



AI Solves Superbug Crisis in Just Two Days!

Description

Title: Breakthrough in Antibiotic Resistance Research Using AI

A complex issue that had perplexed microbiologists for a decade was resolved in just two days thanks to a new artificial intelligence (AI) tool. Professor José R. Penadés and his team at Imperial College London dedicated years to understanding why certain superbugs are resistant to antibiotics.

After supplying the AI tool, developed by Google, with a concise prompt regarding his research, it remarkably reached a similar conclusion in only 48 hours. Prof. Penadés expressed his astonishment, as his findings had not been published and thus were inaccessible to the AI model. "I was so taken aback that I asked Google if they had access to my computer," he recounted on BBC Radio Four's Today programme. However, Google confirmed that they did not.

The decade-long research included substantial time spent validating theories, and the researchers believe that had they formulated their hypothesis earlier, countless hours could have been saved. Not only did the AI tool replicate their conclusions, but it also offered additional hypotheses, surprising the research team. "One of its suggestions was something we had never considered, and we're currently investigating that," he noted.

The impact of AI in science is a topic of heated debate. Supporters argue that it fosters scientific progress, while skeptics fear job losses. Prof. Penadés acknowledged these concerns but emphasized the significant potential of AI as a powerful tool for future research. "I genuinely believe this will transform the landscape of science," he asserted, likening his experience to playing a high-stakes match in the Champions League.

Vocabulary List:

1. **Complex** /kəm'pleks/ (adjective): Consisting of many different and connected parts.
2. **Resistant** /rɪ'zɪstənt/ (adjective): Having the ability to fight against something such as a disease.
3. **Hypothesis** /haɪ'pɒθɪsɪs/ (noun): A proposed explanation made on the basis of limited evidence as a starting point for further investigation.
4. **Theories** /'θɪəri:z/ (noun): Systematic ideas intended to explain something often based on general principles.
5. **Transform** /træns'fɔ:m/ (verb): To make a substantial change in form appearance or nature.
6. **Hypotheses** /haɪ'pɒθɪsi:z/ (noun): Plural of hypothesis; assumptions or proposed explanations for phenomena.

Comprehension Questions



Multiple Choice

1. Who led the breakthrough in antibiotic resistance research using AI?

- Option: Prof. José R. Penadés
- Option: Dr. John Smith
- Option: Dr. Jane Doe
- Option: Prof. Anna Green

2. Which institution was mentioned in the text regarding this breakthrough?

- Option: Imperial College London
- Option: Harvard University
- Option: Stanford University
- Option: Oxford University

3. Which tech company developed the AI tool used in the research?

- Option: Google
- Option: Apple
- Option: Microsoft
- Option: Amazon

4. What was the duration within which the AI tool reached a similar conclusion to the researchers?

- Option: 48 hours
- Option: 1 week
- Option: 1 month
- Option: 6 months

5. What significant potential of AI did Prof. Penadés emphasize in the text?

- Option: Powerful tool for future research
- Option: Job losses
- Option: Entertainment purposes
- Option: Financial gains

6. What did the researchers believe could have been saved if they had formulated their hypothesis earlier?

- Option: Countless hours
- Option: Money
- Option: Equipment
- Option: Energy



True-False

- 7. The AI tool developed by Google had access to the unpublished findings of the researchers.
- 8. The researchers at Imperial College London were not surprised by any of the additional hypotheses suggested by the AI tool.
- 9. Prof. Penadés believes that the impact of AI in science is not a topic of debate.
- 10. Prof. Penadés likened his experience with AI to playing a high-stakes match in the World Cup.
- 11. Skeptics of AI fear job losses in the scientific community.
- 12. Prof. Penadés spent a short amount of time validating theories in his research.

Gap-Fill

- 13. The AI tool reached a similar conclusion in only _____ hours.
- 14. Prof. Penadés and his team dedicated years to understanding why certain superbugs are resistant to _____.
- 16. Prof. Penadés emphasized the significant potential of AI as a powerful tool for future _____.
- 17. Supporters argue that AI fosters scientific progress, while skeptics fear _____.
- 18. Prof. Penadés likened his experience with AI to playing a high-stakes match in the _____.

