View this email in your browser

News, Opportunities and Deadlines for May 2022

2020 LBRN Summer Bioinformatics Training

Event Date: Beginning June 6, 2022
Deadline: May 27, 2022, 4:30pm
Location: Virtual

LBRN is pleased to make available our 2022 LBRN Summer Bioinformatics Training for undergraduate, graduate students, faculty and staff from institutions across Louisiana. This program is in place of our regular summer program, which was cancelled due to COVID-19. This program will proceed in virtual/online formats with support from Pine BioTech.

Program begins on or after June 6th, 2022. Applications will be reviewed on a first come basis immediately after the deadline. All these courses are free to for undergraduate, graduate students, faculty and staff from institutions across Louisiana.

Optional live sessions once per week with an option to request a one on one meeting if needed in the programs. Other than that recorded sessions will be sent out to all of the participants with specific directions on how to complete online modules.

Please see the following listed programs available for all the program details from each participating LBRN Partner. You can also view the information on their website here: https://edu.omicslogic.com/lsu-biommed

Owing to scheduling logistics "Omic Logic" is the only course that can be taken as a combination with one of the other * programs.

Complete Program List:

- Omics Logic (Basics) Bioinformatics
- *Biomedical Data Analysis in R & Python
- *Bioinformatics for Infectious Diseases
- *Transcriptomics for Chronic Diseases
- *Research Project

Program Breakdown:

- Omics Logic Basics. This program is best suited for students interested to learn about various -omics technologies and how bioinformatics is used in biotechnology, healthcare, agriculture and basic research. Program access provides access to all the asynchronous* online courses (basic course certificates only). This can be taken at the same time as ALL the other programs.

*The below projects can be taken at the same time with Omics Logic Basics.

- *Biomedical Data Analysis in R & Python. Getting Started with Bioinformatics in R and Python - As biology is saturated with complex datasets that have to be besorted, explored, and“looked into”, anyone handling data generation, analysis, or decision making based on

data has to gain some level of “data science” skills. In most biological and biomedical settings, you will be expected to run or implement programs written by Python, R, and others. R programming offers a complete range of functionality that you can leverage to perform in-depth statistical analysis, visualization and annotation. The increasing necessity to process big data and develop algorithms in all fields of science means that programming is becoming an essential skill for scientists, with Python the language of choice for the majority of bioinformaticians.

- *Bioinformatics for Infectious Diseases. This program is dedicated to the study of viral diversity and its role in epidemic infectious diseases that keep re-emerging, including zoonotic spillover, transmission between humans, and the process of viral and bacterial disease development. As a result, you will learn to understand relationships between viral strains and haplotypes, find differences in sequence data, and see the implications for drug and vaccine design. This program will provide opportunities to practice analyzing data to gain hands-on experience with curated datasets from public domain collections, guided by experts with bioinformatics experience and knowledge about virology.
- *Transcriptomics for Chronic Diseases An online training program focused on next-generation sequencing (NGS) Data Analysis in application to gene expression data with project examples from infectious diseases, cancer & neuroscience. This online program will introduce real-world applications of RNA-seq data analysis in biomedical research and provide participants with hands-on skills and logical background to extract insights from gene expression data. We will review the methods and history of quantitative and qualitative analysis of mRNA expression. Practical sessions will guide participants to use the methods we review on several project datasets to practice generating a table of expression from raw FASTq files and perform subsequent analysis of this table of gene and isoform expression.
- *Research Project It has been designed to help young researchers and students take advantage of the bioinformatics resources for analysis of complex life science data and become versed in bioinformatics. Research Fellows participate in cutting-edge bioinformatics research led by expert mentors. The program will offer a combination of online resources and mentor guidance to prepare you and help you complete a bioinformatics project. We offer high-grade training and research tools for hands-on analysis for various research fields which includes analysis of Big Data belonging to Multi-Omics fields (Transcriptomics, Genomics, Epigenomics & Metagenomics), Infectious Diseases, Precision Medicine, Neuroscience, Space-Omics, Metabolic Disorders etc.

