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## News, Opportunities and Deadlines for April 2021

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# 2021 8th Annual LBRN Conference on Computational Biology & Bioinformatics

We are pleased to invite you to the:  
**2021 8th Annual Virtual Conference on Computational Biology and Bioinformatics**

**April 15-17, 2021**

This year's conference is being held on April 15 - 17, 2021 Virtual. The Virtual hosting information will be provided with your registration information just before the meeting.

### Topics include :

- Cancer Informatics
- Cloud Computing
- Coronavirus Disease (COVID-19)
- Evolutionary Genomics and Phylogenetics
- Microbiome and Metagenomics
- Virology and Infectious Diseases



# **2021 8th Annual LBRN Conference on Computational Biology and Bioinformatics**

**April 15-17, 2021**

**Topics:**

- **Coronavirus Disease(COVID-19)**
- **Cancer Informatics**
- **Microbiome and Metagenomics**
- **Cloud Computing**
- **Evolutionary Genomics and Phylogenetics**
- **Virology and Infectious Diseases**

**Registration : <https://lbrn.lsu.edu/conference-on-biology-and-bioinformatics.html>**

**LSU** | Center for Computation  
& Technology



**Agenda :**

# Agenda

*for the*

## 8th Annual Louisiana Conference on Computational Biology and Bioinformatics

April 15-17, 2021

Virtual Meeting via Zoom

Thursday, April 15  
12:30 pm - 5:30 pm (CDT)

Friday, April 16  
12:30 pm - 5:30 pm (CDT)

Saturday, April 17  
9:00 am - 12:00 pm (CDT)

All Times given in Central Time Zone

### Speakers include :

- **Alexander Titus**, Google Cloud Strategy Leader @ Google // Emerging Technology for Public Purpose // AI/ML, Biotechnology, and Cloud
- **Ankit Malhotra**, Amazon Web Services (AWS) Business development for Biomedical Research
- **Catherine Lozupone**, University of Colorado Denver Associate Professor • Biomedical Bioinformatics and Personalized Medicine
- **Erin Chu**, Amazon Web Services (AWS) Life Sciences Lead, Open Data
- **Lauren Ancel Meyers**, University of Texas at Austin, Director, UT COVID-19 Modeling Consortium, Cooley Centennial Professor in Biology and Statistics
- **Matt Gieseke**, NIH/CIT STRIDES Initiative Cloud Instructional Development Lead at

## Covalent Solutions, LLC

- **Michelle Lacey**, Tulane University School of Public Health and Tropical Medicine, Associate Professor of Mathematics, Department Biostatistics
- **Moriah L. Szpara**, Center for Infectious Disease Dynamics, Huck Institutes of the Life Sciences, and Eberly College of Science, Pennsylvania State University
- **Ross Thompson**, Google Cloud Solutions Architect at Google
- **Sara Suliman**, Brigham and Women's Hospital, Division of Rheumatology, Immunity and Inflammation
- **Todd Reilly**, NIH/CIT STRIDES Initiative Chief Scientist, Percipient Consulting

## Invited Speakers

### 2021 8th Annual LBRN Conference on Computational Biology and Bioinformatics



**Moriah L. Szpara**  
PennState University  
Associate Professor of  
Biology and Biochemistry  
and Molecular Biology



**Lauren Ancel Meyers**  
Univ. of Texas at Austin  
Director, UT COVID-19  
Modeling Consortium,  
Cooley Centennial  
Professor in Biology and  
Statistics



**Catherine Lozupone**  
Univ. of Colorado Denver  
Associate Professor  
Biomedical Bioinformatics  
and Personalized Medicine



**Michelle Lacey**  
Tulane University  
Associate Professor of  
Mathematics



**Sara Suliman**  
Brigham and Women's  
Hospital, Division of  
Rheumatology, Immunity  
and Inflammation



**Todd Reilly**  
NIH/CIT STRIDES  
Initiative  
Chief Scientist,  
Percipient Consulting



**Matt Gieseke**  
NIH/CIT STRIDES Initiative  
Cloud Instructional  
Development Lead at  
Covalent Solutions, LLC



**Ross Thomson**  
Google Cloud  
Solutions Architect at  
Google



**Ankit Malhotra**  
Amazon Web Services  
(AWS)  
Biomedical Research  
and Life Science Lead



**Erin Chu**  
Amazon Web Services  
(AWS)  
Life Sciences Lead, Open  
Data



**Alexander Titus**  
Cloud Public Sector,  
Strategic Business  
Executive



**Lakshmi Kumar  
Matukumalli**  
NIH/NIGMS  
Program director in the  
Networks and  
Development Programs  
Branch

LSU | Covalent Computation & Technology

2021 8th Annual LBRN Conference on Computational Biology and Bioinformatics 

**2021 8th Annual LBRN Conference on Computational Biology and Bioinformatics**

**Moriah L. Szpara**  
Penn State University  
Associate Professor of Biology and Biochemistry and Molecular Biology

**Herpes simplex viruses - as unique and long-lived as their human hosts**

Herpesviruses are a widespread family of viruses. Unlike acute infections that are cleared in days or weeks, these chronic viruses are hidden within an infected individual for an entire lifetime. Herpes simplex virus (HSV) lies dormant in neurons, and reappears on the skin only during intermittent periods of reactivation. This viral lifestyle makes it a particularly challenging pathogen to study in humans. This talk will highlight how the HSV genome keeps secret codes revealed for different host and flexibility in HSV that we thought possible, and how these insights impact ongoing laboratory and clinical studies. We'll also explore how changes in human behavior are in turn re-shaping these viruses.

**2021 8th Annual LBRN Conference on Computational Biology and Bioinformatics**

**Lauren Ancell Myers**  
University of Texas at Austin  
Director, UT COVID-19 Modeling Consortium, Cooley Commercial Professor in Biology and Medicine

**Modeling to Mitigate COVID-19 in a Large US City**

The University of Texas COVID-19 Modeling Consortium has played a pivotal role in shaping COVID-19 modeling and policy decisions across the United States since March 2020. With a population over 2.2M, Austin is the fastest growing large city in the US. Our extensive engagement with Austin's unique Executive COVID-19 Task Force, which includes city leaders, public health officials, CEOs of all hospitals, public health agencies, and academic researchers, provided a unique paradigm for scenario-oriented modeling. I will describe how models shape the city's data-driven strategies for enacting and relaxing COVID measures, protecting vulnerable populations, and provisioning health care resources.

