

## SCOPUS AI

Scopus AI generuje odpowiedzi na dowolne naukowe pytania na podstawie abstraktów i tytułów artykułów, ponieważ baza Scopus dysponuje takimi właśnie informacjami. Zakres czasowy bazy: od 2013 r. do dziś.

Baza dostępna jest z komputerów w sieci uczelnianej, po wejściu na bazę Scopus należy wybrać zakładkę Scopus AI:

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- ↳ What role does multisensory integration play in the formation of emotional memories?
- ↳ How do urban green spaces contribute to mental well-being?
- ↳ How can game theory be applied to corporate compliance programs?

Należy wpisać pytanie w języku angielskim, np:

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### Start exploring

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What would you like to learn more about?

what is antibiotic resistance?



#### Search examples

- ↳ What role does multisensory integration play in the formation of emotional memories?
- ↳ How do urban green spaces contribute to mental well-being?
- ↳ How can game theory be applied to corporate compliance programs?

Poniżej wyświetlana jest odpowiedź w postaci podsumowania:

### what is antibiotic resistance?

#### Summary

Antibiotic resistance refers to the ability of bacteria to resist the effects of an antibiotic, making the bacteria survive and continue to multiply. Here's a breakdown of antibiotic resistance based on the provided abstracts:

- **Definition:** Antibiotic resistance is a global health crisis affecting human and animal health, as well as the environment [1](#) [2](#) [3](#) .
- **Impact:** It reduces therapeutic options for infectious diseases and poses a significant challenge to the treatment of bacterial, parasitic, viral, and fungal infections [4](#) [5](#) [6](#) .
- **Causes:** Antibiotic resistance is attributed to factors such as overuse and misuse of antibiotics in human health, agriculture, and animal husbandry, as well as poor sewage and waste management [2](#) [6](#) .
- **Solutions:** Efforts to combat antibiotic resistance include data collection, reducing antibiotic abuse, emphasizing antibiotic stewardship, supporting resistance-related research, and developing new antibiotics with multiple modes of action and longer 'resistance windows' [7](#) [8](#) [9](#) .

In summary, antibiotic resistance is a critical issue that requires coordinated efforts across various sectors to address its impact on human and animal health, as well as the environment. The overuse and misuse of antibiotics are significant contributors to this problem, and addressing it necessitates a multifaceted approach, including improved stewardship and the development of new antibiotics with novel mechanisms of action [1-3, 5, 7-9].

## Następnie rozszerzona odpowiedź:

Expanded summary ^

Antibiotic resistance occurs when bacteria develop mechanisms to prevent or mitigate the effects of antibiotics, leading to reduced susceptibility to these agents or preventing them from reaching their targets effectively [1](#) [2](#) . The causes of antibiotic resistance are multifaceted and include enzymatic alteration of antibiotics, changes in antibiotic targets, and prevention of antibiotic access to their targets [1](#) . The development of antibiotic resistance in bacteria is driven by factors such as overuse and misuse of antibiotics in both human and animal health, as well as in agriculture and livestock [3](#) [4](#) [5](#) . The consequences of antibiotic resistance are far-reaching and include increased healthcare costs, prolonged hospital stays, and higher mortality rates due to untreatable infections [6](#) [7](#) . The global burden of antibiotic resistance is substantial, with estimates suggesting that it could cause 10 million deaths worldwide by 2050 if current trends persist [6](#) [8](#) .

### Strategies to Combat Antibiotic Resistance:

- **Promotion of Correct Antibiotic Use:** Encouraging the appropriate use of antibiotics is crucial in combating the rise of antibiotic resistance [9](#) .
- **Understanding Resistance Mechanisms:** A thorough understanding of the mechanisms of antibiotic resistance, including their origins, evolution, selection, and dissemination, is essential to confront this increasing problem [5](#) .
- **Development of New Antibiotics:** Efforts to discover and develop new antibiotics are crucial in addressing the challenge of antibiotic resistance [3](#) .
- **Global Initiatives:** Various local and global initiatives are being undertaken to protect existing antibiotics and encourage the development of newer agents to combat antibiotic resistance [10](#) .

In conclusion, antibiotic resistance is a complex and pressing global health issue driven by various factors such as overuse and misuse of antibiotics. The consequences of antibiotic resistance are significant, leading to increased healthcare costs and mortality rates. However, there are ongoing efforts to combat this problem, including promoting the appropriate use of antibiotics, understanding resistance mechanisms, developing new antibiotics, and implementing global initiatives to protect existing antibiotics and encourage the development of newer agents.

Is this expanded summary more helpful than the original one?