Registration Open Here for LBRN Participants

Technology & Innovation Seminar

LSU School of Veterinary Medicine

Department of Pathobiological Sciences

LBRN

Technology & Innovation Seminar

Dr. Gianluca Veggiani

Postdoctoral Fellow, University of Toronto, Canada

Instructor, Cold Spring Harbor Laboratory, New York

Advanced Molecular Principles and Biomedical Applications of Phage Display Technology

Faculty Host: Dr. Kousoulas

May 24, 2022

2:00pm – 3:00pm

In Person: LSU SVM, 1212C

Introductory seminar of phage display technology and innovation. This event is sponsored by LSU School of Veterinary Medicine, Department of Pathobiological Sciences and LBRN.

Dr. Gianluca Veggiani from University of Toronto, Canada *on Advanced Molecular Principles and Biomedical Applications of Phage Display Technology*.

Faculty Host: Dr. Kousoulas. May 24, 2022, 2:00pm – 3:00pm, In Person: LSU School of

Veterinary Medicine, 1212C. Session will be recorded. Contact us at lbrn@lsu.edu for remote attendance information.

https://lbrn.lsu.edu/2022/05/24/PBS-LBRN-Seminar.html

5th LBRN-LONI Scientific Computing Bootcamp

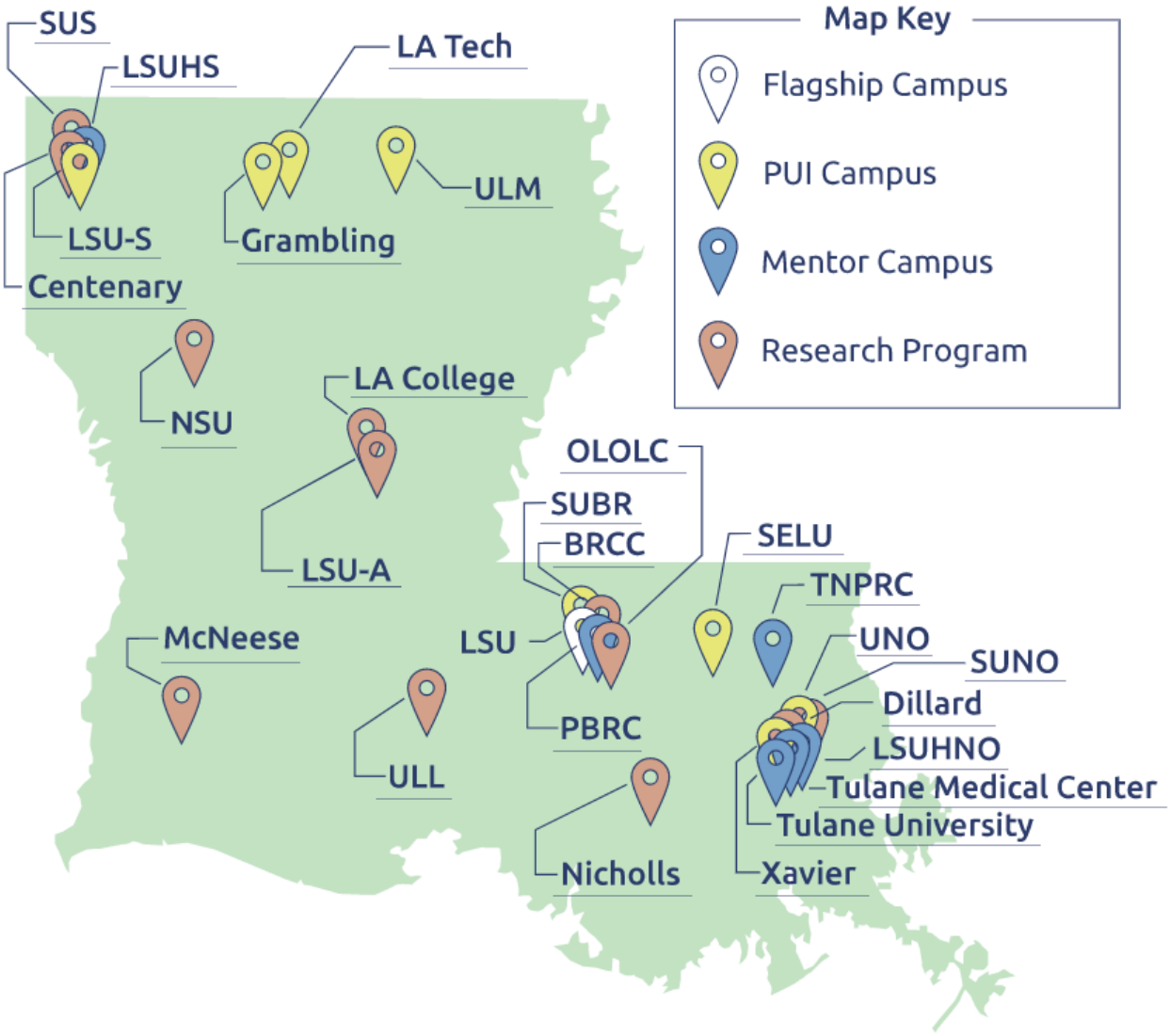
Event Date: May 24-27, May 30-31, 2022
Event Time: 9am to 5pm
Deadline: Deadline May 22, 2022, 4:30pm
Location: Zoom Online

