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**ANTIBIOTIC APOCALYPSE: SHOULD THE U.S. STILL ALLOW MEAT TO BE PROCESSED IN CHINA AFTER NEWS OF SUPERBUGS?**

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*National Geographic* dramatically called an animal in China the “Apocalypse Pig” after scientists found evidence that the pig harbored bacteria that was resistant to even the strongest antibiotics. Colistin-resistant bacteria was discovered in a pig from an intensive farm near Shanghai, and it led to a terrifying discovery. [Colistin](http://cid.oxfordjournals.org/content/40/9/1333.full%22%20%5Ct%20%22_blank) is a last resort antibiotic. It’s the antibiotic doctors use when no other antibiotics work. In a new paper published in *The Lancet Infectious Diseases,* it was revealed that parts of China have already entered the post-antibiotic era. In 2012, the WHO’s director-general, Dr. Margaret Chan, gave a dire keynote address in Copenhagen, Denmark, [warning the world](http://www.inquisitr.com/1232751/the-who-urgently-warns-post-antibiotic-era-is-almost-upon-us/#jZqc4OjDFc7PKXc6.99) of this very thing.

 “A post-antibiotic era means, in effect, an end to modern medicine as we know it. Things as common as strep throat or a child’s scratched knee could once again kill.”

Now, three years later, it has begun in China.

Researchers discovered a gene spreading among bacteria in China that makes bacteria totally resistant to last resort antibiotics available on the pharmaceutical market. Polymyxins, such as the antibiotic colistin, are the final line of defense against the toughest antibiotic-resistant Gram-negative bacteria. The gene, *mcr-1*, is found on tiny pieces of DNA known as plasmids. Yi-Yun Liu, of South China Agricultural University, [authored the research paper](http://www.sciencedirect.com/science/article/pii/S1473309915004247) that announced that bacteria in China are winning the microbial war, and they’re spreading quickly — through meat.

According to the researchers, four years ago, around five percent of *Escherichia coli* isolates from retail chicken and pork meat in China that was sampled tested positive for the colistin-resistant gene. Frighteningly, last fall, the percentage had grown to 25 percent. According to *Medscape*, [bacterial resistance](http://www.medscape.com/viewarticle/854711) to the last resort antibiotic is spreading quickly, because the genes are on the plasmids and not on the chromosome. Bacteria exchanges plasmids regularly. From China, this gene has reportedly already spread to Laos and Malaysia.

China’s farmers use about three times more antibiotics for each pound of meat than U.S. counterparts. Additionally, according to the World Health Organization, six out of 10 people in China believe that antibiotics can treat viruses like the cold and flu, and almost half of all Chinese people surveyed stated that they believe that you are supposed to stop taking antibiotics as soon as you feel better. *Bloomberg* [called for](http://www.bloombergview.com/articles/2015-11-23/china-needs-to-prevent-antibiotic-apocalypse) the Chinese government to “impose an immediate ban on the agricultural use of ‘last resort’ antibiotics” in order to prevent a looming “antibiotic apocalypse.”

Americans don’t have a tremendous amount of time to prevent the spread from China to the U.S. either. A *Forbes* author [reported that the USDA](http://www.forbes.com/sites/panosmourdoukoutas/2015/07/19/processing-american-chicken-in-china-smart-business-or-ruthless-profiteering/) gave its blessing for “the export of American-raised chickens to China for processing and then re-import to America.”

“I cannot help but ask whether the USDA really approved this trade… and what sort of assurances can be given to the American consumer that processed chicken coming out of China isn’t tainted.”

The gene that gives colistin resistance to bacteria was found in slaughterhouses and on samples of raw meat. It was even found in humans. Now, many are questioning whether we should allow our own meat to be shipped to China for processing.

The research paper in *The Lancet* predicts that the resistant bacteria will be spread rapidly around the globe.

“The transfer rate of this resistance gene is ridiculously high, that doesn’t look good,” Professor Mark Wilcox, from Leeds Teaching Hospitals NHS Trust, explained. Wilcox stated that he fears we will get into an “untreatable organism situation,” but “whether that happens this year, or next year, or the year after, it’s very hard to say.”

To be clear, no pharmaceutical antibiotics work to treat infections from these pathogens. According to*National Geographic*, these [universally antibiotic-resistant superbugs](http://phenomena.nationalgeographic.com/2015/11/21/mcr-gene-colistin/) could already be on the move.

The *BBC* says that if this [“antibiotic apocalypse”](http://www.bbc.com/news/health-34857015) happens, it “could plunge medicine back into the dark ages,” and that already “the resistance had spread between a range of bacterial strains and species, including E. coli, Klebsiella pneumoniae and Pseudomonas aeruginosa.”

“All the key players are now in place to make the post-antibiotic world a reality,” Professor Timothy Walsh, who collaborated on the study from the University of Cardiff, told the *BBC News*.

While some say that there are novel approaches we could still take, including [bacteriocin-derived antibiotics (BDAs)](http://www.theguardian.com/commentisfree/2015/nov/20/antibiotics-apocalypse-research-resistance-threat-breakthrough%22%20%5Ct%20%22_blank), pan-antibiotic resistance has already started in the Chinese meat industry. According to a *CBS* report, currently, Chinese processing companies will actually be handling products like nuggets and Buffalo wings, and the arrangement could be expanded to include all chicken.

Now, consumers are wondering how they will know if their meats have been processed in China. Some worry about what will happen if [H.R. 2393](https://www.congress.gov/bill/114th-congress/house-bill/2393) is passed. The bill would amend the Agricultural Marketing Act of 1946 by repealing country of origin labeling requirements for beef, pork, and chicken.

Even if the bill is never passed, other [consumers fear](https://www.change.org/p/congress-keep-chinese-chicken-out-of-our-schools-and-supermarkets) they could still remain in the dark, [citing claims](http://conservancy.umn.edu/bitstream/handle/11299/163823/Schueppert.pdf?sequence=1&isAllowed=y) that country of origin laws don’t apply to where meat is processed anyway.

Tom Super, spokesman for the [National Chicken Council](http://www.snopes.com/china-chicken-reshipped/), reportedly said that consumer fears are completely unfounded. Super says that while the USDA decision allows for [the possibility,](http://conservancy.umn.edu/bitstream/handle/11299/163823/Schueppert.pdf?sequence=1&isAllowed=y) he doesn’t believe there will be much demand for processing through China.

“Economically, it doesn’t make much sense,” Super said.

Nevertheless, the decision to allow meat to be exported to China for processing to be returned back into the United States, in light of the newest threats of the antibiotic apocalypse, has even more Americans vowing to rely on local small farmers for their meat consumption.

Read more at <http://www.inquisitr.com/2576219/antibiotic-apocalypse-should-the-u-s-still-allow-meat-to-be-processed-in-china-after-news-of-superbugs/#MKAMWh3cMPembWrf.99>