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Project Number: 11720

Project Name: A new BridgeDb Release

Project Abstract: BridgeDb is a platform used for identifier mapping in WikiPathways and PathVisio with support for various languages like as a Cytoscape plugin, as an R package, and an API implemented in OpenRiskNet and OpenPHACTS. BridgeDB provides a platform to link other databases like Ensembl, NCBI Gene, ChEBI, PubChem, etc. The main idea of this project is to add functionality and release a major version of BridgeDb. This new version would support Java version above 8. It will also have support for 'Secondary identifier'. As a part of the project, metadata output provided by BridgeDb will also be formatted to meet the 'The FAIR Guiding Principles for scientific data management and stewardship'.

In Google Summer of 2019, I have worked on the following:

- Extension of the existing functionality of BridgeDb.
 - Support for secondary identifiers.
 - Adding an annotation to differentiate primary and secondary identifiers
 - Secondary identifiers to be mapped by BridgeDb to other identifiers.
 - Secondary Identifiers: Secondary Identifiers are the secondary ID associated with the proteins etc. For Example [Sucrose](#), for sucrose [ChEBI Database](#), it has one ChEBI ID and four different secondary ChEBI ID's. These secondary ID's associated with every protein, etc. are secondary identifiers.
- Updating JUnit Test suite from 4 to JUnit Test Suite 5.
 - This also includes creating test cases for the newer functions and the existing functions that did not have test cases.
- Format output of metadata to match [FAIR Standards](#).
- Support for Java 11
- Code Documentation