News, Opportunities and Deadlines for March 2021

2021 8th Annual LBRN Conference on Computational Biology & Bioinformatics

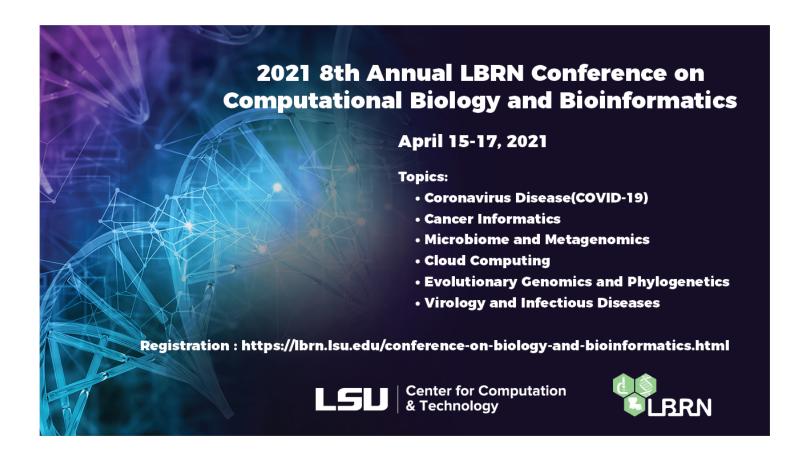
We are pleased to invite you to the:

2021 8th Annual Virtual Conference on Computational Biology and Bioinformatics

April 15-17, 2021

Topics include:

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



Speakers include :

- Alexander Titus, Google Cloud Strategy Leader @ Google // Emerging Technology for Public Purpose // Al/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
- Ross Thompson, Google Cloud Solutions Architect at Google
- Todd Reilly, NIH/CIT STRIDES Initiative Chief Scientist, Percipient Consulting



Conference Schedule (all times are CDT):

- April 15th, Thursday from 12:30pm to 5:30pm CDT
- April 16th, Friday from 12:30pm to 5:30pm CDT
- April 17th, Saturday from 9:00am to 12:00pm CDT



2021 LBRN 19th Annual Meeting Awards





2021 LBRN 19th Annual Meeting Awards are made for poster presentations for summer program participants in the graduate and undergraduate categories and one graduate student and one full project PI presenter is awarded for their oral presentations.

Recordings of the entire meeting and presentations are available on the media page of annual meeting: <u>LBRN 2021 Annual Meeting Page</u>.

LBRN 19th Annual Meeting Poster and Presentation Award Winners

Graduate poster award winners: (tied)

- #37 Achyut Dahal ULM "Conformationally Constrained Multicyclic Grafted Peptidomimetic as an Immunomodulator in Rheumatoid Arthritis"
- #25 Tithi Roy ULM "Data-Driven Evaluation of New Synthetic Fisetin Analogs Identify Kinase Inhibitors with Anti-Skin Cancer Activities"
- #40 Jafrin Jobayer Sonju ULM "Novel pH-Sensitive Liposome Formulation of Peptidomimetic-Doxorubicin Conjugate for Enhanced, Site Specific and Targeted Delivery of Anticancer Conjugate on HER2 Positive Lung and Breast Cancer"

Undergraduate poster award winners:

- #45 Derrick Mullins XULA 1st Place "Simulating Double Minute Chromosomes using Java"
- #27 Remmington Bishop LSUS 2nd Place <u>"Computational-Aided Drug Discovery of Anti-Viral Therapeutics for COVID-19"</u>

 #23 Emily Meaney LATECH – 3rd Place <u>"The Influence of MED12 Knockdown on</u> Adipogenesis"

Oral presentation award winners:

- Graduate talks winner Shilpa Thota SUBR "Pentachlorophenol mediated regulation of cannabinoid receptor-mediated signaling (in vitro)"
- Full project talks winner Kun Zhang XULA "Detecting Race-Relevant Molecular Biomarkers with Clinical Utilities using Multi-omics Data across Tumor Types"

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

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

- Section B 'Positions and Honors' has been renamed 'Positions, Scientific Appointments, and Honors'.
- For the non-Fellowship Biosketch,
 Section D. has been removed.
- For the Fellowship Biosketch, Section
 D has been updated to remove
 'Research Support.'
- 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 format page has been reorganized to separate funded projects from in-kind contributions.
- Signature block added, for Program

Biographical Sketch Format Page

Other Support Format Page

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

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 <u>precautions</u> in public places like **wearing a mask**, **staying 6 feet apart from others**, and **avoiding crowds** and **poorly ventilated spaces** until we know more.