[↩ Yes](#) [↩ No](#)

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Tu możemy wyświetlić wszystkie odwołania z boku ekranu:

[1-3, 5, 7-9].

### Expanded summary

Antibiotic resistance occurs when bacteria develop mechanisms to prevent the effects of antibiotics, leading to reduced susceptibility to these agents by preventing them from reaching their targets effectively [1, 2]. The causes of antibiotic resistance are multifaceted and include enzymatic alteration of antibiotic targets, and prevention of antibiotic access to their targets [1]. The development of antibiotic resistance in bacteria is driven by factors such as the misuse of antibiotics in both human and animal health, as well as in agriculture and livestock [3, 4, 5]. The consequences of antibiotic resistance are far-reaching, including increased healthcare costs, prolonged hospital stays, and higher mortality due to untreatable infections [6, 7]. The global burden of antibiotic resistance is substantial, with estimates suggesting that it could cause 10 million deaths by 2050 if current trends persist [6, 8].

#### Strategies to Combat Antibiotic Resistance:

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In conclusion, antibiotic resistance is a complex and pressing global health issue caused by various factors such as overuse and misuse of antibiotics. The consequences are significant, and it is essential to implement effective strategies to combat this growing threat.



### Expanded summary references



Reference 1 • 4 citations

#### Molecular mechanisms of antibiotic resistance - part II

Sharkey, L.K.R. [↗](#), O'Neill, A.J. [↗](#)

*Bacterial Resistance to Antibiotics: From Molecules to Man* [↗](#) 2019

[Show abstract](#) [↕](#)

Reference 2 • 3 citations

#### Antibiotic resistance

Périchon, B. [↗](#), Courvalin, P. [↗](#), Stratton, C.W. [↗](#)

*Encyclopedia of Microbiology* [↗](#) 2019

[Show abstract](#) [↕](#)

Reference 3 • 3 citations

#### Global concern of antimicrobial effectiveness and resistance combat strategies

Sahoo, S. [↗](#), Mohanty, J.N. [↗](#), Behera, T.R. [↗](#), (...), Das, S.R. [↗](#)

*Journal of Medical Pharmaceutical and Allied Sciences* [↗](#) 2022

[Show abstract](#) [↕](#)

Reference 4 • 80 citations

#### Antibiotic resistance in agriculture: Perspectives on upcoming strategies to overcome upsurge in resistance

Mann, A. [↗](#), Nehra, K. [↗](#), Rana, J.S. [↗](#), Dahiya, T. [↗](#)

*Current Research In Microbial Sciences* [↗](#) 2021

[Show abstract](#) [↕](#)

Reference 5 • 0 citations

Każde odwołanie w tekście możemy podejrzeć po kliknięciu z boku ekranu:

**Impact of Misuse on Public Health:**

- The overuse and misuse of antibiotics have resulted in a high frequency of resistance among medically important bacterial pathogens, posing a significant global health problem [4](#) [5](#).
- If the current scenario persists, there is a risk of entering a post-antibiotic era where drugs might not be able to treat even the simplest of infections [6](#).

[1-3, 5, 7-9].

Expanded summary

Antibiotic resistance occurs when bacteria develop mechanisms to prevent the effects of antibiotics, leading to reduced susceptibility to these agents by preventing them from reaching their targets effectively [1](#) [2](#). The causes of antibiotic resistance are multifaceted and include enzymatic alteration of antibiotic targets, and prevention of antibiotic access to their targets [1](#). The development of antibiotic resistance in bacteria is driven by factors such as the misuse of antibiotics in both human and animal health, as well as in agriculture and livestock [3](#) [4](#) [5](#). The consequences of antibiotic resistance are far-reaching and include increased healthcare costs, prolonged hospital stays, and higher mortality due to untreatable infections [6](#) [7](#). The global burden of antibiotic resistance is substantial, with estimates suggesting that it could cause 10 million deaths by 2050 if current trends persist [6](#) [8](#).

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In conclusion, antibiotic resistance is a complex and pressing global health problem caused by various factors such as overuse and misuse of antibiotics. The consequences of antibiotic resistance are far-reaching and include increased healthcare costs, prolonged hospital stays, and higher mortality due to untreatable infections. The global burden of antibiotic resistance is substantial, with estimates suggesting that it could cause 10 million deaths by 2050 if current trends persist. Strategies to combat antibiotic resistance include promoting correct antibiotic use, understanding resistance mechanisms, developing new antibiotics, and implementing global initiatives to improve existing antibiotics and encourage the development of newer agents to combat antibiotic resistance.