**2021 8th Annual LBRN Conference on Computational Biology and Bioinformatics**

**Catherine Lacey**  
University of Colorado Denver  
Associate Professor of Biostatistics and Personalized Medicine

**Systems analysis of gut microbiome influence on metabolic disease in HIV and high-risk populations**

For male health, characterized by metabolic diseases and disabilities, a higher risk in people living with HIV and the human immunodeficiency virus (HIV) has been observed. In particular, the incidence of metabolic diseases in HIV-positive individuals is approximately twice that of the general U.S. Metabolic disease is associated with an increased incidence of cardiovascular disease (CVD). Metabolic disease is also associated with an increased risk of death from CVD. The combination of metabolic disease and associated systemic inflammation has been described as "inflammaging". Inflammaging is a process where metabolic disease, which is often associated with an increased risk of death, can contribute to the development of metabolic disease. Our research group has used systems biology approaches to investigate the gut microbiome and its influence on metabolic disease. We have shown that altered gut microbiome composition and function are associated with metabolic disease. In this talk, we will discuss our findings regarding gut microbiome composition and function and its influence on metabolic disease. We will also discuss interventions that can be made while performing this analysis, including diet, exercise, and probiotics. These interventions have the potential to increase overall health and reduce the risk of metabolic disease.

**2021 8th Annual LBRN Conference on Computational Biology and Bioinformatics**

**Michelle Lacey**  
Tulane University  
Associate Professor of Mathematics

**p-Values: The Role of Statistics in Epigenetic Research**

A common objective in epigenetic analysis is the detection of differentially methylated regions (DMRs) between two groups. When using sequencing-based methods, this involves comparing two groups of samples that contain counts of methylated and unmethylated reads, and classical approaches such as logistic regression are typically employed to identify statistically significant differences. However, these algorithms largely ignore sources of both technical and biological bias and variance, and violate key statistical assumptions, potentially producing unreliable results. This talk will discuss ongoing efforts to develop improved statistical models for methylation sequencing data and will also highlight recent work with the FDA's Epigenomics Quality Control (EpGQC) Group to determine best practices for epigenetics research.

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**2021 8th Annual LBRN Conference on Computational Biology and Bioinformatics**

**Sara Suliman**  
University of Michigan Hospital, Division of Rheumatology, Immunity and Inflammation

**Integration of genetic and transcriptional profiles of innate cells to decipher mechanisms of TB susceptibility**

Most people infected with Mycobacterium tuberculosis (MTB) never develop TB disease, suggesting host-specific risk factors for disease progression. Transcriptional profiling of samples from TB patients and MTB-exposed controls identified a set of genes that were significantly upregulated in TB patients, but not in controls. We sought to determine how variation with transcriptional profiles to decipher mechanisms of TB pathogenesis. We sought to determine host genetic risk of progression to TB. From a prospective Prospective cohort of household contacts of TB patients, we re-recruited fully TB-naïve individuals and performed whole genome sequencing of DNA isolated from peripheral blood mononuclear cell samples. We generated monocyte-derived dendritic cells and macrophages by differentiating sorted peripheral blood monocytes with GM-CSF and IL-4, respectively, and analyzed gene expression using quantitative RT-PCR (qRT-PCR) analysis. In this study, we identified 103 variants associated with a TB outcome (OR > 1.5) and 76 of which were novel variants. In this study, we also found that the gene encoding for the enzyme Acyl-CoA acyltransferase 1 (ACAT1) is associated with TB outcome. The ACAT1 analysis highlights underappreciated candidate TB susceptibility pathways, which are now being functionally validated using CRISPR-based gene editing.

**2021 8th Annual LBRN Conference on Computational Biology and Bioinformatics**

**Todd Reilly**  
NIH/CIT STRIDES Initiative  
Chief Scientist, Perpetual Consulting

**NIH/CIT STRIDES - Overview**

The STRIDES Initiative is a mechanism created by the NIH in an effort to support the transition to or continuation of NIH-funded, cloud-based biomedical research - this is done through access to 1) favorable pricing on cloud services, 2) an array of learning opportunities, 3) direct support from the NIH, and 4) direct engagement from Cloud Service Providers (CSP). In this presentation, we will discuss the STRIDES mission and the NIH-funded investigators can get involved.

**2021 8th Annual LBRN Conference on Computational Biology and Bioinformatics**

**Matthew Gieseke**  
NIH/CIT STRIDES Initiative  
April 16-19, 2021  
Cloud Infrastructure Development at Covariant Initiatives, LLC

**NIH/CIT STRIDES - Training Spotlight**

Matt will detail the STRIDES Training Program and the training opportunities available to NIH-funded researchers as they currently are. Matt will also provide instruction on engaging with the STRIDES Training Program.

**2021 8th Annual LBRN Conference on Computational Biology and Bioinformatics**

**Ross Thomson**  
Google Cloud  
Software Architect at Google

**Multi-Cloud for Science Productivity**

Scientific computing is an ideal candidate for cloud computing. Most institutions have some presence in the cloud. Given the variability of cloud providers (CSP) and the availability of on-premise, private clouds, it is unlikely that a single CSP will meet all the needs of your institution. I present some ideas enable a multi-cloud future.

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**2021 8th Annual LBRN Conference on Computational Biology and Bioinformatics**

**Ankit Melhotra**  
Amazon Web Services (AWS)  
Business development for Biomedical Research

**Transforming Biomedical Research with AWS**

Ankit Melhotra is a biomedical research and life sciences lead on the Amazon Web Services (AWS) Research team. At AWS, Ankit helps lower the barrier to biomedical researchers to build solutions and do their research using cloud computing. Before joining AWS, Ankit was a Staff Scientist at the Jackson Laboratory for Genomic Medicine where he led a group developing algorithms for analysis of next generation sequencing data. Ankit has a PhD in Biochemistry, molecular biology, and genetics and a Masters in Computer science from the University of Virginia, he has over 10 years of experience as a NIH and DoD funded computational genomic scientist. He has authored more than 20 publications in the field with over 37000 citations.

