Revolutionary QM212

Abstract:

A new process in bio-chemistry involves the manipulation of molecules to defeat diseases, viruses, chemical warfare, and to reduce the cost of bio-chemical engineering. This new process is refined in that the researcher utilizes new computer technology to model the behavior of certain molecules to insert a "slot" for discarding unwanted foreign objects. These unwanted foreign objects are discarded by fixing the slot to fit the objects. This slot can be customized, through manipulation and modelling, to fit many different objects. Therefore, objects such as viruses, poisonings, or bacteria, could be jetted out of ones body. This aspect could one day benefit millions of people around the world.

Chemical Process:

Teams from universities successfully inserted instructions for building an anti-fluorescein antibody in the DNA of bacteria. This antibody binds with fluorescein molecules. Into this chunk of material, they inserted instructions for building a metal-ion binding sight. They discovered where to put this slot by simulating the antibody on a large computer. The resulting product revealed an anti-fluorescein antibody which binds to metal ions. After physically inserting the genetic code into E. coli. bacteria, the researchers had a large batch of a new compound which they named QM212. When copper was added to this new batch, it binded with the metal-ion binding sight, decreasing the fluorescent emissions.

Applications:

The human immune system already uses similar antibodies for similar tasks. Natural antibodies conform to the shape of foreign bodies and bind to the outer surface. They then release enzymes to break down the substance. In the experiment, copper acted as the foreign body while QM212 was the antibody.

One application of this process could be used by the military. The military, utilizing bio-chemical tools, could engineer an antibody which binds with nerve gas and splits each molecule. This

could be accomplished by first of all searching the Brookhaven database for a proper antibody. Then, using large mainframe computers, one can manipulate models of the antibody and create a binding sight for the nerve gas molecules. Then, the soldier would inject himself with the antibodies when he is nerve gased.

Another application of this process could be used by bio-chemists in fighting the AIDS epidemic. If an antibody was engineered to conform to the AIDS virus, it could break it in half and dispose of it.

Finally, using E. coli., synthetic antibodies replacing current vaccines could be mass produced. Instead of growing cultures of a disease then killing them for use in vaccines, one could produce one antibody which conforms to the disease then reproduce this with E. Coli.

Impacts:

The impact of these applications could benefit people around the world. Soldiers would not die (and continue killing like blind mice) because of the nerve gas serum.

The AIDS epidemic would halt as announcements of a new product which would desist the AIDS virus fill the radio waves. AIDS is increasing exponentially and this would halt its fatal expansion.

Also, biologists would no longer waste money in replicating vaccines. A mini-computer would be used to replicate synthetic antibodies instead.

Creating molecules with the uncanningly precise seek-and-destroy capabilities of natural antibodies is an exciting step in replicating nature's fascinating immune system.

Bibliography

Uehling, Mark D. "Birth of a Molecule." February 1992, p. 74