Scientific computing is becoming more ubiquitous for all types of research areas. Skills and knowledge that are necessary to take full advantage of the power of computing, however, are often inadequately present in both curricular and extracurricular training. The purpose of this workshop is, by both presentation and hands-on experiences, to help attendants understand the usage of popular scientific computing programming tools and prepare for their future computational study and research career.

Schedule (All sessions below include a hands-on session)

- May 24: Overview and Introduction to R
- May 25: Intermediate R
- May 26: Introduction to Python
- May 27: Intermediate Python
- May 30: Introduction to Deep Learning, Part 1
- May 31: Introduction to Deep Learning, Part 2

54 LBRN participants are registered from eight LBRN's PUI campuses, which are Grambling State University, LSUS, LA Tech, Southeastern Louisiana University, Souther University, ULM, University of New Orleans, and Xavier University.

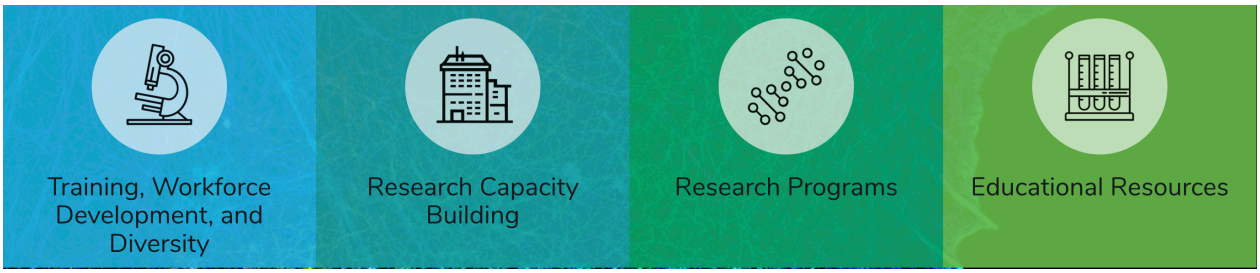


NIGMS News

National Institute of General Medical Sciences

The National Institute of General Medical Sciences (NIGMS) supports basic research that increases our understanding of biological processes and lays the foundation for advances in disease diagnosis, treatment, and prevention. NIGMS-funded scientists investigate how living systems work at a range of levels—from molecules and cells to tissues and organs—in research organisms, humans, and populations. Additionally, to ensure the vitality and continued productivity of the research enterprise, NIGMS provides leadership in training the next generation of scientists, enhancing the diversity of the scientific workforce, and developing research capacity throughout

the country.