**2021 8th Annual LBRN Conference on Computational Biology and Bioinformatics**

**Erin Chu**  
Cloud Infrastructure Services (CIS)  
Life Sciences Lead, Open Data

**Powering the Open Science Flywheel**

Herpesviruses are a widespread family of viruses. Unlike acute infections that are cleared in days or weeks, these chronic viruses are hidden within an infected individual for an entire lifetime. Herpes simplex virus (HSV) lies dormant in neurons, and reappears on the skin only during intermittent periods of reactivation. This viral lifestyle makes it a particularly challenging pathogen to study in humans. This talk will highlight how the HSV genome keeps secret codes revealed for different host and flexibility in HSV that we thought possible, and how these insights impact ongoing laboratory and clinical studies. We'll also explore how changes in human behavior are in turn re-shaping these viruses.

**2021 8th Annual LBRN Conference on Computational Biology and Bioinformatics**

**Alexander Titus**  
Cloud Infrastructure Services (CIS)  
Strategic Business Executive

**Life Sciences with Google Cloud**

Alexander Titus is a strategic business executive at Google Cloud where he leads healthcare and life sciences strategy for the global public sector, as well as AI/ML applications for public sector missions. Prior to Google, Titus was the inaugural Assistant Director for Biotechnology within the Office of the Director for Defense Research and Engineering (DDR&E), where he was responsible for developing the Defense Readiness and Readiness Assessment Information System. His career has served between the private sector, public sector, and academia. Previously, he has served as an AI/ML Research Fellow at Google, as well as in the R&D group of a strategic investment firm in N-Q-Tel, and as an Adjunct Assistant Professor of Biostatistics at Dartmouth University and Biotechnology from Dartmouth College, as well as a BS and BA in Biochemistry and Biology, respectively, from the University of Puget Sound.

**2021 8th Annual LBRN Conference on Computational Biology and Bioinformatics**

**Lakshmi Kumar Matukumalli**  
National Institute of Standards and Technology (NIST)  
Program director in the Networks and Development Programs Branch

**Lakshmi Kumar Matukumalli, Ph.D., is a program director in the Networks and Development Programs Branch at the National Institute of Standards and Technology (NIST). He is a member of the Interagency Network of Biomedical Research Units (INBIR) Technical Working Group for INBIR. He is also a member of the INBIR Executive Committee and the INBIR Accelerator Hub for INBIR States, and the Centers of Biomedical Research Excellence (CBRE).**

**Before joining NIGMS, Matukumalli served as a program director at the National Institute of Food and Agriculture, USA, where he managed extramural grant programs in the areas of genomics, plant breeding, and biopesticides. He also worked as a research scientist in the area of molecular and animal genomics and bioinformatics research at the USDA Agricultural Research Service, while serving as a research faculty member at George Mason University in Virginia. Matukumalli earned his Ph.D. in Plant Breeding and Genetics from the Indian Institute of Technology, New Delhi, India. He received his Ph.D. in biochemical engineering (Indian Institute of Technology, New Delhi, India). He received his Ph.D. in bioinformatics and computational biology from George Mason University.**

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## Conference Schedule (all times are CDT):

- **April 15th, Thursday** from 12:30pm to 5:30pm CDT / **Poster session I**
- **April 16th, Friday** from 12:30pm to 5:30pm CDT / **Poster session II**
- **April 17th, Saturday** from 9:00am to 12:00pm CDT



## Success Stories of LBRN

- **LBRN PI Awarded R01 from NIH**

The National Institutes of Health awarded \$1.65 million to fund cancer research being done by **Dr. Seetharama Jois (LBRN PI)**, a professor of Medicinal Chemistry at the School of Basic Pharmaceutical and Toxicological Sciences at the University of Louisiana Monroe College of Pharmacy. The National Cancer Institute of the NIH has issued a notice of award for the project titled "**Molecular mechanism of EGFRs protein-protein interaction inhibition by a grafted peptide in NSCLC**".

The research will be carried out in collaboration with Yong-Yu Liu, M.D., Ph.D., a cancer pharmacologist at the ULM College of Pharmacy, and a lung-cancer researcher from the Mayo Clinic in Minnesota.



*Photo from Siddharth Gaulee/ULM Photo Services*

Director of the Office of Sponsored Programs and Research of the University of Louisiana Monroe, LaWanna Gilbert-Bell, said, "This is the second R01 awarded by NIH to the University since 2016. This is the highest award possible from the NIH. It reiterates and highlights the profound research being conducted by our distinguished faculty."

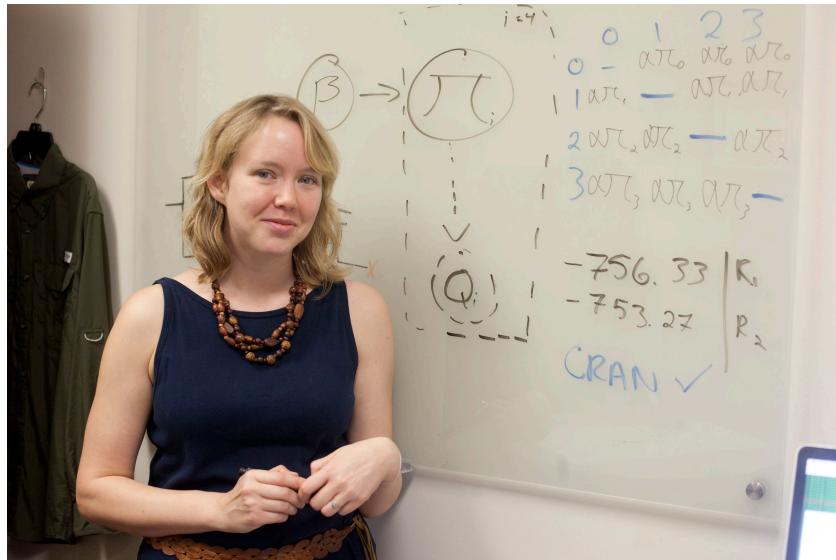
[... to see more details](#)

- **Southeastern Biologist Receives NSF grant**

Southeastern Louisiana University Assistant Professor of Biological Sciences **Dr. April**

**Wright (LBRN PI)** has been awarded a five-year grant of \$1,125,000 by the National Science Foundation to integrate information from the fossil record with data collected from living species to infer phylogenetic relationships.

