

I think that it could be possible to create new antibiotics by changing randomly the chemical structure.

The idea is to modify the organism that produces the antibiotic (for example the *Penicillium* fungi), using ionizing radiation (radioactivity, electron gun or other means) to induce changes in the genome that encode the production of the antibiotics.

I think that it could be possible to use a laboratory robot to produce a great set of Petri dishes containing the same human tissues, the same bacterial infection and the genetically modified organism.

If the antibiotic destroy the bacteria, and leaves unharmed the human tissue through automatic measurement (camera, microscopy or biosensors), then a genetic sequencing could give the structure of the possible antibiotic; there is a first in-vitro test of antibiotic drug.

I think that the same method could be used to try to treat certain types of cancer, using cancer tissues and healthy tissue of the same patient in two different Petri dishes, and try different genetically modified organism in the two Petri dishes; if the organism destroys the tissue with the defective gene and leave unchanged the healthy tissue, then there is a possible cure using the genetic sequencing of the organism to study the protein or molecules encoded.