

Data

Apps

Toolbar

Narrative

Available Compounds

Selected Compounds

Result Report

KBio

RunFluxMIA\_Testing

Created by: Sayed Saklaff Zahmeeth (zahmeeth)

DATA

YIL1228.mifba.v572

FBA

2 days ago

IMR1\_799.mifba.v7

FBA

35 days ago

MR1\_Minimal\_Media.v1

Media

56 days ago

YIL1228.v1

FBAModel

Sep 12, 2017 by jellfryes

kbjmedia.593\_v2\_v2\_v2.v1

Media

Aug 18, 2017

kbjmedia.593\_v2\_v2\_v2\_v4.v1

Media

Aug 18, 2017

kbjmedia.593\_v2\_v2\_v2\_v3.v1

Media

Aug 18, 2017

kbjmedia.593\_v2\_v2\_v2.v1

Media

Aug 10, 2017

kbjmedia.593\_v2\_v2.v1

Media

Aug 10, 2017

kbjmedia.593\_v4.v2

Media

Aug 9, 2017

kbjmedia.593\_v3.v2

Media

Aug 9, 2017

kbjmedia.593\_v2.v2

Media

Aug 9, 2017

IMR1\_799.v1

FBAModel

Jul 27, 2017

APPS

My Favorites

6

Comparative Genomics

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Expression

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Genome Annotation

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Genome Assembly

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Metabolic Modeling

17

Microbial Communities

12

Read Processing

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Sequence Analysis

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Uncategorized

2

Upload

6

Utilities

25

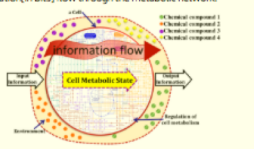
Welcome to Run Flux Mutual Information Analysis!

Related publications

1. Pterobon, M. et al. "Mutual information upper bound of molecular communication based on cell metabolism.", In Signal Processing Advances in Wireless Communications (SPAWC), 2016 IEEE 17th International Workshop on, pp. 1-6. IEEE, 2016. Preprint at IEEE Xplore DL, <https://ieeexplore.ieee.org/document/7536835/> (2016). DOI: 10.1109/SPAWC.2016.7536835.
2. Zahmeeth, S.S. et al. "End-to-end molecular communication channels in cell metabolism: an information theoretic study", In Proceedings of the 4th ACM International Conference on Nanoscale Computing and Communication, p. 21. ACM, 2017. Preprint at ACM DL, <https://dl.acm.org/citation.cfm?id=3109474> (2016). DOI: 10.1145/3109453.3109474.
3. Zahmeeth, S.S. et al. "Characterization of Molecular Communication Based on Cell Metabolism Through Mutual Information and Flux Balance Analysis.", Master's thesis 2016 Dec. Preprint at DigitalCommons@University of Nebraska - Lincoln, <https://digitalcommons.unl.edu/computersci/114/> (2016).

Narrative Overview!

Run Flux Mutual Information Analysis generates a bar chart of an organism for various chemical compositions present in the environment that could potentially estimate the amount of information(in bits) flow through the metabolic network.



Steps in this Narrative

1. Begin with FBA model
2. Select the base media
3. Choose compounds to be analyze
4. Select the mode of operation
5. Click run to estimate the mutual information for various chemical composition

NOTE: This Narrative is view-only, allowing you to see, but not alter, the input and output of the KBase apps used in this workflow. To run the steps yourself, using your own data or different parameters, you will need to make your own copy. Click the "copy" button at the top right of the screen. This will copy the Narrative to your account. You will be prompted to open the copy, which is now yours to run, edit, and even share. If you just want to read this Narrative, you still can see the data objects generated in the workflow by using the "Controls" link at the top left. For more information, please see the [Narrative Interface User Guide](#).

Run Flux Mutual Information Analysis

none

Reset

Finished with success on Aug 21, 2018 at 3:29pm

View Configure

Job Status

Result

Input Objects

FBA model

YIL1228

Base media

MR1\_Minimal\_Media

Parameters

Compounds to analyze

Available Items - 1661

search

1 14glucan6\_a0

-14glucan6\_a0

2 14glucan6\_c0

-14glucan6\_c0

3 14glucan6\_e0

-14glucan6\_e0

4 lagpe181\_a0

-lagpe181\_a0

5 2kmb\_c0

-2kmb\_c0

Selected Items

1 14glucan6\_a0

-14glucan6\_a0

2 14glucan6\_c0

-14glucan6\_c0

3 14glucan6\_e0

-14glucan6\_e0

4 lagpe181\_a0

-lagpe181\_a0

5 2kmb\_c0

-2kmb\_c0

Mode of operation

Intracellular fluxes

Report

View report in separate window

Overview

Visualization