Expanded primary reference ×

Reference [5](#) • 0 citations

**Prevalence of Antibiotic Resistance Genes and Bacterial Community Composition in a River Influenced by a Wastewater Treatment Plant**

Marti, E. [↗](#), Jofre, J. [↗](#), Balcazar, J.L. [↗](#)

**Wastewater and Public Health: Bacterial and Pharmaceutical Exposures** [↗](#)

2015

[Open document details](#) [↗](#)

**Abstract**

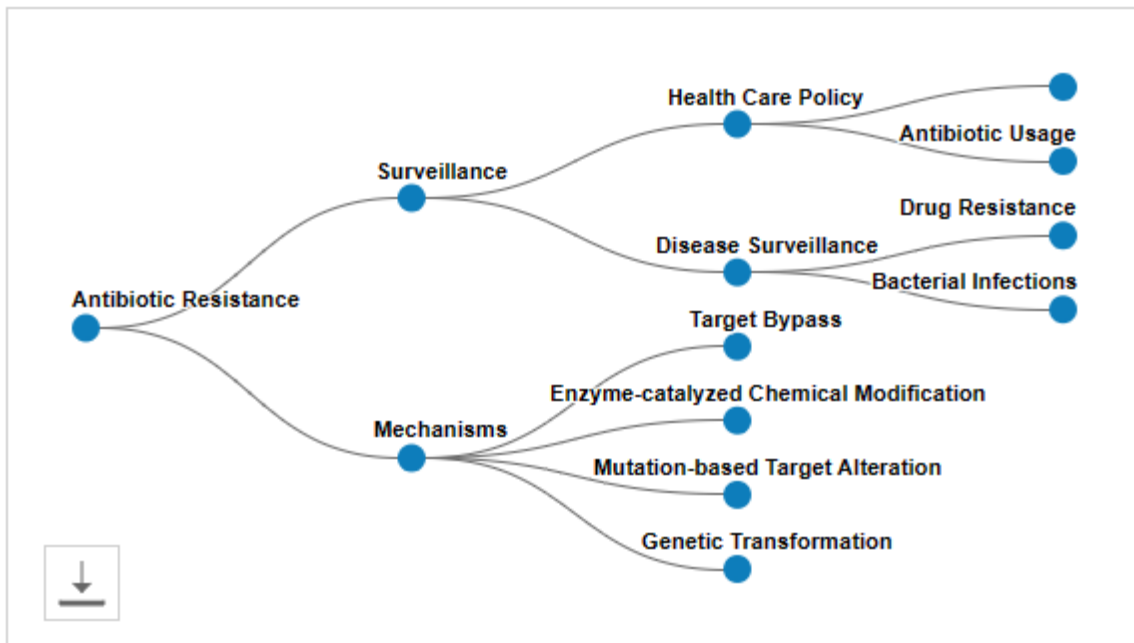
Antibiotic resistance represents a significant global health problem due to the use and misuse of antibiotics, which favors the emergence and spread of resistant bacteria. Since the first warning of antibiotic resistance [1], this phenomenon has increased dramatically and as a result, 70% of all hospital-acquired infections in the United States are resistant to at least one family of antibiotics [2]. The treatment of these infections leads to higher healthcare costs because these therapies require longer hospital stays and more expensive drugs. To confront this increasing problem, it is necessary to understand the ecology of antibiotic resistance, including their origins, evolution, selection and dissemination [3]. © 2016 by Apple Academic Press, Inc.

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Sporządzona na podstawie podsumowania jest także mapa pojęć:

### Concept Map



Is this Concept map helpful?

Yes

No

Feedback – oceniając odpowiedź masz wpływ na rozwój aplikacji i generowanie coraz trafniejszych i rzetelniejszych odpowiedzi w przyszłości

Następnie wyświetlane są informacje o badaczach zajmujących się tą tematyką, mających największą liczbę cytowań :

Topic experts



**Zhu, Yongguan Y.**

| 4,438 citations 79 matching documents 36 h-index

Yongguan Zhu is an expert in antibiotic resistance due to their research on the co-occurrence of antibiotic resistance genes and pesticide removal in soil systems, as well as their work on the increase of antimicrobial resistance in invasive land snails driven by urbanization. Their publications demonstrate a deep understanding of the interactions between microbial processes, environmental factors, and the development of antibiotic resistance.

[Preview profile](#)

**Su, Jianqiang J.**

| 9,576 citations 77 matching documents 63 h-index

Jianqiang Su is an expert in antibiotic resistance, evident from their research on the abundance of environmental antibiotic resistance genes and the inhibition of plasmid-mediated horizontal gene transfer of antibiotic resistance genes. Their work on the spatiotemporal changes of antibiotic resistance and potential pathogens in kindergarten dust showcases their expertise in understanding the dynamics of antibiotic resistance in various environments.