NIH Funding Opportunity and/or Policy Announcements

- Administrative supplements to advance precision medicine using the All of Us Research Programs Data (NOT-PM-22-002). Due date: July 6. Eligible programs include, but not limited to, IDeA-CTR, COBRE, INBRE, NARCH, SuRE and SCORE.
- Change to number of applications per institution allowed for Science Education Partnership Award (SEPA) (NOT-GM-22-037).
- Clinical and Translational Science Award (CTSA) Program: Collaborative and Innovative Acceleration Award (PAR-22-167). IDeA-CTR investigators are eligible to apply as collaborators of CTSA investigators.
- Updated Requirements for NIH Notification of Removal or Disciplinary Action Involving Program Directors/Principal Investigators or other Senior/Key Personnel (NOT-OD-22-129).

Reports / News / Program Messages

- The NIH Office of Research on Women's Health (ORWH) issues new resources on the Maternal Morbidity and Mortality (MMM) Web Portal. See more information here.
- Slides for the COBRE Phase 2 Informational Webinar are available here. The recording of the webinar will be posted at a later date.
- NIH issues new resources for implementing the NIH policy for data management and sharing. The first resource is the *Informed Consent for Research with Data and Biospecimens: Points to Consider and Sample Language for Future Use and/or Sharing.* See more information here. Submit your comment here.
- 2022 Data Scholars Program for experienced data and computer scientists. Application due May 27. See more information and apply here.

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

---

NIH Extramural Nexus

- # Action Required for In-Progress RPPR Budget Forms By or Before June 22

The Research Performance Progress Report (RPPR) module in eRA Commons is moving June 23 to the new visual appearance of other eRA modules. This is part of a required technology upgrade that will enhance the security and stability of the module. The release will include the addition of the new unique entity identifiers (UEI) where applicable as well as required FORMS-G changes,

including updated budget forms.

This is a heads up that since the budget forms (applicable to non-SNAP awards only) will be updated to the new Forms-G version, recipients with in-progress RPPRs will need to redo their budget forms if their RPPR is not submitted by June 22, a day before the release. See NOT-OD-22-130 for details.

RPPRs submitted on or before June 22 will reflect the FORMS-F budget forms. Due dates for submission of the RPPR remain unchanged. See https://grants.nih.gov/grants/rppr/index.htm.

See also: Updated RPPR Instruction Guide Available.

- ## Guidance for Applicants Preparing Applications for Summer 2022 Due Dates During the COVID-19 Pandemic

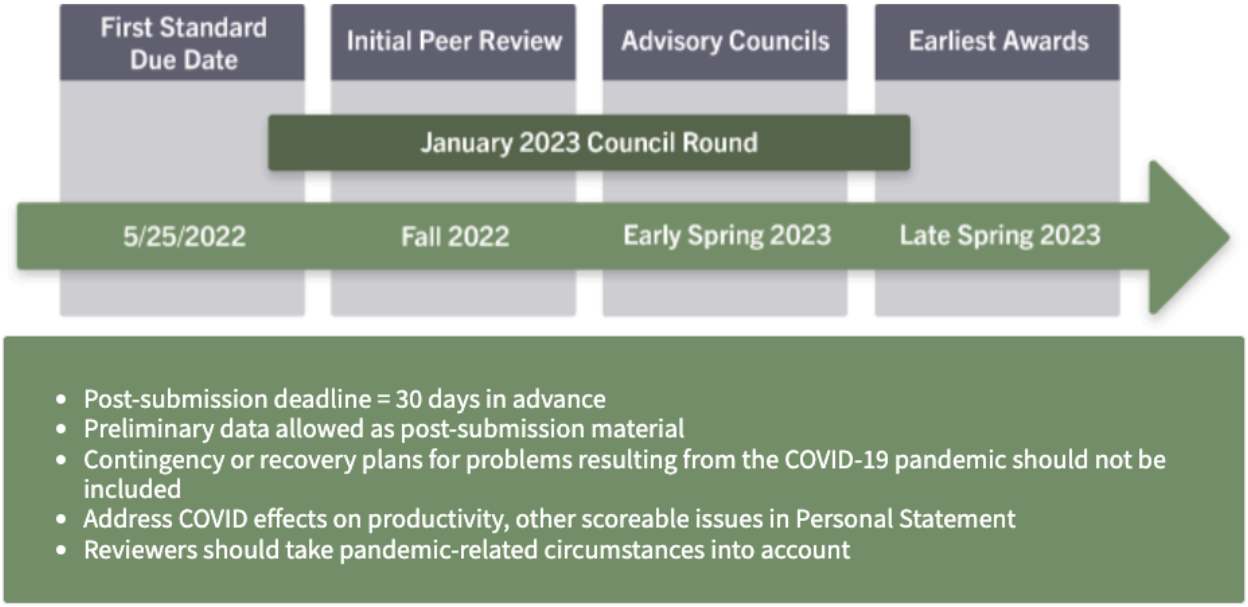
For applicants preparing applications for the summer 2022 due dates, NIH recently extended the guidance that while grant applications should **not** include contingency or recovery plans for problems resulting from the COVID-19 pandemic, investigators may address effects due to the pandemic on productivity 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.