The grant was one of only two CAREER grants awarded in the state. The National Science Foundation CAREER awards are in support of junior faculty who exemplify the role of teacher-scholars through research and education, and the integration of these endeavors in the context of their organizations' missions.



The project will focus on the use of posterior predictive methods for assessing which models are most appropriate for a particular dataset. The work will provide practical guidance and research software tools for researchers to perform more complex model assessment in systemic biology, Wright said.

"I will be working with statistical methods to integrate fossil data with extant molecular data to estimate dated phylogenetic trees," said Wright. "Phylogenetic trees are one of our key ways of understanding the evolution of organisms, form, and function. And fossils are often our only direct source of information about past organisms. What we'll be doing in the lab is evaluating different mathematical models for estimating phylogenetic trees from joint fossil and molecular data."

[... to see more details](#)

- **LSU Heath Researcher receives \$750k NASA grant**

Project: Develop a novel single-cell biodosimetry for brain genomic instability and

neurodegeneration to predict clinical health outcomes in human spaceflight crews.

The research team includes project investigator, Xiaohong Lu, LSUHSC-S, co-investigators Dr. Lynn Harrison, Professor of Molecular and Cellular Physiology at LSU Health Shreveport; Dr. Jeffery Chancellor, Assistant Professor at LSU Baton Rouge; and **Dr. Urska Cvek (LBRN PI)**, Professor at LSU Shreveport.

As NASA plans future exploration missions to the Lunar and Martian surfaces, realistic ground-based analog studies and more predictive biodosimetry are needed to assess whether the space radiation poses a detrimental risk of brain genomic instability and neurodegeneration that leads to late-onset behavioral deterioration for spaceflight crews. Implementing a recently developed method of recreating the intravehicular (IVA) radiation environment expected on spaceflight vehicles and habitats and a novel genetic sensor, this proposal addresses Research Topic 3 – Animal Biology Studies in support of Human Space Exploration and Sub-topic AB1-A: Behavior and underlying neural function in Appendix D: Solicitation of Proposals for Flight and Ground Space Biology Research. We propose to determine how the space environment and sex affect brain genomic stability and consequent age-related brain structure and function changes. Our studies will support Human Space Exploration, by contributing the first biodosimetry for quantifying brain DNA instability and neurodegenerative changes to predict clinical health outcomes in human spaceflight crews and the utility of available ground-based analogs to realize basic mechanisms that can lead to the development of biologic counter-measures.

[... to see more details](#)

- **BioMorph Lab at Louisiana Tech receives two USAF contracts**

Louisiana Tech's BioMorph Lab, directed by professor **Dr. David Mills (LBRN PI)**, recently received a pair of research contracts from the U.S. Air Force that call for the development of an antimicrobial filament for 3D medical device printing and a multifunctional bandage.

The antimicrobial filament is a bioplastic that contains agents to kill bacteria, fungi, and other elements that cause infection. The bandage will be multifunctional because it can be used in combat, at a military hospital, or for civilians. Components of the bandage will be printed.



*Dr. David Mills & BioMorph Lab members*

This is the first time the BioMorph Lab has received a USAF grant, but the Lab has had Department of Defense funding in the past. The contract is classified as Phase I, which is for 90 days. Mills' major goal is to locate a military medical partner for his Phase II proposal. Specifically, the research contracts are a collaboration between the USAF, Tech's BioMorph lab, and Mills' two startups, organicNANA and Nano Medicine.

[... to see more details](#)

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## Notice of Special Interest (NOSI) : NIH

- **Administrative Supplements for Research on Women's Health in the IDeA States**

Notice Number: NOT-GM-21-018

First Available Due Date: April 19, 2021

The Office of Research on Women's Health ([ORWH](#)) and the National Institute of General Medical Sciences ([NIGMS](#)), along with Institutes and Centers (ICs) of NIH participating in this Notice, announce the availability of administrative supplements to IDeA awards to expand research and research capacity in the IDeA states to address important issues of women's health across the lifespan. The proposed research must address at least one of the strategic goals of the 2019-2023 [Trans-NIH Strategic Plan for Women's Health Research](#) "Advancing Science for the Health of Women." Research on maternal and infant morbidity and mortality is of particular interest.

[... Continue reading to learn more](#)

## • Availability of Administrative Supplements to INBRE Awards to Fund Research Collaborations

Notice Number: NOT-GM-21-016

First Available Due Date: April 30, 2021

The National Institute of General Medical Sciences (NIGMS) announces the availability of funds for Administrative Supplements to NIGMS-funded Institutional Development Award (IDeA) Networks of Biomedical Research Excellence (INBRE) (P20) awards. These funds are intended for existing INBREs to develop collaborations between investigators at the INBRE partner institutions, including primarily undergraduate institutions (PUIs), community colleges (CCs) and Tribally Controlled Colleges and Universities (TCCUs), and investigators in research areas that are currently supported by one of the following programs:

- Centers of Biomedical Research Excellence (COBRE)
- IDeA-Infrastructure for Clinical and Translational Research (IDeA-CTR)
- IDeA co-funded R01s and R15s in their first or second year of awards
- IDeA States Pediatric Clinical Trials Network (ISPCTN) awards
- National Center for Advancing Translational Sciences (NCATS) Clinical and Translational Science Awards (CTSA) to institutions located in IDeA states

The goal of this supplement program is to encourage collaborations among investigators in IDeA states while providing students a broad continuum of research opportunities. Although in-state collaboration is encouraged, the collaborative projects can also be proposed between programs across the IDeA states.

The collaborative project should be an expansion of a project currently supported by a COBRE, IDeA-CTR, IDeA co-funded R01s and R15s in their first or second year of awards, ISPCTN or CTSA award. The project must not constitute a change in scope of the parent awards.

For these supplements, the INBRE must be active when the supplement application is submitted (e.g. within the originally reviewed and approved project period), regardless of the time remaining on the current project. This applies also to COBRE, IDeA-CTR, IDeA co-funded R01s and R15s in their first or second year of awards, ISPCTN or CTSA programs that will collaborate with INBREs.

