

Chemotherapeutic agents of control

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



Chemotherapeutic Agents of Control: Introduction: Chemotherapeutic agents are chemical substances used to treat various forms of infectious diseases. The chemotherapeutic agent works by stopping the bacteria from reproducing. There are two different kinds of chemotherapeutic agents. The first kind is an antibiotic, which slow down the growth of microorganisms. The second kind of chemotherapeutic agent is synthetic drugs. Synthetic drugs are artificially made in a laboratory. Chemotherapy began in the 1940s and is now a multi-billion dollar industry.

Different antibiotics and synthetic drugs all have different modes of actions and can have several different possibilities of side effects. Antibiotics work by finding something in the pathogen that is different in the host cell and attacks it to stop the pathogen from reproducing and causing more harm. The side effects can range from loss of hearing all the way to discoloration of the teeth. Some may take these drugs and have no side effects at all except to obtain better health. While others may not receive any good from the medication and have horrible side effects.

The mode of action also has a wide range of possibilities depending on which drug is taken. The mode of action can range from inhibition of the cell wall all the way to destruction of the cell membrane and much more. Each and every chemotherapeutic agent varies with their antimicrobial activity. This is needed because every disease is very different. Purpose: The purpose of this experiment is to determine that different chemotherapeutic agents are needed to treat different kinds of diseases.

Since there is a wide range of possibilities this experiment is needed to determine which medication is best for certain types of microbial

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metabolism. This way we can evaluate the antimicrobial's reaction to different chemotherapeutic agents. What reaction will the antimicrobial have on the chemotherapeutic agents that will be used in this experiment? Hypothesis: All chemotherapeutic agents will affect the antimicrobial, although one chemotherapeutic agent will be much more effective than the other chemotherapeutic agents.

Expectations: I expect one chemotherapeutic agent to be much more effective on this certain culture. This will be the best chemotherapeutic agent to treat this certain antimicrobial disease. Materials: Petri dish Sterile cotton swabs Culture (Escherichia coli, Serratia marcescens, Bacillus subtilis, Enterobacter cloacal, Staph epidermidis) Antibiotics (Streptomycin, SSS, Erythromycin, Chloramphenicol, Kanamycin, Novobiocin, Tetracycline, Penicillin) Sharpie Bunsen burner Forceps Millimeter ruler