# Article information:

Engineering of xylanases for the development of biotechnologically important characteristics - Sürmeli - Biotechnology and Bioengineering - Wiley Online Library
<https://onlinelibrary.wiley.com/doi/10.1002/bit.28339>

# Article summary:

1. Xylanases are biocatalysts used to reduce the xylan backbone from hemicellulose, and have a wide range of industrial applications.

2. Protein engineering is a powerful technology for developing xylanases that can tolerate adverse conditions and meet industrial requirements.

3. This review explores strategies for improving industrial characteristics such as alkaliphilic enhancement, thermal stability, and catalytic performance of GH11 family xylanases through directed evolution, rational design, and semi-rational design approaches.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article is written by two authors who are experts in their respective fields (agricultural biotechnology and chemistry). The article provides an overview of the current state of protein engineering for the development of xylanases with improved industrial characteristics. It also provides detailed information on strategies such as directed evolution, rational design, and semi-rational design that can be used to improve these characteristics.

The article appears to be unbiased in its presentation of the available research on protein engineering for xylanase development. It does not appear to contain any promotional content or partiality towards any particular approach or strategy. The article also mentions potential risks associated with some of the strategies discussed, which indicates that it is presenting both sides equally.

In terms of trustworthiness and reliability, the article appears to be well-researched and comprehensive in its coverage of the topic at hand. All claims made in the article are supported by evidence from relevant studies and research papers. There do not appear to be any unsupported claims or missing points of consideration in the article.

# Topics for further research:

* Xylanase industrial applications
* Directed evolution of proteins
* Rational design of proteins
* Semi-rational design of proteins
* Protein engineering techniques
* Potential risks of protein engineering

# Report location:

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