[... Continue reading to learn more](#)

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# NIH Announces Format Changes

The National Institutes of Health (NIH) have announced upcoming changes to the Biographical Sketch and Other Support format pages for proposals due on or after May 25, 2021.

For the Biographical Sketch format page, Section B: ‘Positions and Honors’ has been renamed ‘Positions, Scientific Appointments, and Honors.’ For the Fellowship Biosketch, Section D has been updated to remove ‘Research Support.’ Meanwhile, for the non-Fellowship Biosketch, Section D has been removed. As applicable, all applicants may include details on ongoing and completed research projects from the past three years that they want to draw attention to within the personal statement, Section A.

The Other Support format page has been re-organized to separate funded projects from in-kind contributions. A signature block has been added, for Program Director/Principal Investigator or Other Senior/Key Personnel to certify the accuracy of the information submitted. For Other Support submissions that include foreign activities and resources, recipients are required to submit copies of contracts, grants, or any other agreement specific to senior/key personnel foreign appointments and/or employment with a foreign institution as supporting documentation.

Format Page	Changes
Biographical Sketch Format Page	<ul style="list-style-type: none"><li>• Section B ‘Positions and Honors’ has been renamed ‘Positions, Scientific Appointments, and Honors’.</li><li>• For the non-Fellowship Biosketch, Section D has been removed.</li><li>• For the Fellowship Biosketch, Section D has been updated to remove ‘Research Support.’</li><li>• As applicable, all applicants may include details on ongoing and completed research projects from the past three years that they want to draw attention to within the personal statement, Section A.</li></ul>

## Other Support Format Page

- The format page has been re-organized to separate funded projects from in-kind contributions.
- Signature block added, for Program Director/Principal Investigator or Other Senior/Key Personnel to certify the accuracy of the information submitted. Each PD/PI or senior/key personnel must electronically sign their respective Other Support form as a PDF prior to submission.

[... Continue reading to learn more](#)

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## Louisiana Coronavirus (COVID-19) Information

Information from CDC: <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/vaccine-benefits.html>

"[COVID-19 vaccines](#)" are effective at protecting you from getting sick. Based on what we know about COVID-19 vaccines, people who have been fully vaccinated can start to do some things that they had stopped doing because of the pandemic.

We're still learning how vaccines will affect the spread of COVID-19. After you've been fully vaccinated against COVID-19, you should keep taking [precautions](#) in public places like **wearing a mask, staying 6 feet apart from others, and avoiding crowds and poorly ventilated spaces** until we know more.

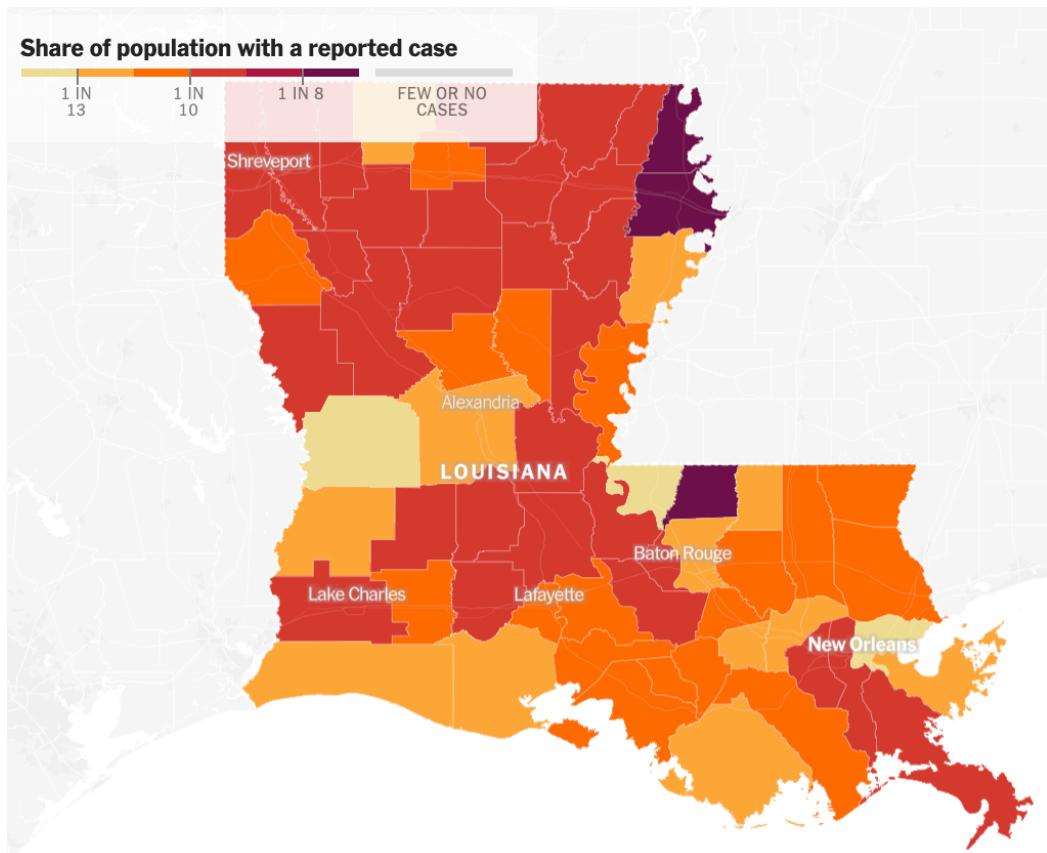


People are considered fully vaccinated:

