resources & Recordings Available from the Recent 2021 NIH Virtual Grants Seminar.

## LBRN "Core Bucks"



The BBC Core and MCBR Core offer researchers the opportunity to earn "Core Bucks" to support faculty and students upto \$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

## **Coronavirus (COVID-19) Information**

Information from CDC: https://www.cdc.gov/coronavirus/2019-ncov/index.html

## **COVID-19 Vaccines**

You are up to date with your COVID-19 vaccines when you have followed the current recommendations listed below. The recommendations will be different depending on your age, your health status, and when you first got vaccinated.

Many people who are <u>immunocompromised</u> may need an additional dose as part of their primary vaccine series.

Note that booster shots are not recommended for everyone at this time.

#### Johnson & Johnson's Pfizer-BioNTech<sup>[1]</sup> Moderna<sup>[1]</sup> Janssen<sup>[1,2]</sup> Ages Recommended Ages Recommended Ages Recommended 5+ years old 18+ years old 18+ years old Primary Series **Primary Series Primary Series** 2 doses[3,4] 2 doses [3] 1 dose Given 3 weeks (21 days) Given 4 weeks (28 days) apart [5] apart [5] Fully Vaccinated **Fully Vaccinated Fully Vaccinated** 2 weeks after final dose in 2 weeks after final dose in 2 weeks after 1st dose primary series primary series Booster Dose Booster Dose Booster Dose Everyone ages 12+ should Everyone ages 18+ should Everyone ages 18+ should get a booster dose at least 5 get a booster dose of either get a booster dose of either months after the last dose Pfizer-BioNTech or Moderna Pfizer-BioNTech or Moderna in their primary series. (mRNA COVID-19 vaccines) (mRNA COVID-19 vaccines) at least 5 months after the at least 2 months after the Teens 12–17 should last dose in their primary first dose of J&J/Janssen only get a Pfizer-COVID-19 Vaccine. You may series. BioNTech COVID-19 get J&J/Janssen in some Vaccine booster situations. Everyone 18+ should

When Boosted A person is considered "boosted" and **up to date** right after getting their booster dose.

get a booster dose of either Pfizer-BioNTech or Moderna (mRNA COVID-19 vaccines)

#### When Boosted

A person is considered "boosted" and **up to date** right after getting their booster dose.

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A person is considered "boosted" and **up to date** right after getting their booster dose.

<sup>1</sup> If you had a severe <u>allergic reaction</u> after a previous dose or if you have a known (diagnosed) allergy to a <u>COVID-19 vaccine ingredient</u>, you should not get that vaccine. If you have been instructed not to get one type of COVID-19 vaccine, you may still be able to get another type.

<sup>2</sup> CDC has updated its <u>recommendations for COVID-19 vaccines with a preference for mRNA</u> (Pfizer-BioNTech or Moderna) vaccines. Learn more about the updated <u>guidance on the use of Janssen (Johnson & Johnson) COVID-19 vaccine</u>.

<sup>3</sup> The primary series of these vaccinations includes a third dose for people ages 18 years and older with <u>moderate to severe immunocompromise</u>. This third dose occurs 28 days after the second dose in the primary series.

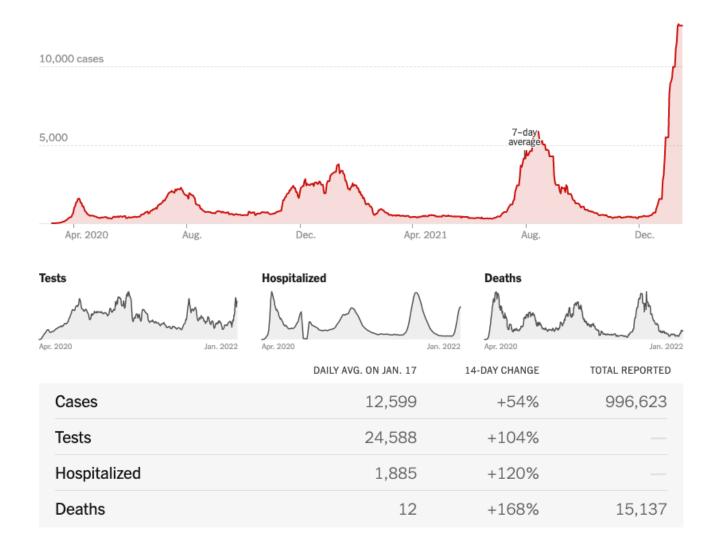
<sup>4</sup> The primary series of this vaccination includes a third dose for people ages 5–17 years with <u>moderate to</u> <u>severe immunocompromise</u>. The third dose occurs 28 days after the second dose in the primary series.

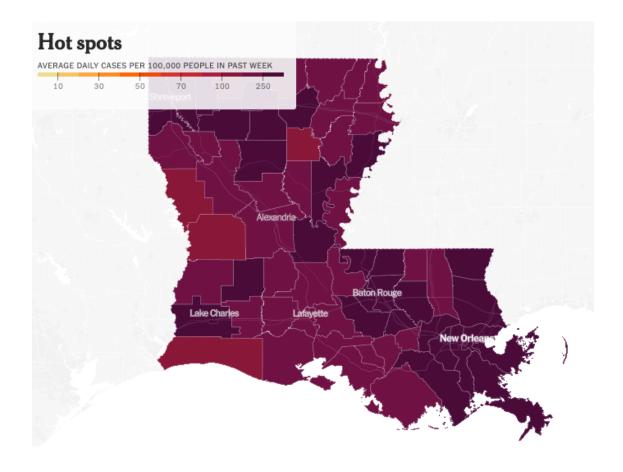
<sup>5</sup> You should get your <u>second shot</u> as close to the recommended 3-week or 4-week interval as possible. You should not get the second dose early.

