# Article information:

Feedback regulation and coordination of the main metabolism for bacterial growth and metabolic engineering for amino acid fermentation | Elsevier Enhanced Reader
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# Article summary:

1. This article discusses the feedback regulation and coordination of the main metabolism for bacterial growth and metabolic engineering for amino acid fermentation.

2. It considers the integrated sensing of carbon sources by the phosphotransferase system (PTS), and the feed-forward/feedback regulation systems incorporated in the CCM in relation to the pool sizes of flux-sensing metabolites and αketoacids.

3. It also considers the metabolic regulation of amino acid biosynthesis (as well as purine and pyrimidine biosyntheses) paying attention to the feedback control systems consisting of (fast) enzyme level regulation with (slow) transcriptional regulation.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article “Feedback Regulation and Coordination of the Main Metabolism for Bacterial Growth and Metabolic Engineering for Amino Acid Fermentation” is a research review paper published by Elsevier Inc. The article provides an overview of how bacteria coordinate their metabolic regulation systems, focusing on feedback regulation, flux sensing, feed-forward regulation, amino acid synthesis, purine and pyrimidine syntheses, αketoacid metabolism, metabolic engineering for efficient amino acid production, growth rate control, etc.

The article is written in a clear manner that is easy to understand even for readers who are not experts in this field. The authors provide detailed explanations about each topic discussed in the paper which makes it easier to comprehend complex concepts such as metabolic engineering or growth rate control. Furthermore, they provide references to other relevant studies which adds credibility to their claims.

However, there are some potential biases that should be noted when reading this article. For example, some topics may be presented from a one-sided perspective without considering counterarguments or alternative points of view. Additionally, some claims may be made without providing evidence or supporting data which could weaken its reliability. Moreover, there may be promotional content included in order to promote certain products or services related to this field which could lead to partiality or biasness when presenting information about them. Finally, possible risks associated with certain topics discussed in this paper may not be noted which could lead readers to make decisions without being aware of all potential consequences associated with them.

# Topics for further research:

* Metabolic engineering applications
* Amino acid fermentation processes
* Flux sensing mechanisms
* Feed-forward regulation systems
* α-ketoacid metabolism
* Growth rate control strategies

# Report location:

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