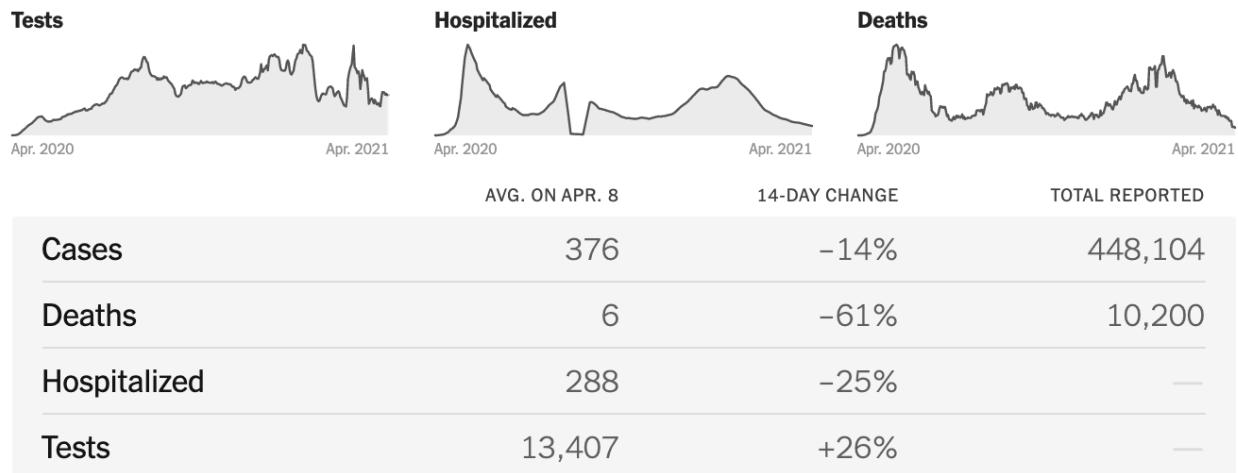
- 2 weeks after their second dose in a 2-dose series, like the Pfizer or Moderna vaccines, or
- 2 weeks after a single-dose vaccine, like Johnson & Johnson's Janssen vaccine

If it has been less than 2 weeks since your shot, or if you still need to get your second dose, you are NOT fully protected. Keep taking all prevention steps until you are fully vaccinated."

## Cases per capita in Louisiana



## Tracking COVID cases in Louisiana



The following information was provided by [The New York Times Interactive Coronavirus website](#).

We want to remind everyone to continue practicing safety with regards to prevention of spreading and contracting the COVID-19 virus.

We remind everyone of the information provided here on our website: [LBRN COVID-19](#).

## NIH Extramural Nexus (NIH/OD)



- The NIH SABV Policy: E-learning Opportunities and a Symposium Provide Guidance and Inspiration**

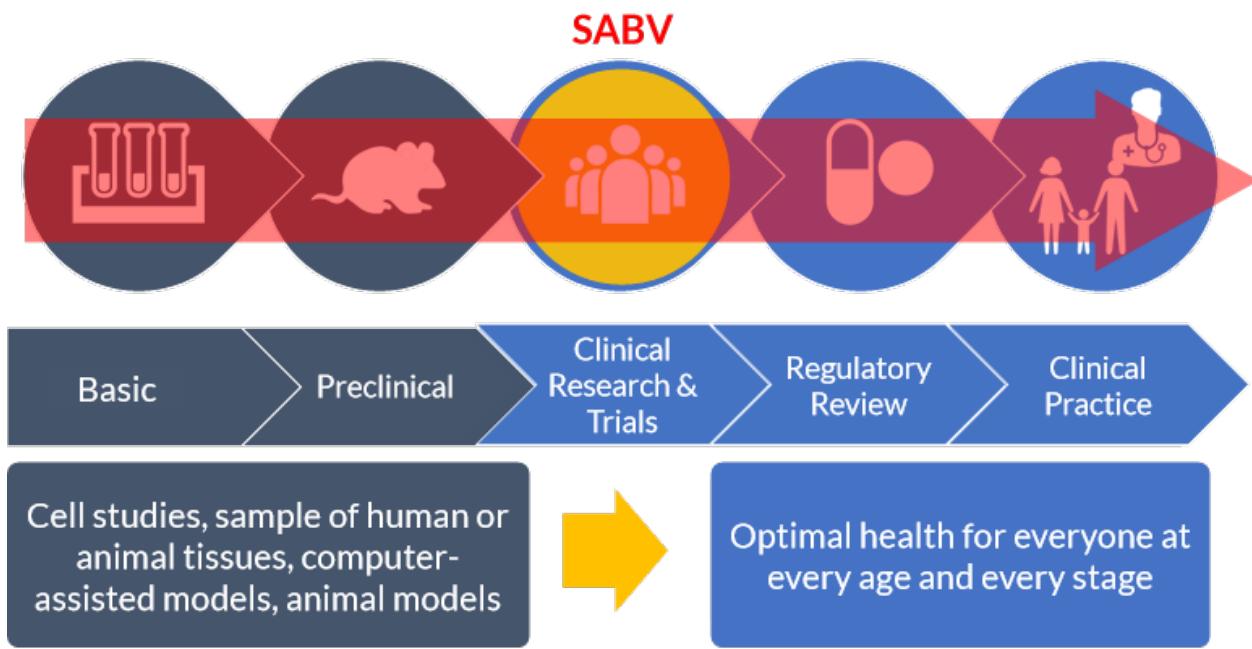
Interest in sex and gender in research—and resources to help investigators—is growing. In the 5 years since NIH enacted its pioneering [Policy on Sex as a Biological Variable \(SABV\)](#) (see our [progress report here](#)), there has been a lot of activity, including increased attention on sex differences and influences and many questions and requests for assistance. I'm pleased to announce the NIH Office of Research on Women's Health (ORWH) has issued two new courses, [Sex as a Biological Variable: A Primer](#) and [Bench to Bedside: Integrating Sex and Gender](#)

[to Improve Human Health](#), to our [suite of free e-learning offerings](#).

Before discussing these e-learning opportunities, I would like to invite you to a related symposium where we will explore current gaps or barriers within different sectors of the biomedical research enterprise, introduce areas of scientific opportunity that the study of sex and gender presents, and underscore its impact on science and public health. Our [Fifth Annual Vivian Pinn Symposium: Integrating Sex and Gender into Biomedical Research as a Path for Better Science and Innovation](#) will be held virtually on May 11-14, 2021. Registration information can be found [here](#). I look forward to seeing you at the symposium.

To enhance transparency, researchers should consider the potential influence of sex on the disease, condition, or phenomenon being studied, whether there is already a proven influence or not. Investigators should design research that studies both sexes whenever possible, collecting data in a way that allows for disaggregation of data by sex. Even when a study isn't sufficiently powered to detect a sex-based difference in analysis, data can be reported separately for each sex, to facilitate meta-analyses and inform future studies.