We remind everyone of the information provided here on our website: LBRN COVID-19.

#### **COVID-19 in Louisiana**

Information from New York Times: https://www.nytimes.com/interactive/2021/us/louisiana-covid-cases.html





#### **NIH Extramural Nexus**



## Strengthening Fellowship Review

Have you applied for, sponsored, or reviewed NIH fellowship applications? We would like to hear your thoughts on what works, what doesn't, and how the process could be improved.

National Research Service Award (NRSA) Fellowship (F) awards are intended to support training that will enhance pre- and post-doctoral trainees' potential to develop into productive, independent research scientists. In 2021, CSR handled the review of more than 5500 of the approximately 6800 NRSA F applications received by NIH. We recently convened a <u>CSR Advisory Council working group</u>, charged with evaluating the fellowship review process and making recommendations to make it as effective and fair as possible for all.

The working group has noted multiple concerns, many of which center around the challenges of discerning the

potential of the applicant and the value of the training planned, as opposed to the general reputation of the school and sponsor. There are concerns that applicants from smaller and less-resourced schools sometimes face a higher bar, that grades can unfairly haunt strong applicants, and that junior faculty are hesitant to sponsor applications, feeling their chances are slim.

Now the working group would like to hear your thoughts about the fellowship review process. What are its strengths and weaknesses? How could it be improved? In answering, think about the characteristics of strong applicants, sponsors, and training programs and the challenge of identifying the applications that have the greatest potential to develop independent, productive research scientists.

It may be useful to refresh your memory on the criteria NIH uses now. The five main review criteria are: Fellowship Applicant; Sponsor(s), Collaborators, and Consultants; Research Training Plan; Training Potential; and Institutional Environment & Commitment to Training. (PA-21-051 is a typical funding announcement and details review information in section V.) However, you need not be bound to these criteria; creativity is welcome.

Share your ideas via the comments box, or by emailing <u>feedback@csr.nih.gov</u>. We cannot respond individually to most comments, but we promise that if received by January 24, 2022, they'll be read and that the information you provide will help the working group and CSR strengthen the review of NRSA fellowship applications.

## Webinar Available on Searches for Alternatives to Animals

The NIH Office of Laboratory Animal Welfare hosted a live webinar in December 2021 entitled, "<u>Best Practices</u> <u>for Conducting a Search for Alternatives and Finding Animal Model/Model Organism Information</u>." The panelists included Jessie Kull from the U.S. Department of Agriculture Animal Welfare Information Center and Joelle Mornini from the NIH Library. View this recording to learn how to find:

- 3Rs methods (replacement, reduction, and refinement) and animal use alternative information in bibliographic databases
- Journal articles, patents, NIH-funded research projects, and genetic information related to animal models and model organisms
- Requirements and resources for the NIH Model Organism Sharing Policy

Want more on this topic? We invite you to take a few minutes and also listen to our <u>NIH All About Grants</u> <u>podcast</u> on <u>considering alternatives to animals in your grant application</u>.

## Extending Existing Guidance for Preparing Applications During COVID-19

For Spring 2022 due dates, NIH recently <u>extended the guidance</u> that while grant applications should not include contingency or recovery plans for problems resulting from the COVID-19 pandemic, investigators may

address effects due to the pandemic on productivity or other scoreable issues in the personal statement of the biosketch. Reviewers will be instructed to take these pandemic-related circumstances into account when assessing applicants' productivity and other score-driving factors. If needed, NIH staff will request and assess plans to resolve specific problems arising from the COVID-19 pandemic prior to funding.

NIH also <u>extended the special exception for post-submission material</u> to applications submitted for the August/October 2022 Council rounds. For applications submitted for the August/October 2022 Council rounds (beginning with applications submitted for the January 25, 2022 due date), the NIH, AHRQ, and NIOSH will accept a one-page update with preliminary data as post-submission materials for applications submitted under all activity codes, ONLY if the Funding Opportunity Announcement (FOA) used for submission allowed preliminary data in the application. One page of preliminary data will be accepted for single component applications or for each component of a multi-component application.

The deadline for submitting all post-submission materials, including preliminary data, will be 30 days before the study section meeting, unless specified otherwise in the FOA. Because applications for emergency competitive revisions and urgent competitive revisions undergo expedited review, post-submission materials will not be accepted for those applications.

## Revised NIH Grants Policy Statement for FY 2022

The <u>revised NIH Grants Policy Statement</u> (NIHGPS) has been published, replacing the April 2021 version as standard terms and conditions of award. This revision applies to all NIH grants and cooperative agreements with budget periods beginning on or after October 1, 2021.

Access the NIHGPS in <u>HTML</u> or <u>PDF</u> formats, and take a look at the <u>summary of significant changes</u> for this revision. Prior versions of the NIHGPS can be found on our <u>NIH Grants Policy Statement</u> page.

For more details, see the full <u>Guide Notice</u>.

## **CFA for Short Term Core Projects**



Molecular Cell Biology Research Resources Core (**MCBRC**) and Bioinformatics, Biostatistics, and Computational Biology Core (**BBCC**) are calling for proposals to carry out short term projects in collaboration with the Cores. All LBRN researchers can submit a proposal for a defined project that can be carried out in collaboration with the Core facilities listed in the attached Call for Proposals (CFP) on a competitive basis. Each selected project will be allocated \$1,500 to fully or partially offset Core expenses. <u>Please contact your LBRN</u>

Steering Committee Member.

## 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 2021/2022.

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 <u>Dr. Nayong Kim</u>.

#### **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 GM103424-20.

• 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 P20GM103424-20.

• 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 (2P20GM103424-20) 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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