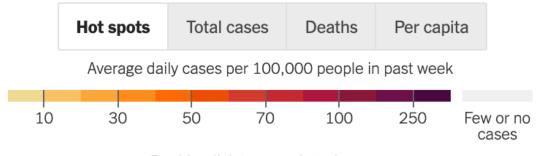
People are considered fully vaccinated:

• 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

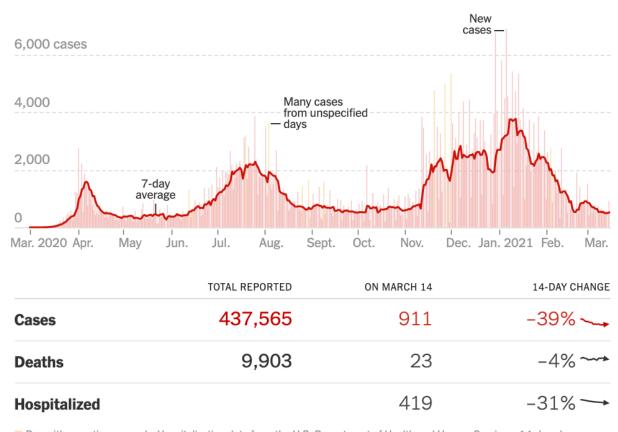
If it has been less than 2 weeks since your shot, or if you still need to get your second dose, you are NOT fully protected. Keep taking all <u>prevention steps</u> until you are fully vaccinated."

Average daily cases per 100,000 in Louisiana



Double-click to zoom into the map. Shreveport Monroe Alexandria Baton Rouge Lake Charles Lafayette New Orleans

Daily reported new cases



Day with reporting anomaly. Hospitalization data from the U.S. Department of Health and Human Services; 14-day change trends use 7-day averages.

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: <u>LBRN COVID-19</u>.

LSU HPC Training: Version Control with Git



HPC Training: Version Control with Git

The schedule for the Spring 2021 HPC Training is available at http://www.hpc.lsu.edu/training/tutorials.php.

Our next HPC training will be held on Wednesday, March 24 at 9:00 AM. Due to concern about the COVID-19 pandemic, 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 24, 2021: Version Control with Git

Version control system is used for tracking changes in computer files and coordinating work on those files among multiple people. It is primarily used for source code management in software development and also used to keep track of changes in any set of files. This tutorial gives an introduction to the Git version control software and will cover the following topics:

- * Basic Git usage: create, manage and track changes in git repository
- * Working with Git branch
- * Remote repository

Prerequisites:

A laptop/desktop with Git installed, or LONI or LSU HPC account to access the Git installed on cluster.

Please visit http://www.hpc.lsu.edu/training/tutorials.php for more details and register using the link provided.

The Impact of COVID-19 on the Careers of Women in Academic STEMM

Investigating the Potential Impact of COVID-19 on the Careers of Women in Academic Science, Engineering, and Medicine



On March 31, from 1 to 4 pm EST, the National Academies of Sciences, Engineering, and Medicine will host an event designed to highlight, discuss, explore, and expand our understanding of how the COVID-19 pandemic has affected the professional and personal lives of women throughout the research workforce. Building of the National Academies consensus study report, *The Impacts of COVID-19 on the Careers of Women in Academic Science, Engineering, and Medicine* (2021).

NIH Extramural Nexus (NIH/OD)



Parenting in a Time of COVID

Next week marks the one-year anniversary of NIH shifting to maximum telework in response to the

COVID-19 pandemic. Like employers and employees across the country, overnight we needed to adapt our entire enterprise and reinvent our jobs in the virtual workplace. Coincidentally, next week is also when with a deep breath and a big hug, I send my six year old back to school in person, masked up and excited to meet his 1st grade teacher in person for the first time. So it seems like a good time to reflect on what the past year has been like, juggling the demands of serving in the leadership of a government agency square in the middle of COVID response with the needs of two young children during this nationwide experiment in virtual schooling.

Over the past year, I have gotten expert at the hand-over-the-mouth side conversations with my kids while muted on videoconference. There are good days and there are bad days. Like when my already prone-to-anxiety fifth grader gets hysterical because there are technology glitches and is panicked he's missed something. Or when my first grader breaks down into tears because he's had to sit in front of a computer for hours and is confused by something being asked of him. Inevitably, these moments occur when I'm in the middle of a critical meeting. I've accidentally come off mute while in the middle of alternately yelling at and bribing my children to behave so I can just pay attention to this conversation. I long for five minutes to just pay sole attention to the work I am doing and not have to think about snack time or lunch options or whether trombone is starting to whether a Chromebook is charged. I struggle to feel smart and competent as either a mother or as a professional when the unrelenting demands of one are constantly competing with the other.

