# Article information:

Digital Twins and AI Reshape Biopharmaceutical Manufacturing  
<https://www.genengnews.com/topics/bioprocessing/digital-twins-and-ai-reshape-biopharmaceutical-manufacturing/>

# Article summary:

1. Quality of a drug product is determined by the manufacturing line, and a well-controlled process yields a consistent product that can save lives.

2. Digital twins and AI technology are being used to improve process control in biopharmaceutical manufacturing.

3. Mechanistic models are gaining in popularity as they allow users to simulate hundreds and thousands of experiments without experimental effort, providing a more accurate picture of the design space.

# 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 “Digital Twins and AI Reshape Biopharmaceutical Manufacturing” provides an overview of how digital twins and artificial intelligence (AI) technology are being used to improve process control in biopharmaceutical manufacturing. The article is written from an objective point of view, presenting both the advantages and disadvantages of using digital twins and AI technology for this purpose. It also provides insights into how mechanistic models can be used to better characterize production processes, such as providing a more accurate picture of the design space.

The article is generally reliable and trustworthy, as it provides evidence for its claims in the form of quotes from experts in the field, such as Mohamed Noor from NIBRT and Anurag Rathore from DBT Center of Excellence for Biopharmaceutical Technology at Indian Institute of Technology in Delhi. Additionally, it cites relevant documents such as the International Conference on Harmonization’s Q8 guidance document which further adds credibility to its claims.

The article does not appear to have any biases or one-sided reporting, as it presents both sides equally with no promotional content or partiality towards either side. It also mentions potential risks associated with using digital twins and AI technology for process control, such as errors due to lack of system knowledge or physical understanding when making predictions during scale-up.

In conclusion, this article is generally reliable and trustworthy due to its objective point of view, evidence provided by experts in the field, citation of relevant documents, lack of bias or one-sided reporting, mention of potential risks associated with using digital twins and AI technology for process control, etc.

# Topics for further research:

* Digital Twins and AI in Biopharmaceutical Manufacturing
* Benefits of Digital Twins and AI in Biopharmaceutical Manufacturing
* Challenges of Digital Twins and AI in Biopharmaceutical Manufacturing
* Mechanistic Modeling for Biopharmaceutical Manufacturing
* International Conference on Harmonization Q8 Guidance Document
* Scale-up Errors in Digital Twins and AI Technology

# Report location:

<https://www.fullpicture.app/item/1bf17b1c95853e7739eb124c4e77fa91>