Spatial Flux Balance Analysis

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Running Title: Spatial Flux Balance Analysis

To be submitted: *BMC Systems Biology*

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Abstract

Fill me in.

Keywords: Biochemical engineering, systems biology, flux balance analysis

Introduction

The introduction has three paragraphs (introduction no longer than 3 pages):

1. **First paragraph**: Introduce flux balance analysis as the state of the art in modeling metabolism.

2. **Second paragraph**: Introduce metabolic channeling, both natural and man-made examples. Reference Conrado study, Conrado review, and newer experimental studies in this area.

3. **Third paragraph**: In this study, [Repeat the abstract with some additional detail]. Taken together, [killer statement].

Results

The results are presented in **past tense**. Each paragraph starts with a statement of the result in that paragraph in active voice. Each results paragraph ends with a Taken together type statement followed by a link statement e.g., Next we considered etc. When referring to figures, state what the figures shows (Fig. ZZ).

Discussion

The discussion has three (sometimes four) paragraphs:

1. **First paragraph**: Present a modified version of the last paragraph of the introduction. In this study, [...]. Taken together, [killer statement]

2. **Second paragraph**: Contrast the key findings of the study with other computational/experimental studies

3. **Third paragraph**: Present future directions. If you had more time, what would like to do? Highlight the key shortcomings of the approach and how will we address them in the future. In this case, we will have a scaling issue if we extend to genome scale. We should extend to dynamic cases, and we need to experimentally validate the findings.

Materials and Methods

1. **Model formulation**: Present the spatial flux balance approach, and enzyme balances for the (un)channeled case. Outline any bounds formulation, and state all parameter assumptions.

Acknowledgements

This study was supported by an award from [FILL ME IN].

References