



Gut Protein Found to Neutralise Bacteria

Description

Researchers have found a protein in the gut that helps stop bacteria from spreading. This protein, called intelectin-2, could be used to treat diseases like inflammatory bowel disease in the future. Intelectin-2 is part of a group of proteins known as lectins, which attach to specific sugar molecules.

A team from MIT discovered that intelectin-2 operates in two ways. First, it strengthens the mucus lining in the gastrointestinal tract, protecting the intestinal walls. If this barrier breaks, intelectin-2 can capture and kill bacteria.

The researchers studied this protein using different methods, examining tissue and gut bacteria from mice and humans, as well as the protein itself in the lab. They found that intelectin-2 targets galactose, a simple sugar in mucus and on some bacteria.

Some bacteria that intelectin-2 targets are resistant to antibiotics, making this discovery important for drug development. These include bacteria like *Staphylococcus aureus*, which can cause serious infections.

The study suggests intelectin-2 is crucial in defending gut health. It could lead to new drugs that either copy the protein's actions or boost its effects naturally in the body. Researchers believe these ancient proteins could be used to fight antibiotic resistance by using our body's natural defenses.

The findings have been published in *Nature Communications*.

Vocabulary List:

1. **lectins** //ˈlektɪnz// (noun): proteins that stick to certain sugar molecules
2. **mucus** //ˈmju:kəs// (noun): thick liquid that covers and protects parts
3. **gastrointestinal** //,gæstrəʊɪn'testɪnəl// (adjective): relating to the stomach and small intestine
4. **barrier** //ˈbæriə// (noun): something that stops movement or entry
5. **resistant** //rɪ'zɪstənt// (adjective): not easily harmed or killed by something
6. **antibiotics** //,æntɪbaɪ'ɒtɪks// (noun): drugs used to kill bacteria in the body

Comprehension Questions



Multiple Choice

1. What is the name of the protein found in the gut that helps stop bacteria from spreading?
Option: Galactose
Option: Intelectin-2
Option: Staphylococcus aureus
Option: Mucus
2. Which group of proteins does intelectin-2 belong to?
Option: Enzymes
Option: Hormones
Option: Lectins
Option: Antibodies
3. What does intelectin-2 strengthen in the gastrointestinal tract?
Option: Intestinal walls
Option: Mucus lining
Option: Bacteria
Option: Absorption rate
4. Which simple sugar does intelectin-2 target?
Option: Glucose
Option: Fructose
Option: Sucrose
Option: Galactose
5. What type of bacteria does intelectin-2 target that is resistant to antibiotics?
Option: Escherichia coli
Option: Staphylococcus aureus
Option: Salmonella
Option: Clostridium
6. In which journal were the findings of the study published?
Option: Nature
Option: Nature Communications
Option: Science
Option: Cell



True-False

7. Intelectin-2 can capture and kill bacteria if the mucus lining gets damaged.
8. The study was conducted only on human tissue.
9. Researchers believe that intelectin-2 can help fight antibiotic resistance.
10. Intelectin-2 is a type of enzyme found in the gut.
11. The researchers used only one method to study intelectin-2.
12. Intelectin-2 is not related to gut health.

Gap-Fill

13. Researchers found a protein called intelectin-2 that helps stop bacteria from spreading and it is part of a group known as _____ .
14. Intelectin-2 strengthens the mucus lining in the gastrointestinal tract, protecting the _____ walls.
15. Some targeted bacteria by intelectin-2, like Staphylococcus aureus, can cause serious _____ .
16. The findings about intelectin-2 were published in _____ Communications.
17. The study suggests that intelectin-2 is crucial for defending gut _____ .
18. Researchers believe these ancient proteins can help fight antibiotic _____ .

