Taking the Pig Iron and Salicylic Acid solution to antibiotics resistance

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Resistance to antibiotics is the one consistent problem in modern medicine. The pharmaceutical industry has been under constant pressure to develop new antibiotics to combat antibiotic-resistant bacteria. One chemical already has a small place in the arsenal of antibiotics: pig iron.

The research team in Spain has been studying the pig iron supplement to control pneumococcal and staphylococcal infections for several years, but up to now, the concept has been too small to function in humans.

Recently, however, scientists from the Raul Castro Centre for Molecular Medicine in Algeciras has succeeded in demonstrating in mice that it works as a legitimate inhibitor of resistance to this particular antibiotic.

The Pig Iron-Salicylic Acid Inhibitor Enhances the Ability of Antibiotic Resistance Bacteria To Respond to Lower Levels of Salicylic Acid in Ophthalmology

They used a bacterial colony that was resistant to penicillin. In experiments carried out in mice, they used two combinations of salicylic acid and iron to inhibit their survival.

In cells grown in the mouse eye, the combination was even better, reducing the survival of the resistant bacteria by a factor of five.

The protein within this mixture is called â€œAC7â€. Just one amino acid change into â€œAC6â€ produces the effect. It is being discovered and characterized for the first time and is currently under patent.

â€œWe are delighted to have found a candidate for the first non-resistance therapeutic in the history of this fieldâ€, according to Jody Prehil, lead researcher on the project.

â€œIn the 1950s, antibiotic resistance was one of the most serious problems in the world. Today, it poses a major threat to public health and to the pharmaceutical industryâ€, he added.

European and American governments and the World Health Organization have warned against the risks posed by antibiotic resistance. In addition, the microbes that produce resistance (various types of bacteria in the human body) are specific to humans.

More than 85% of the worldâ€™s total stock of some 50,000 registered bacterial pathogens are reported to be resistant to the first-line antibiotics that we use today, according to the World Health Organization (WHO).

In 2008, the Spanish government passed a law prohibiting the use of more than half a million doses of antibiotics that are in use in the general population per year.

The pork industry in Spain has been hit particularly hard by antibiotic-resistant bacteria.

Inspectors from EU regulations have required that veterinary inspectors in agriculture laboratories carry out specific protocol to protect against the use of these medicines on pig animals. They also check the residues of penicillin in pig food.

The chicken industry has also experienced resistance problems. In particular, two species, the Mexican chicken Chilly Chipotle and the Mexican chicken Coronado are known to be resistant to penicillin.

A Close Up Of A Cat Wearing A Tie