Answer

Multiple Choice: 1. Prof. José R. Penadés 2. Imperial College London 3. Google 4. 48 hours 5. Powerful tool for future research 6. Countless hours

True-False: 7. False 8. False 9. False 10. False 11. True 12. False

Gap-Fill: 13. 48 14. antibiotics 16. research 17. job losses 18. Champions League



Vocabulary quizzes

Multiple Choice (Select the Correct answer for each question.)

1. Which term is used to describe something having a title but no real power or authority?
Option: Integral
Option: Antagonist
Option: Titular
Option: Profound
2. What word best describes something that does not yield easily to force or pressure?
Option: Complex
Option: Resistant
Option: Hypothesis
Option: Theories
3. Which term refers to phenomena that are beyond scientific understanding or the laws of nature?
Option: Supernatural
Option: Whimsical
Option: Anticipated
Option: Aesthetic
4. What word means to modify or make something according to personal preferences or specifications?
Option: Impostor
Option: Cosmetic
Option: Collaboration
Option: Customize
5. Which term describes the ability to adapt or be adapted to many different functions or activities?
Option: Attractive
Option: Cater
Option: Versatility
Option: Innovative
6. What word means too attractive and tempting to be resisted?



- Option: Compact
- Option: Viable
- Option: Attractive
- Option: Irresistible

7. Which term refers to the action of deducing or subtracting something?

- Option: Deduction
- Option: Impostor
- Option: Cosmetic
- Option: Collaboration

8. Which term describes a person who actively opposes or is hostile to someone or something?

- Option: Titular
- Option: Integral
- Option: Antagonist
- Option: Profound

9. Which term means to make a thorough or dramatic change in the form appearance or character of something?

- Option: Individuality
- Option: Complex
- Option: Resistant
- Option: Transform

10. Which term best describes introducing new ideas; original and creative in thinking?

- Option: Hypothesis
- Option: Theories
- Option: Transform
- Option: Innovative

Gap-Fill (Fill in the blanks with the correct word from the vocabulary list.)

11. The speaker delivered a _____ speech that touched everyone in the audience.
12. She _____ to achieve excellence in everything she does.
13. The evening sky was _____ by the fireworks display.
14. Before conducting the experiment scientists formulate a _____ to test.
15. The apartment had a _____ design that made the most of the available space.



16. Expressing your true _____ is important for personal growth and fulfillment.
17. The release of the new iPhone was eagerly _____ by tech enthusiasts.
18. The artwork was praised for its _____ appeal and creativity.
19. Successful projects often result from effective _____ and teamwork.
20. She is a _____ actress who can play a wide range of roles with ease.

Matching Sentences (Match each definition to the correct word from the vocabulary list.)

21. Many people believe in ghosts spirits and other phenomena.
22. The children's book was filled with colorful illustrations and characters.
23. The aroma of freshly baked cookies was making it impossible to resist them.
24. The restaurant aims to to a diverse range of tastes by offering a varied menu.
25. The job offer was very competitive with an salary and benefits package.
26. The subject matter of the research study was extremely requiring detailed analysis.
27. After careful consideration they concluded that the new business plan was not in the current market.
28. In the play the villain played the role of the constantly opposing the protagonist.
29. The old warehouse was into a modern office space with innovative design elements.
30. The tech company prided itself on its approach to developing cutting-edge products.

Answer

Multiple Choice: 1. Titular 2. Resistant 3. Supernatural 4. Customize 5. Versatility 6. Irresistible 7. Deduction 8. Antagonist 9. Transform 10. Innovative

Gap-Fill: 11. Profound 12. Strives 13. Illuminated 14. Hypothesis 15. Compact 16. Individuality 17. Anticipated 18. Aesthetic 19. Collaboration 20. Versatile

Matching sentence: 1. Supernatural 2. Whimsical 3. Irresistible 4. Cater 5. Attractive 6. Complex 7. Viable 8. Antagonist 9. Transform 10. Innovative



CATEGORY

1. Sci/Tech - LEVEL4

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