ASTROBIO

PRODUCT BACKLOG

iGEM CONCORDIA

ID	Card	Sprint	Status	Conversation	Confirmation	Points	Priority	Type	Dependency
1	As a developer, I need to collect transcriptomics data, so that I can store them in DB to be used AstroBio	8	Complete	MVP Bioinformatics	Have every option in AstroBio with a successful Search result	43	1	EPIC	2,4,5,6
2	As a developer, I need to make sure of high-quality data gathered, so that the data is reliable and useful to researchers	0	Complete	Data Requirements	Must be normally distributed and data makes sense	6	1	Technical	
3	As a developer, I need to have a sample data in DB, so that we can start developing software with DB queries	1	Complete	Datasets ready and in DB	Developer should be able to use DB queries in program, and fetch required data	8	2	Technical	7,8
4	As a developer, I need to extract all data found for yeast, so that we can benefit the software team and help them with the selection process for the project	2	Complete	NCBI - GEO database used as a source	Extracted two yeast studies of different species including S.C, which is the target for our experiments	7	2	Technical	
5	As a developer, I need to extract as many DE data from a variety of studies, so that we enable cross studies comparisons	7	Complete	RNAseq data obtained	RNAseq data obtained, along with different modal organisms	15	3	Technical	

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6	As a developer, I need to host the application and give external access, so that end users can access the software and DB	4	Complete	Where is it hosted? Security?	Hosted in AWS EC2 instance, Linux OS AWS offers security App does not have a users' registry	15	3	Technical	
7	As a developer, I need to automate data conversion from CSV to JSON, so that I can easily store more data gathered into Database	1	Complete	Automation	Node app uses CSVTOJSON library to convert files automatically, which can then be stored	5	1	Technical	
8	As a developer, I need to have a flexible DB, so that different datasets can be stored given different formats	1	Complete	Do all studies require the same schema?	No. Some studies offer more or less info to be extracted. To accommodate we chose a NOSQL database	3	2	Technical	
9	As a developer, I need to set up the program as MVC architecture, so that I can allow rapid development with teammates	2	Complete	Model-View-Controller	Need to allow rapid development for the backend, frontend without the need to worry about conflicts	8	5	Technical	
10	As a developer, I need to setup AWS and Concordia server account, so that I can setup instance and gain remote access	3	Complete	Setting up account and server space provided by Concordia	AWS account and IAM role hosted by SCRUM Master With help from Shawn and the Bioinformatics department at Concordia, gained server space to run program there	6	3	Technical	

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11	As a developer, I need to host the application and give external access, so that end users can access the software and DB	3	Complete	Set up OS	NPM, Node and MongoDB installed. and npm to run program in the background	9	4	Technical	
12	As a developer, I need to automate data conversion from CSV to JSON, so that I can easily store more data gathered into Database	4	Complete	Set npm forever	Gain ability to run program even when remote access is terminated	2	6	Technical	
13	As a developer, I need to have a flexible DB, so that different datasets can be stored given different formats	4	Complete	Set default limit and sort	Limit set to 10, and sort set to adjusted p value	1	7	Technical	
14	As a developer, I need to set up the program as MVC architecture, so that I can allow rapid development with teammates	7	Complete	Shiny App	Shiny App/ Interactive JS server running on localhost	20	15	Technical	
15	As a developer, I need to setup AWS and Concordia server account, so that I can setup instance and gain remote access	5	Complete	Handlers	Handle various AJAX API queries for pagination, limited DB fetching and fast processing Use middleware for EXPRESS routing and parameter passing	3	9	Technical	

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16	As a developer, I need to setup AJAX API query, so that I do not have to re-program search 2^8-1 different scenarios again	5	Complete	AJAX format	User input data are being passed as API via a middleware software code, that contains directory of page of display, along with values of start/limit/query/sort where the query is basically the search query in action	15	8	Technical	
17	As a developer, I need to adjust and maintain DB tables and schemas as per bioinformatics findings, so that it is easier to handle in application	3	Complete	DB contains three collections	genesData which contains DE Analysis results, metaData which on stains information of experiments, and reducedGenes which contains a map reduced list of genes with associated IDs to differentiate between genes with different names	2	7	Technical	
18	As a developer, I need to host the Shiny APP and link with AstroBio, so that users can access yeast meta data	8	Complete	Host	AWS EC2 will be used to host the Shiny App server The program will be linked with AstroBio to help users further expose yeast GSE4136 meta data analysis	7	6	Technical	