[Preview profile](#)

**Torres, Carmen C.**

| 10,646 citations 90 matching documents 65 h-index

Carmen Torres is an expert in antibiotic resistance, as demonstrated by their research on the prevalence, antimicrobial resistance, and genetic lineages of *Staphylococcus aureus*, as well as their work on the detection of linezolid and vancomycin resistant

## what is antibiotic resistance?

### Summary

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- **Solutions:** Efforts to combat antibiotic resistance include data collection, reducing antibiotic abuse, emphasizing antibiotic stewardship, supporting resistance-related research, and developing new antibiotics with multiple modes of action and longer 'resistance windows' [7](#) [8](#) [9](#) .

In summary, antibiotic resistance is a critical issue that requires coordinated efforts across various sectors to address its impact on human and animal health, as well as the environment. The overuse and misuse of antibiotics are significant contributors to this problem, and addressing it necessitates a multifaceted approach, including improved stewardship and the development of new antibiotics with novel mechanisms of action [1-3, 5, 7-9].

### Expanded summary

Antibiotic resistance occurs when bacteria develop mechanisms to prevent or mitigate

### References

- 1 Antibiotic resistance, a cross-functional issue (One Health)  
Madec J.-Y.  
*Revue de l'Infirmiere* ↗ 2023
- 2 Antibiotic resistance—A global crisis  
Elisabeth Z.M.  
*Antibiotics - Therapeutic Spectrum and Limitations*  
↗  
2023
- 3 Molecular mechanisms of antibiotic resistance revisited  
Darby E.M., Trampari E., Siasat P., (...), Blair J.M.A.  
*Nature Reviews Microbiology* ↗ 2023

[Show all 9 references](#)

### Foundational documents

3,852 citations

Origins and evolution of antibiotic resistance  
J.E., Davies, Julian E., D.R., Davies, D. R.  
*Microbiology and Molecular Biology Reviews* ↗ 2010

2,592 citations

Molecular mechanisms of antibiotic resistance  
J.M., Blair, Jessica M.A.,  
M.A., Webber, Mark Alexander, A.J., Baylay, Alison J.  
(...), L.J., Piddock, Laura J.V.  
*Nature Reviews Microbiology* ↗ 2015

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Foundational documents – wyświetlane z prawej strony, obok przypisów, są najbardziej wpływowymi dokumentami w bazie danych Scopus na dany temat i otrzymały największą liczbę cytowań z użytych do odpowiedzi abstraktów artykułów.



Na koniec, w celu poszerzenia swojej wiedzy, możemy skorzystać z zaproponowanych przez Scopus AI kolejnych pytań związanych z tematem:

Go deeper

↳ How does the misuse of antibiotics contribute to the development of antibiotic resistance?

↳ What are the main mechanisms by which bacteria acquire antibiotic resistance?

↳ How can we prevent the spread of antibiotic resistance in healthcare settings?

## How does the misuse of antibiotics contribute to the development of antibiotic resistance?

### Summary

The misuse of antibiotics contributes to the development of antibiotic resistance through several mechanisms, as supported by the academic abstracts:

#### **Mechanisms of Antibiotic Resistance Development:**

- Misuse or overuse of antibiotics has led to the fast development of antibiotic resistance, with bacteria acquiring resistance through horizontal or vertical transmission [1](#) [2](#) .
- Genetic alterations of bacteria caused by misuse of antibiotics lead to the evolution of resistance genes and the development of multiple drug-resistant bacteria [1](#) [2](#) [3](#) .

#### **Impact of Misuse on Public Health:**

- The overuse and misuse of antibiotics have resulted in a high frequency of resistance among medically important bacterial pathogens, posing a significant global health problem [4](#) [5](#) .
- If the current scenario persists, there is a risk of entering a post-antibiotic era where drugs might not be able to treat even the simplest of infections [6](#) .

#### **Consequences and Urgent Need for Action:**

- The extensive use and misuse of antibiotics promote the emergence and dissemination of antibiotic-resistant bacteria, presenting a growing global healthcare crisis [7](#) .
- Addressing the problem of resistance is essential and requires the discovery and development of novel antibiotics, continuous drug discovery, and effective global antibiotic stewardship to reduce misuse [3](#) [4](#) .

In conclusion, the misuse of antibiotics contributes to the development of antibiotic resistance through genetic alterations, leading to the evolution of resistance genes and