

Public Abstract

First Name:Siva Ratna Kumari

Middle Name:

Last Name:Narisetti

Adviser's First Name:Trupti

Adviser's Last Name:Joshi

Co-Adviser's First Name:Dong

Co-Adviser's Last Name:Xu

Graduation Term:FS 2017

Department:Computer Science

Degree:MS

Title:DEVELOPMENT OF KBCOMMONS - UNIVERSAL INFORMATICS FRAMEWORK FOR MULTI-OMICS TRANSLATIONAL RESEARCH

Multi-level 'OMICS' data integration for multiple organisms has been one of the major challenges in the era of advanced next-generation sequencing and high-performance technologies. There are many websites which stores different data types and display data in pie charts or plain text format but limit their data to only one fixed organism. These complex omics data requires extensive data management, exhaustive computational analysis, and effective integration to have a one-stop interactive, web-based portal to browse, access, analyze, integrate, visualize and share knowledge about genomics and molecular mechanisms, with ultimate links to phenotypes and traits. To achieve this, we have developed Knowledge Base Commons (KBCommons), a platform that automates the process of establishing the database and making the tools for organisms available via a dedicated web resource.