

Reproducible Bioinformatics: Bioinformatics is a dynamic and growing field, developing into an essential part of biomedical research that is transformed by large genomic and other high-throughput datasets. As a result, federal research support requires a robust and reproducible bioinformatics analysis. Regulatory agencies like the FDA are actively working on standardizing bioinformatics analysis submission in their review process. In order to encourage special attention to robust and reproducible biomedical research using OMICS data, the FDA has recently launched [Precision FDA](#).

**REPRODUCIBLE
BIOINFORMATICS**

Learn about **BioCompute
Objects** and **PrecisionFDA**

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Precision FDA is hosting [a challenge](#) for students, researchers, and faculty to submit a bioinformatics analysis project using a specially designed [bio-compute object \(BCO\)](#). BCOs are detailed records of a bioinformatics pipeline containing all the necessary information to understand or repeat an entire analysis and include additional metadata to identify provenance and usage. According to the FDA, “BCOs are of interest to a wide group of users including 1) researchers to reproduce computational results more accurately, both within and between labs, 2) clinical laboratories offering ‘omics tests for precision medicine, and 3) pharma/biotech companies submitting data for regulatory review.”

[The Louisiana Biomedical Research Network \(LBRN\)](#) together with [George Washington University Hive’s Lab](#), is organizing a special webinar to introduce BCOs and share details about this challenge. **THIS WEBINAR WILL BE DELIVERED THURSDAY, OCTOBER 3, 2019 AT 3 PM.** In this webinar, we will discuss the expanding bioinformatics training and support programs, and the way participating universities can gain access to a variety of opportunities to advance their research. The Bio Compute Object hosted by George Washington University and the Precision FDA BioCompute app-a-thon program is one such example. We plan on scheduling this webinar in early October as we find the best time for everyone to join.

STUDENTS, FACULTY AND STAFF INTERESTED IN THIS WEBINAR NEED TO REGISTER [HERE](#).

As a part of this project, there will be a dedicated program to help prepare an analysis that can be submitted using BCOs. The training will also introduce a variety of resources that can be completed independently and used by beginners or advanced students to develop bioinformatics projects. If you are new to bioinformatics, or would like to better understand the role of reproducible and robust bioinformatics analysis for biomedical research, this is a great opportunity to join a bioinformatics community and participate in a structured process that will guide you through the process of developing a reproducible pipeline for analysis of omics data like genomics, transcriptomics, epigenomics and metagenomics. “Participants will be given the opportunity to enhance standards around reproducibility and documentation of biomedical high-throughput sequencing through BCO creation and conformance. Beginner and advanced tracks will be available for all participant levels.” For students, this can be a great opportunity to gain exposure to bioinformatics research and platforms. For researchers, this can be an opportunity to learn about different processes and receiving feedback from the FDA on your work. Current organizations participating in the challenge include NIH, the American Heart Association, the CDC, 23andMe, and many others.

LBRN

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