... Continue reading to learn more

CSR's Commitment to Advancing Equity, Diversity and Inclusion in Peer Review

On March 1, NIH Director Francis Collins <u>announced</u> NIH's broad-based initiative, <u>UNITE</u>, to end structural racism and racial inequities in biomedical science. This is a recognition of the need for urgent, sustained effort on many fronts across the research enterprise, including in all parts of the NIH's extramural processes, to change culture. While the NIH Institutes and Centers will examine their programmatic priorities and discretionary funding practices, here at CSR, we are committed to pushing ahead with efforts to protect the peer review process from the systemic biases that exist in all areas of the scientific community.

In the <u>June 2020 Review Matters blog</u>, I wrote about some of the steps that CSR is taking to address individual and systemic biases in peer review. Following that, in July 2020, we held three community listening sessions, in which we heard the rightful anger and the call for urgent and specific action around the persistent funding disparity for Black investigators. I shared the <u>report and recommendations</u> from those forums with NIH leadership, with the <u>UNITE E</u> group that is

focused on extramural changes, as well as with our own CSR Advisory Council. Since then, I have held a number of individual and small group conversations with investigators, who shared their personal experiences of bias as an applicant or reviewer, which has helped us further refine the strategies we were already pursuing, as well as develop some new approaches. Below are a few of the actions we are taking:

... Continue reading to learn more

Announcement of Childcare Costs for Ruth L. Kirschstein National Research Service Award (NRSA) Supported Individual Fellows

We recognize that the high cost of childcare impacts the ability of graduate students and post-doctoral fellows in many ways, including successfully completing their training and fully participating in the extramural research workforce. Pieces like these from Scientific American in 2019 and 2020, Science, and Nature Cancer as well as this recent report underscore the reality faced by some early-career researchers when balancing professional and personal responsibilities.

NIH is dedicated to fostering a well-trained and diverse biomedical research workforce, which involves supporting <u>family-friendly policies and initiatives</u> that balance work and family life for all biomedical researchers. Trainees and fellows supported by National Research Service Awards (NRSAs), for instance, are <u>eligible</u> for up to 60 calendar days (equivalent to 8 work weeks) of parental leave per year for the adoption or the birth of a child.

As part of our on-going efforts to develop programs which support family-friendly research environments for the NIH-supported workforce, NIH will begin providing an option for NRSA fellows to request support for childcare costs in new and continuation applications or as <u>administrative</u> supplements to existing awards effective April 8, 2021.

The NRSA childcare costs apply to full-time NIH-NRSA supported fellowship positions. Each fellow is eligible to receive \$2,500 per budget period to defray childcare costs. The NRSA childcare costs are not tied to any <u>payback obligations</u>.

NRSA fellows are encouraged to carefully review <u>this Guide Notice</u> for more information, and contact relevant NIH staff with any questions if needed. Please stay tuned as related guidance is expected for NRSA supported trainees in Phase 2 of this initiative (anticipated in early fiscal year 2022).

NIH Stands Against Structural Racism in Biomedical

Research

Although addressing the COVID-19 pandemic has been front and center for NIH over the past year, we have not forgotten another significant challenge confronting the health of our nation — systemic and structural racism. The events of 2020 highlighted the reality of our nation's racial injustices that have been allowed to endure over four centuries and that significantly disadvantage the lives of so many. The time for upholding our values and taking an active stance against racism, in all its insidious forms, is long overdue.

As a science agency, we know that bringing diverse perspectives, backgrounds, and skillsets to complex scientific problems enhances scientific productivity. NIH has long supported programs to improve the diversity of the scientific workforce with the goal of harnessing the complete intellectual capital of the nation. These efforts, however, have not been sufficient. To those individuals in the biomedical research enterprise who have endured disadvantages due to structural racism, I am truly sorry. NIH is committed to instituting new ways to support diversity, equity, and inclusion, and identifying and dismantling any policies and practices that may harm our workforce and our science.

... Continue reading to learn more

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 <u>harmonizing</u> the reporting period of the Annual Reports to OLAW and USDA
- Requests for Information regarding <u>encouraging</u> the use of sections of the AAALAC
 International Program Description in the Animal Welfare Assurance, <u>clarifying institutional</u>
 <u>responsibilities</u> for grant to protocol congruence review, and the <u>flexibilities</u> 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 <u>Guide for the Care and Use of Laboratory</u> Animals

Top 3 Applicant and Grantee Systems Resources

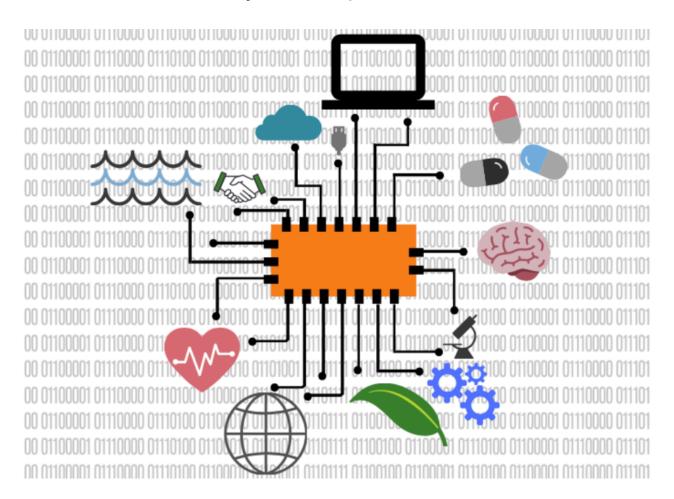
Are you applying for or managing an NIH award? To help you navigate our grants systems, the <u>electronic Research Administration (eRA) website</u> provides a myriad of resources. Here are the three most commonly accessed resources that you may find helpful:

