

Al Solves Superbug Challenge in Just 48 Hours

Description

Tom Gerken

Technology Reporter

A new artificial intelligence (AI) tool has solved a big problem in just two days. Professor José R Penadés and his team at Imperial College London studied why some superbugs are immune to antibiotics for many years.

He used an Al tool called "co-scientist" made by Google. He asked it a simple question about his research. The Al found the answer in just 48 hours. Professor Penadés was amazed because his research was not published and was private. He thought Google had access to his computer, but they said they did not.

The Al not only found the right answer but also gave other ideas that helped the researchers. The team has been trying to understand how superbugs form.

They believe these germs can share parts with viruses to spread between different species. Professor Penadés thinks this AI tool will change science for the better. He feels excited about the future and believes this is a powerful new tool for researchers.

Vocabulary List:

- 1. **Artificial** /ˌɑːr.tɪˈfɪʃ.əl/ (adjective): Made or produced by human beings rather than occurring naturally.
- 2. Superbugs /'su:.pər.bʌqz/ (noun): Bacteria that have become resistant to antibiotic treatment.
- 3. Immune /ɪˈmjuːn/ (adjective): Protected against a particular disease or infection.
- 4. **Research** /'riː.sɜːrtʃ/ (noun): The systematic investigation into and study of materials and sources to establish facts and reach new conclusions.
- 5. **Germs** /dʒɜːrmz/ (noun): Microorganisms especially those that can cause disease.
- 6. Powerful /'paʊə.fəl/ (adjective): Having great power or strength; very effective.

Comprehension Questions

Multiple Choice

1. Who is the Technology Reporter mentioned in the text?



Option: Tom Gerken

Option: Professor José R Penadés

Option: Ratan Naval Tata

Option: Google

2. Where is Professor José R Penadés and his team based?

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

3. What AI tool did Professor José R Penadés use for the research?

Option: Co-scientist

Option: Alexa Option: Siri Option: Cortana

4. How long did it take the AI to find the answer to the simple question posed by Professor José R Penadés? ESL-NEW

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

5. What does Professor Penadés believe the AI tool will do for science?

Option: Change it for the better

Option: Have no impact

Option: Make research slower Option: Decrease innovation

6. What does the team believe superbugs can do to spread between different species?

Option: Share parts with viruses

Option: Disappear Option: Breed faster Option: Become weaker

True-False

7. The Al tool used by Professor José R Penadés was called "co-scientist".



8.	Professor	losé R	Penadés	believed	Google had	accessed	his ı	private	research.

- 9. The AI tool only found the right answer without providing any additional ideas.
- 10. Superbugs have been a focus of study for many years by the team.
- 11. Professor José R Penadés thinks the AI tool will hinder scientific progress.
- 12. The team believes that superbugs can only spread within the same species.

Gap-Fill

13. Professor José R Penadés and his team studied why some superbugs are immune to antibiotics for man
years at College London.
14. The Al found the answer in just hours.
15. Professor José R Penadés believed the AI tool will change science for the better because he felt
about the future.
16. The team has been trying to understand how superbugs
17. According to Professor Penadés, superbugs can share parts with viruses to spread between different
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18. Professor Penadés believes this AI tool will be a powerful new tool for

Answer

Multiple Choice: 1. Tom Gerken 2. Imperial College London 3. Co-scientist 4. 48 hours 5. Change it for the better 6. Share parts with viruses

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

Gap-Fill: 13. Imperial 14. 48 15. excited 16. form 17. species 18. researchers

Vocabulary quizzes



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

1. What is the primary purpose of encryption in cybersecurity?

Option: A. Enhancing privacy

Option: B. Boosting energy efficiency

Option: C. Improving manufacturing processes

Option: D. Reducing stress levels

2. What term is used to describe bacteria that are resistant to multiple antibiotics?

Option: A. Germs

Option: B. Immune cells Option: C. Ceramics Option: D. Industries

3. What is the term for data that has been coded to prevent unauthorized access?

Option: A. Powerful
Option: B. Dangerous
Option: C. Encrypted
Option: D. Threatening

4. Which aspect of data protection focuses on ensuring individuals have control over their personal information?

Option: A. Rehabilitation

Option: B. Stress
Option: C. Privacy
Option: D. Protection

5. Which industry is primarily concerned with the development of aircraft and spacecraft?

Option: A. Manufacturing Option: B. Protection Option: C. Aerospace Option: D. Properties

6. What process involves the production of goods using machinery tools and labor?

Option: A. Consequences

Option: B. Threat

Option: C. Manufacturing Option: D. Research

7. What term refers to something made or produced by human beings rather than occurring naturally?

Option: A. Complex Option: B. Artificial



	Option: C. Immune
	Option: D. Energy
8	. Businesses strive to meet the needs and expectations of which group to ensure success?

Option: A. Customers Option: B. Clutch

Option: C. Electroadhesive Option: D. Redesigned

9. Which sector includes various branches of economic activity such as agriculture manufacturing and services?

Option: A. Industries Option: B. Protection Option: C. Government Option: D. Warrant

10. What are the outcomes or results of a particular action or event? NEWS.COM

Option: A. Stress

Option: B. Consequences

Option: C. Threat Option: D. Immune

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

11	is the process of converting information or data into a code to pre	vent		
unauthorized access.				
12	plays a crucial role in regulating various aspects of society includi	ng policies		
and laws.				
13. Businesses need to understand the needs and preferences of their to provide				
tailored products and services.				
14. Scientific	is essential for advancements in various fields from med	licine to		
technology.				
15. Some viruses and bacteria have evolved to become superbugs due to				



antibiotic resistance.					
16. Excessive	can have negative effects on both physical and mental health.				
17 are often	used in aerospace applications due to their lightweight and heat-				
resistant properties.					
18. The body's	_ system helps protect against infections and diseases.				
19. Cyberattacks pose a significant	to data security and privacy.				
20. Physical therapy is often used in	programs to help patients recover from				
injuries.					
Matching Sentences (Match each definition to the correct word from the vocabulary list.)					
21. Ensuring the of sensitive data is a critical concern for organizations in the digital age.					
22. Some intelligence gathering involves the use of intelligence to analyze large sets of data.					
23. The rise of presents a significant challenge to modern medicine.					
24. Understanding the nature of the universe is a goal pursued by many scientists.					
25. The sector plays a key role in producing goods for consumption.					
26. Sensitive information should be securely to prevent unauthorized access.					
27. Various contribute to the overall economic development of a country.					
28. Renewable sources of play a crucial role in sustainable development.					
29. Identifying and mitigating cybersecurity is essential for protecting digital assets.					
30. Practicing mindfulness and relaxation techniques can help reduce levels.					

Answer

Multiple Choice: 1. A. Enhancing privacy 2. A. Germs 3. C. Encrypted 4. C. Privacy 5. C. Aerospace 6. C. Manufacturing



7. B. Artificial 8. A. Customers 9. A. Industries 10. B. Consequences

Gap-Fill: 11. Encryption 12. Government 13. Customers 14. Research 15. Powerful 16. Stress 17. Ceramics 18. Immune 19. Threat 20. Rehabilitation

Matching sentence: 1. Protection 2. Artificial 3. Superbugs 4. Complex 5. Manufacturing 6. Encrypted 7. Industries 8. Energy 9. Threat 10. Stress

CATEGORY

1. Sci/Tech - LEVEL1

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