For a visualization of the peer review process and timelines during COVID-19, see this infographic.

- Post-submission deadline – 30 days in advance
- Preliminary data allowed as post-submission material
- Applications should NOT include contingency or recovery plans for problems resulting from the pandemic
- Applicants may address effects due to the pandemic on productivity or other scoreable issues in their Personal Statement
- Reviewers will take these circumstances into account
- NIH staff will resolve specific problems arising from the pandemic prior to funding

- Post-submission deadline – 30 days in advance
- Preliminary data allowed as post-submission material
- Applications should NOT include contingency or recovery plans for problems resulting from the pandemic
- Applicants may address effects due to the pandemic on productivity or other scoreable issues in their Personal Statement
- Reviewers will take these circumstances into account
- NIH staff will resolve specific problems arising from the pandemic prior to funding



- ## Congress Strengthens NIH's Ability To Address Harassment in NIH-funded Activities

The recently passed Consolidated Appropriations Act for fiscal year 2022 includes "Section 239," which is a milestone in our efforts to ensure safe working conditions for people engaged in NIH-supported research. The law requires NIH grant recipients to notify us when their senior key personnel are removed from their position or are otherwise disciplined due to concerns about harassment, bullying, retaliation, or hostile working conditions. This is a major step in our continued effort to change the culture of harassment in biomedical science.

The NIH Grants Policy Statement Section 4, states that NIH recipient institutions are expected to provide safe and healthful working conditions for their employees and foster work environments conducive to high-quality research. Towards this end, and in response to a 2018 National Academies report and recommendations from the NIH Advisory Committee to the Director, we have taken the following steps:

- NIH expects recipients requesting prior approval for changing a principal investigator, key personnel, or recipient institution to include mention as to whether these requests are related to concerns about the safety and/or work environment, including issues related to sexual harassment or bullying (see this post and NIH Grants Policy Statement Sections 1.2.6 and 8.1.2.7)
- Established an agreement with the U.S. Department of Health and Human Services (HHS) Office for Civil Rights for information sharing to facilitate case handling (see this post)
- Updated our anti-harassment website to encompass the range of threats to safe and respectful workplaces at institutions receiving NIH funding (see this post)

- Administered the inaugural NIH Workplace Climate and Harassment Survey in 2019 and developed resources such as a findings report, infographics, and survey methodology institutions can adopt as they deem appropriate to their needs.

These and other related efforts have led to more than 400 notifications received between 2018 to March 2022. NIH worked with funded institutions on 112 confirmed findings of harassment, resulting in institutions removing 92 individuals from NIH grants and taking other actions for the remaining cases. More data are available here.

So, as described in a statement issued today by NIH Acting Director Lawrence Tabak, "While NIH has made progress toward our goal of ending harassment in biomedical research, NIH lacked clear authority to *require* funded institutions to report to NIH whether personnel changes to an NIH grant are related to harassment, only that they *should* report it. This limited NIH's awareness of when harassment was affecting NIH-supported activities, and therefore NIH's ability to take necessary action to ensure appropriate grant stewardship." With the implementation of Section 239, that changes today.