- 1. <u>eRA Commons Online Help</u> for step-by-step instructions eRA Commons Online Help can be accessed throughout the eRA Commons modules by clicking the question mark icon in various places on the screens. But did you know the online help is also available outside of the eRA Commons modules? Using the link above, you can get to the complete online help content. It provides information from passwords to ORCID iDs, status to closeout and everything in between.
- 2. <u>eRA Video Tutorials</u> for quick overviews
 Sometimes you just want to see how something works and we have an ever-growing library of videos (currently at 50+) to help you. Designed to be short and sweet and to the point, most videos are less than 5 minutes and demonstrate key functionality of the different modules that make up eRA Commons. If you are a fan of Twitter, look for an increasing number of videos specifically designed for social media from the <u>@NIHgrants</u> (Grants and Funding News from the Office of Extramural Research) handle.
- 3. <u>eRA Commons Frequently Asked Questions</u> for helpful answers FAQs are kind of the unsung hero of this list. Developed from real user feedback, the FAQs are constantly being updated with new content and improved information. Divided into 25 different categories, eRA FAQs cover a wide range of topics to help you find the answers that you are looking for.

If you can't find what you are looking for on the <u>eRA website</u>, don't hesitate to contact the <u>Grants Information</u> group or the <u>eRA Service Desk</u>.

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.

LBRN Bioinformatics Needs Survey: Take Survey Here



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



Purpose: The IDeA National Resource for Quantitative Proteomics provides subsidized access to sophisticated proteomics services for investigators performing biomedical research within the mission of NIGMS (https://idearesourceproteomics.org/). In addition to providing cost effective access to a variety of proteomics services, the resource supports a competitive voucher program that provides fully subsidized access at no cost to the user. The goal of the voucher program is to provide pilot scale data to investigators that will create new hypotheses, support publications, and support on-going research studies within the mission of NIGMS. This voucher program supports discovery proteomics workflows limited to 10 sample Tandem Mass Tag (TMT) or 20 sample data independent acquisition (DIA) quantitative proteomic platforms. For example, a 10-plex TMT could be 5 biological replicates of a control verses 5 biological replicates of a treated cell line, while a 20 sample DIA could be 10 control vs 10 experimental tissue/plasma samples. Interested applicants may contact the resource prior to applying to discuss the proposed sample analysis and determine eligibility for the voucher program.

Voucher application due dates: 5:00pm on October 15, February 15, June 15. Earliest start date: November 1, March 1, July 1. Anticipated number of awards: 100 annually

Award budget: Fee-free voucher for 10-plex TMT (>7,000 proteins) or 20 sample DIA Award Period: Samples must be submitted within 4 months from award date

Eligibility: One awarded voucher per laboratory Principal Investigator per year. Priority will be given to researchers funded by NIGMS, funded through the NIGMS-IDeA Program, and early-stage/new investigators working within the mission of NIGMS. Only one submission per laboratory Principal Investigator per due date.

Pre-submission consultation: Interested applicants may contact the resource at lDeAproteomics@uams.edu to discuss the proposed sample analysis and determine voucher eligibility.

Content and form of application submission: Applications are limited to 2 pages (11pt font, single spaced, 0.5 inch margins) and should include the following sections: Project Overview (outlining the specific research question), Preliminary Studies (providing example data to support the proposed proteomics analysis), Quality Control Data (provide evidence of sample quality such as a gel image, verification of 50 micrograms of protein or 25 microliters of plasma/serum, and details on sample homogenization including buffer components), and Data Utilization (discussing how the proteomics data will be used to support work within the scope of NIGMS). An optional presubmission consultation may be used to determine whether TMT or DIA proteomics would be most appropriate for the study. Applications are to be submitted as a PDF file at https://is.gd/IDeAVoucher.

Other documents for submission: Principal Investigator NIH Biosketch and NIH Other Support documents.

Other requirements: For eligibility, recipients will be required to participate in pre- and post-award surveys.

Contacts: For general questions, contact lDeAproteomics@uams.edu. For administrative questions, contact Ms. Sonet Weed (SWeed@uams.edu)

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 <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 GM103424-18 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.