## SABV Across the Biomedical Research Continuum



[... Continue reading to learn more](#)

- The Impact of the COVID-19 Pandemic on the

# Extramural Scientific Workforce – Outcomes from an NIH-Led Survey

One year later, the COVID-19 pandemic has drastically affected our individual lives and communities. We have observed disproportionate effects observed in underserved populations, leaving them vulnerable to higher infection and mortality risk. These effects have led to an increased reliance on biomedical researchers and clinicians to offer public health solutions to this crisis. Within the research workforce, early-career scientists may bear the brunt of pandemic-related mitigation measures at institutions and limitations due to inability to be in the physical workspace.

At NIH, we recognized the many ways the COVID-19 pandemic could adversely affect the biomedical workforce, particularly members of underrepresented groups and vulnerable populations. In October 2020, NIH [fielded two online surveys](#) to objectively document COVID-19's impact on extramural research. One survey assessed the perspective of individual research administration leaders at extramural institutions, and the other survey assessed the perspective of the researchers themselves. In this post, we offer a high-level overview of general trends noted within both surveys. This [infographic here](#) also describes the outcomes from the surveys.

## Institutional High-Level Findings

The heat map below presents how research leaders across various institution types perceived the impact of COVID-19 on their **financial and research functions**, as well as their efforts to **mitigate the pandemic's impact**.

Proportion Reporting ...

Sections:	Section #8		Section 9		Section #10		
KEY QUESTIONS	Research Functions will be Jeopardized	Moderate/ Major Impacts in Research Productivity	Very/ Extremely Concerned with Institution's Financial Status	Substantial Impact from Loss in Endowment	Testing Available to Anyone	Implementing COVID-19 Monitoring Measures	Providing/ Expanding Facilities for Childcare
All Respondents	41%	83%	68%	15%	44%	83%	21%
Doctorate-granting University with a Professional School (53%)	49%	85%	77%	19%	51%	88%	26%
Doctorate-granting University without a Professional School (17%)	40%	82%	74%	13%	58%	90%	-
Independent Research Institution (19%)	29%	83%	33%	-	31%	81%	15%
Special Focus/ Other Institution (7%)	-	87%	-	-	-	40%	50%
Minority-Serving Institution (24%)	51%	74%	77%	17%	43%	87%	11%
Non-Minority Serving Institution (76%)	44%	85%	76%	15%	55%	88%	23%

\*Note: For certain dependent variables, higher percentages correspond to a more negative impact; whereas for other dependent variables, higher percentages correspond to a less negative impact.

MSI = Minority Serving Institution, NMSSI = Non-Minority Serving Institution

All percentages are out of valid totals, with missing values removed

More Negatively Impacted than Overall Average

Less Negatively Impacted than Overall Average

On par with Overall Average

[... Continue reading to learn more](#)

- 2021 HHS Small Business Program Conference: Diverse

# Perspectives SEEDing Impactful Innovations

As I noted in my March 1 Open Mike post [NIH Stands Against Structural Racism in Biomedical Research](#), the NIH seeks to do its part to end structural racism and to ensure greater diversity in all aspects of the biomedical workforce. One longstanding area of concern has been our small business programs, which account for over \$1 Billion in annual investments. Unfortunately, entrepreneur scientists from diverse backgrounds remain under-represented in the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs.

We are working to identify ways to lower barriers for all new applicants to the NIH SBIR and STTR programs. Conferences have the ability to bring people together expressly to share perspectives and exchange expertise, including the lessons of personal experience. That is why I am pleased to announce as a first step in addressing these concerns we will be sponsoring the **2021 HHS Small Business Program Conference** with the theme "[Diverse Perspectives SEEDing Impactful Innovations](#)." The meeting will take place virtually April 26-30 and registration is [free](#).

The conference will be held under the auspices of SEED, the new NIH office focused on [Small business Education and Entrepreneurial Development](#). We plan an introduction to the plethora of resources and biomedical product development tools that SEED has to offer to the small business community, with particular focus on the wider series of initiatives at NIH aimed at [diversifying the biomedical workforce](#).

Other informative session topics will include:

- Diversity and Bias-Perceptions and Reality
- Secrets to a Successful Submission
- Persistence is Key: Resources for Resubmission
- Entrepreneurs in Action: Stories of Success
- Beyond Research: Building a Business

The last two days of the meeting will provide opportunities for you to schedule individual meetings with federal program staff who can provide personalized guidance on how best to move your small business grant application, SBIR or STTR, forward and point you toward other resources that may be available.

We are committed to holding ourselves to the same standards that we published in guide notice ([NOT-OD-21-053](#)) for conference grant applicants and recipients, which describes plans to [enhance diversity](#) by increasing the participation of individuals from diverse backgrounds in all aspects of the conference. We hope you will join us for this important and informative event.

Questions? For further information reach out to [seedinfo@nih.gov](mailto:seedinfo@nih.gov), visit the [conference](#)

[website](#), and stay current by following #HHSsmallbizconf across social media platforms.

- Reminder: NIH Will Continue to Accept Preliminary Data as Post-Submission Material Through January 2022 Council**

In recognition of the fact that COVID-19 may still be adversely affecting the ability of applicants to generate preliminary data, NIH will continue to accept a one-page update with preliminary data as post-submission materials for applications submitted for the January 2022 Council (beginning with applications submitted for the May 25, 2021 due date for Fall 2021 review meetings), ONLY if the Funding Opportunity Announcement (FOA) used for submission allowed preliminary data in the application ([NOT-OD-21-095](#)).

The deadline for [submitting all post-submission materials](#), including preliminary data, will be 30 days before the study section meeting or as stipulated 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.

For a visualization of the peer review process and timelines during COVID-19, see this [infographic](#).