As of July 9, 2022 (see NOT-OD-22-129), recipient institutions must report within 30 days of when "individuals identified as a principal investigator or as key personnel in an NIH notice of award are removed from their position or are otherwise disciplined due to concerns about harassment, bullying, retaliation, or hostile working conditions" to our dedicated web form. The following information should be reported:

- Name of the Authorized Organization Representative submitting the notification
- Name of the individual of concern
- Description of the concerns
- Action(s) taken
- Anticipated impact on the NIH-funded award(s)

We will then consult with the institution. If necessary, we may take additional actions ranging from changing personnel, restricting award funds, or suspending or terminating the grant as outlined in the NIH Grants Policy Statement.

This is a major step in helping us continue ensuring the safety for all involved in NIH-supported research. As Dr. Tabak noted in his statement, "Wherever NIH research activities take place, our priority will always be to do what we can to eliminate harassment and ensure that the integrity of scientific endeavor is never compromised by the fundamental injustice of workplace harassment."

If you have concerns about harassment, discrimination, and other forms of inappropriate conduct at your institution, please find help here.

New FY 2021 RCDC Categories and Funding Data are Now Available

NIH recently updated its Research, Condition, and Disease Classification (RCDC) system with FY 2021 actual spending data and estimates for FY 2022 and 2023. There are now 309 total RCDC publicly reported categories.

The following are new RCDC topics added in FY 2021:

- Celiac Disease
- Coronaviruses Diagnostics and Prognostics
- Coronaviruses Disparities and At-Risk Populations
- Coronaviruses Therapeutics and Interventions
- Coronaviruses Vaccines
- Dissemination and Implementation Research
- Lymphatic Research
- Lymphedema
- Telehealth
- Tickborne Diseases

There were also several existing RCDC categories that were renamed, including:

- Attention Deficit Disorder (ADD) renamed to Attention Deficit Hyperactivity Disorder (ADHD)
- Fetal Alcohol Syndrome renamed to Fetal Alcohol Spectrum Disorders (FASD)
- Injury – Childhood Injuries renamed to Childhood Injury
- Injury – Unintentional Childhood Injury renamed to Unintentional Childhood Injury
- Injury – Traumatic Brain Injury renamed to Traumatic Brain Injury (TBI)
- Injury – Trauma – (Head and Spine) renamed to Traumatic Head and Spine Injury
- Substance Abuse renamed to Substance Misuse

For more background, please see this NIH Open Mike blog and the RCDC process.

NIH All About Grants Podcast: Building Bridges

You may have heard that NIH can provide limited, interim research support for applications with creative and innovative approaches that fell just outside the payline. These "bridge awards" are helpful for researchers to gather additional data to revise their current application. But, how do we decide on which applications to support this way?

Join us for this NIH All About Grants podcast episode to learn more about R56/bridge awards

(MP3/Transcript). Drs. Lakshmi Ramachandra from the National Institute of Allergy and Infectious Diseases and Bonnie Burgess-Beusse with the National Institute of Diabetes and Digestive and Kidney Diseases will tell us about the purpose of bridge awards, how program staff consider who and what to recommend for funding, the budget, when investigators should reach out about them, and more.

"…If you received a score that was close to the pay line but you missed being funded, but you have extenuating circumstances in your laboratory… for example you might be in danger of losing your position or losing your lab, that's something that can be helpful for program officials to know, because that can also factor into their decisions." – Dr. Bonnie Burgess-Beusse

"when the program staff are considering which applications to nominate for bridge funding, they first… consider whether the [principal investigator] should just revise and resubmit. The reason being that bridge funds are actually quite limited…and not every PI can actually benefit from one to two years of funding…. other things that staff will consider is…what potentially could be lost by not providing some funding. Now could it be momentum? Could it be loss of some very important resource? Then we also look into what is the relevance of what is being supported to the… institute's mission…" – Dr. Lakshmi Ramachandra

---

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 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 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 GM103424-20.

• 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.