

# Antibiotic resistant bacteria - lab report example

[Science](#), [Biology](#)



## **Antibiotic Resistant Bacteria**

RESISTANCE TO ANTIBIOTICS Antibiotic resistance, according to Chadwick, , is a form of resistance to drugs by microorganism causing diseases such as bacteria and plasmodium. In this case, these microorganisms are able to survive even after they are exposed to one or more types of antibiotics.

Majority of microbial are resistance to a particular type of antibiotics.

However, there exist some bacteria that are resistance to numerous antibiotics. Collins (2002) describes them as MDR (multidrug resistant) or superbugs. Multiple researchers have categorized drug resistance as either induced genetic mutation or spontaneous. Through natural selection mechanism, the organisms that survive the killer antibiotic give rise to a new generation of resistant bacteria.

This article analyzes various ways on how the menace of drug resistance can be curbed. To achieve the objectives, the article focuses on research done by experts on the issues and possibilities of mending any loopholes in the research so as to eliminate cases of drug resistance.

### RESISTANCE TO ANTIBIOTICS

Available data in the health sector shows that some of the diseases that medical practitioners used to cure with ease are becoming more expensive and difficult to cure. Moreover, the WHO (world health organization) has a recently been announcing the rising trend in the demand of new types of antibiotic. In this, the global body claims that the existing antibiotics have consistently been failing to eliminate some microorganisms, Ochiai (2011).

The data has clearly indicated that the cases of drug resistance by microbial is on a rising spree. Though the data is consistent with the many deaths

resulting from formerly curable diseases, experts have not been able to provide sufficient evidence of new resistant mechanisms apart from the ancient rationale of gene resistance, p. 158. To close the information gap, Collins (2002) suggests that researchers have to find out a justification for the new resistance mechanism.

Among the many techniques that used to eliminate cases of drug resistance, completion of antibiotic dosage has proved to be quite reliable. Shnayerson & Plotkin (2003) declare that when a patient successive undergoes a complete antibiotic therapy, microbial is given little time to mutate. In the circumstance that the treatment is not completed, a new generation of bacteria that cannot be eliminated with that particular drug would begin p. 526. On the other hand, introduction of a mild form of bacteria in the form of vaccination has failed to curb resistance. Coates (2012) asserts that the immune system of a human being can not generate strong antibodies to defeat mutated bacteria.

A large number of studies done on drug resistance have not solved the problem of drug resistance by bacteria. Coates (2012) laments that drug resistance studies are full of errors and mistakes and hence are unreliable. Regrettably, most of the have only focused on launching new antibiotics now and then. The study I would design to deal with the antibiotic menace would focus on the enzyme that the bacteria secretes to counter the effects of the antibiotics.

## References

Chadwick, D. (2011). Antibiotic resistance origins, evolution, selection, and spread. Chichester, England: Wiley.

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Coates, A. (2012). Antibiotic resistance. Heidelberg: Springer.

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Collinson, P. (2002). Nelson modular science. Cheltenham: Nelson Thornes.

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Ochiai, E. (2011). Chemicals for life and living. Heidelberg: Springer.

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Bottom of Form

Shnayerson, M., & Plotkin, M. (2003). The killers within: The deadly rise of drug-resistant bacteria. Boston: Back Bay.