Answer

Multiple Choice: 1. Intelectin-2 2. Lectins 3. Mucus lining 4. Galactose 5. Staphylococcus aureus
6. Nature Communications

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

Gap-Fill: 13. lectins



14. intestinal 15. infections 16. Nature 17. health 18. resistance

Vocabulary quizzes

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

1. What often arises from opposing interests or values?

Option: Agreement

Option: Conflict

Option: Sympathy

Option: Indifference

2. What feeling is commonly associated with wishing one had made a different decision?

Option: Joy

Option: Regret

Option: Relief

Option: Excitement

3. Which term describes the system responsible for digestion and absorption of food?

Option: Respiratory

Option: Gastrointestinal

Option: Nervous

Option: Musculoskeletal

4. What type of medication is used to treat bacterial infections?

Option: Analgesics

Option: Antibiotics

Option: Antivirals

Option: Vaccines

5. What substance produced in the body helps to protect and lubricate membranes?

Option: Enzyme

Option: Mucus

Option: Bile

Option: Saliva

6. What term refers to the habits and behaviors that influence an individual's health?



- Option: Lifestyle
- Option: Occupation
- Option: Education
- Option: Income

7. What are beliefs about how events should unfold called?

- Option: Perceptions
- Option: Expectations
- Option: Assumptions
- Option: Realities

8. What term describes changes in the body related to hormones?

- Option: Hormonal
- Option: Emotional
- Option: Physical
- Option: Mental

9. What term is used for organisms that are not affected by certain treatments?

- Option: Sensitive
- Option: Resistant
- Option: Susceptible
- Option: Vulnerable

10. What term is used for the release of substance from the body?

- Option: Reception
- Option: Absorption
- Option: Discharge
- Option: Ingestion

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

11. The _____ approach addresses the mind-body connection in therapy.

12. Certain chemicals act as _____ to slow down biochemical reactions.

13. Certain foods may serve as _____ for allergic reactions.

14. The _____ is a part of the retina responsible for central vision.

15. In the study of biology, various types of _____ are examined.



16. Patients were _____ for various conditions before entering the study.
17. Biology focuses on understanding how _____ interact within cells.
18. Certain substances can be _____ and harmful to human health.
19. He was diagnosed with a rare _____ that affects the immune system.
20. Adopting a healthier _____ can improve overall well-being.

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

21. Setting realistic expectations can greatly reduce stress and disappointment.
22. Conflict often arises when individuals have differing viewpoints or interests.
23. Gastrointestinal health is essential for proper nutrient absorption and digestion.
24. Antibiotics play a crucial role in treating bacterial infections effectively.
25. Somatic therapies often focus on the connection between body and mind.
26. Regret can sometimes lead to personal growth as individuals reflect on past choices.
27. Mucus protects the lining of various body cavities from irritation.
28. Hormonal changes can significantly affect both physical and emotional well-being.
29. Discharge from a wound can indicate infection or the healing process.
30. Various factors can act as triggers for allergies and asthma attacks.

Answer

Multiple Choice: 1. Conflict 2. Regret 3. Gastrointestinal 4. Antibiotics 5. Mucus 6. Lifestyle 7. Expectations 8. Hormonal 9. Resistant 10. Discharge

Gap-Fill: 11. somatic 12. inhibitors 13. triggers 14. macula 15. organisms 16. screened 17. molecules 18. toxic 19. syndrome 20. lifestyle

Matching sentence: 1. expectations 2. conflict 3. gastrointestinal 4. antibiotics 5. somatic 6. regret 7. mucus 8. hormonal 9. discharge 10. triggers



CATEGORY

1. Health - LEVEL3

POST TAG

1. B1
2. Bacteria
3. ESL learning
4. esl news
5. Gut
6. Level 3
7. Neutralize
8. protein
9. reading level L3

Tags

1. B1
2. Bacteria
3. ESL learning
4. esl news
5. Gut
6. Level 3
7. Neutralize
8. protein
9. reading level L3

Date Created

2026/04/07

Author

aimeeyoung99

ESL-NEWS.COM