- Webinar Available on Progress Towards Reducing Administrative Burden While Maintaining Animal Welfare and Scientific Integrity**

The NIH's Office of Laboratory Animal Welfare (OLAW), along with their colleagues from the U.S. Department of Agriculture (USDA) and Food and Drug Administration (FDA), recently [presented a webinar](#) discussing progress towards implementing the [21st Century Cures Act](#). The new webinar focuses on how the three agencies recommend reducing administrative burden on investigators while maintaining the integrity and credibility of research findings and the protection of research animals. The actions discussed follow the release of their [final report](#) in 2019 (see also this [NIH Open Mike blog](#)). Topics of note for Assured institutions conducting research involving animals include:

- Updates to guidance and policies, such as [harmonizing](#) the reporting period of the Annual Reports to OLAW and USDA
- Requests for Information regarding [encouraging](#) the use of sections of the AAALAC International Program Description in the Animal Welfare Assurance, [clarifying institutional](#)

responsibilities for grant to protocol congruence review, and the flexibilities for conducting semiannual inspections

- Requests for Information under development related to expanded use of designated member review, exemptions from IACUC review, non-compliance reporting requirements, and clarifying requirements for departing from the [Guide for the Care and Use of Laboratory Animals](#)

## • **Continued Extension of Policy Flexibilities for Basic Experimental Studies Involving Humans (BESH)**

NIH has [extended flexibilities for registration and results reporting](#) for studies submitted to BESH funding opportunities. This policy flexibility, originally announced in [NOT-OD-18-212](#) and [NOT-OD-19-126](#), is now extended through September 24, 2023.

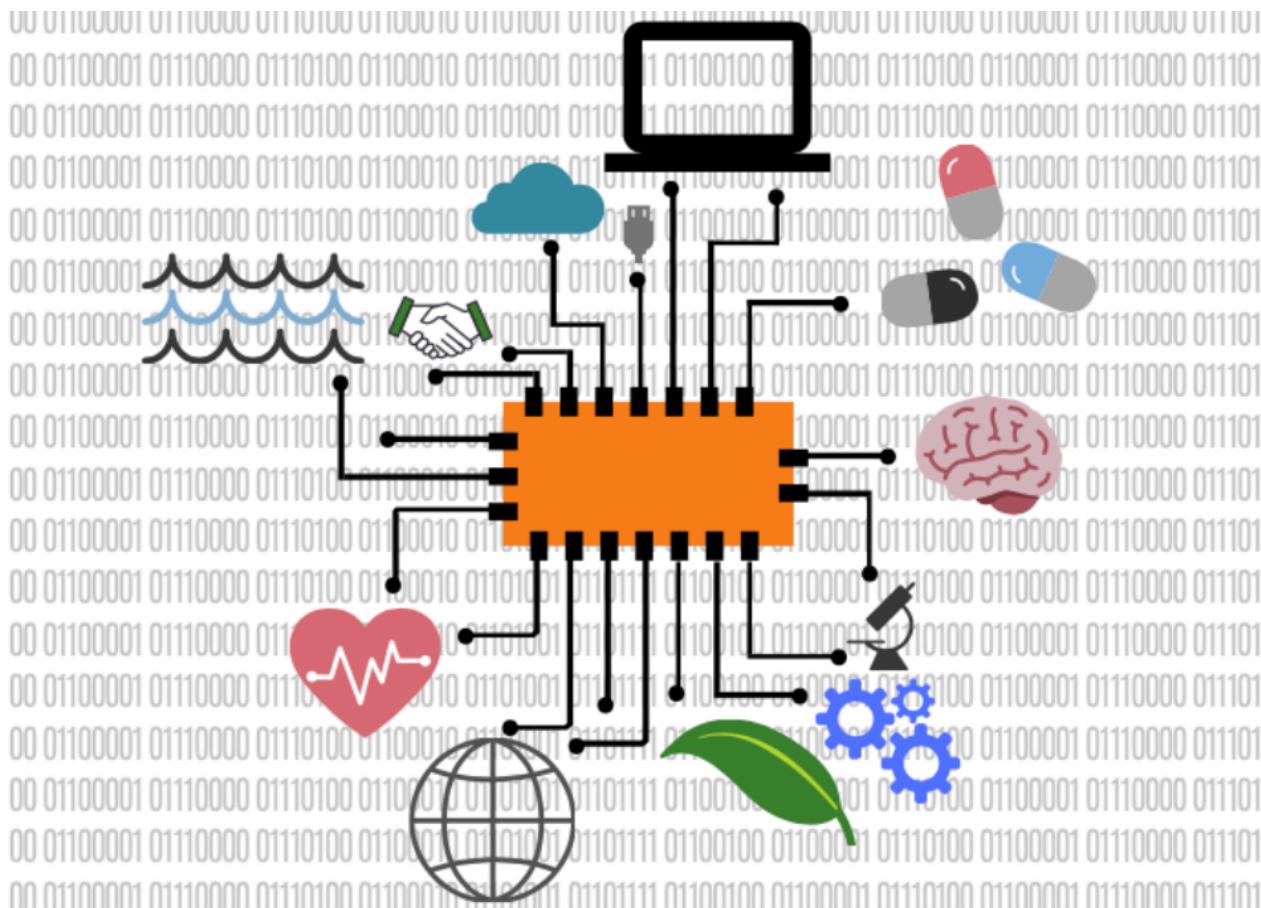
While BESH investigators are strongly encouraged to register their studies and report summary results to ClinicalTrials.gov, NIH is continuing to offer the flexibility for investigators to register and report results on alternative publicly available platforms at this time. It is important to note that this flexibility only applies to studies submitted through funding opportunities that are designated as “Basic Experimental Studies with Humans” in the title.

Refer to [NOT-OD-21-088](#) for more details.

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## LBRN Bioinformatics Needs Survey

This survey is conducted by the **Division of Biotechnology & Molecular Medicine (BioMMED)** of the **LSU School of Veterinary Medicine (SVM)**. The Division operates the core facility **GeneLab** that currently conducts illumina-based Next Gen Sequencing, Single-Cell Gene Expression (10X Genomics) and the **Protein Laboratory** that provides protein production, and purification, and antibody production and characterization. These Core Laboratories are supported by SVM, the Louisiana Biomedical Research Network (LBRN) and the Center for Lung Biology and Disease (CLBD). Current Bioinformatics support is provided through arrangements with **Pine Biotech Inc** through GeneLab. The Pine Biotech proprietary pipelines are available through GeneLab as fee-for-service for a specified time interval. The Illumina BaseSpace Sequence Hub is expected to be available in February, 2021 for all GeneLab clients.



Please fill out and also disseminate to appropriate researchers who are requiring bioinformatics services

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## 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. [Please contact your LBRN 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 2020/2021.

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](#).

## 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 GM103424-18 and 3 P20 GM103424-15S1.

- 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 P20GM12345.*

- 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 (2P20GM103424-19) 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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