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## **ANIMAL WELFARE APPROVED REFUTES MISLEADING CONCLUSIONS OF ANTIBIOTIC RESISTANCE RESEARCH**

**ALEXANDRIA, VA** - Animal Welfare Approved has strongly criticized the conclusions of a recent research paper from the UK's University of Glasgow [1] on the link between farm antibiotic use and the development of antibiotic resistant disease in humans for being "misleading" and "highly irresponsible."

The researchers compared the development of antibiotic resistance in animals and people in Scotland in a major strain of salmonella (*Salmonella typhimurium* DT104) - a key food poisoning bacterium. They concluded that the local animal populations were "*unlikely to be the major source of resistance diversity for humans*" and that, as a result, the "*current policy emphasis on restricting antimicrobial use in domestic animals may be overly simplistic.*"

Several prominent agricultural industry websites and magazines subsequently used the research to criticize attempts to impose restrictions on the use of antibiotics in farming on the basis that the paper suggests that the use of antibiotics in animal agriculture is *not* a major contributor to the development of antibiotic resistance in diseases that affect humans.

However, Animal Welfare Approved has uncovered significant weaknesses in the analysis used that significantly undermine the University of Glasgow researchers' conclusions - presented in an accessible online Briefing Paper entitled *Comments on Research from UK's Glasgow University on Antimicrobial Resistance* [2].

Andrew Gunther, Program Director for Animal Welfare Approved, says:

"The conclusions of this University of Glasgow paper fly in the face of over 50 years of scientific endeavor in this field, and contradict the position of many notable national and international authorities, including the World Health Organization [3]. Having seen the paper, and identified a number of significant contradictions and limitations, we asked for an analysis of what appeared

to be a somewhat reckless series of claims. We know that there is already a considerable scientific consensus that the overuse of antimicrobials in intensive farming is an important cause of antimicrobial resistance among serious human pathogens - including *Salmonella* and *E. coli*.

"The one-sided conclusions presented in the University of Glasgow paper are extremely unhelpful and serve only to encourage those elements within the intensive farming industry who are seeking any justification to block efforts to promote the more responsible use of farm antibiotics, and who want nothing more than to maintain the status quo - at the expense of our future health and well-being."

The University of Glasgow paper is based on highly complex statistical analysis, so Animal Welfare Approved sought expert advice from Richard Young and C il n Nunan of the Alliance to Save Our Antibiotics [4] to examine the research data and to review the paper's controversial conclusions. Young and Nunan identified a number of significant shortcomings and weaknesses in the research that undermine the overall validity of the paper's conclusion that animals are unlikely to be a major source of antibiotic resistant bacteria in humans, and that efforts to encourage the responsible use of antibiotics in intensive farming are thus misguided.

Andrew Gunther, Program Director for Animal Welfare Approved, says:

"Having looked at the analysis from Young and Nunan, some of the researchers' decisions on what data to present is highly perplexing, to say the least. For example, why did they choose to effectively hide the fact that the antibiotic resistant salmonella types that originated in humans only - and not as a result of the use of antibiotic use in farming - actually accounts for less than 2% of all human cases of the disease? And why did they fail to tell us whether the types of antibiotic resistant salmonella that affect both humans *and* animals first originated in either humans or animals - and thus establish whether or not factory farming *is* to blame? The researchers have the data, yet they chose not to present it. Why?"

"We have serious concerns about the way the researchers chose to draw conclusions on the role of antibiotic use in farming, and the emergence of antibiotic resistant disease in humans. At the very least, this research paper should have been published with far more modest and balanced conclusions."

#### Notes for Editors:

1. Mather, A.E., Matthews, L., Mellor, D.J., Reeve, R., Denwood, M.J., Boerlin, P., Reid-Smith, R.J., Brown, D.J., Coia, J.E., Browning, L.M., Haydon, D.T., and Reid, S.W. (2011). An ecological approach to assessing the epidemiology of antimicrobial resistance in animal and human populations, *Proceedings of the Royal Society B*. 2011 Nov 16. [Epub ahead of print].

Abstract available at

<http://rspb.royalsocietypublishing.org/content/early/2011/11/10/rspb.2011.1975.abstract>

2. *Comments on research from UK's Glasgow University on Antimicrobial Resistance*, Animal Welfare Approved Briefing Paper #2 is available for free at <http://www.animalwelfareapproved.org/standards/science-and-research/>

3. The World Health Organization (WHO) recently reported that the "effectiveness of critically important antimicrobials for human medicine should not be compromised by inappropriate over-use and/or misuse in the non-human sector." Dr. Margaret Chan, Director-General of the WHO, warned earlier this year that, "In the absence of urgent corrective and protective actions, the world is heading towards a post-antibiotic era in which many common infections will no longer have a cure and, once again, kill unabated." The WHO dedicated World Health Day 2011 - an annual global PR initiative to highlight a priority area of concern to the WHO - to the very plight of combating the rampant rise of antibiotic-resistant bacteria.

In September 2011, the United States Government Accountability office stated that, "Antibiotics have saved millions of lives, but antibiotic use in food animals contributes to the emergence of resistant bacteria that may affect humans." See U.S. Government Accountability Office report, [\*Antibiotic Resistance: Agencies Have Made Limited Progress Addressing Antibiotic Use in Animals\*](#).

4. The Soil Association, Compassion in World Farming and Sustain are founding members of the Save Our Antibiotics Alliance. Richard Young is Policy Advisor to the Soil Association. Animal Welfare Approved would also like to thank Cólín Nunan for his contribution to the analysis of Mather *et al* (2011).

5. Andrew Gunther is a regular contributor to the Huffington Post, where he has commented extensively on the misuse of antibiotics in intensive farming. See, for example:

a. The FDA Fails the Public on Antibiotics Once Again

[http://www.huffingtonpost.com/andrew-gunther/fda-antibiotics-animals\\_b\\_1190663.html](http://www.huffingtonpost.com/andrew-gunther/fda-antibiotics-animals_b_1190663.html)

b. Antibiotic Resistance: Consider the Source

[http://www.huffingtonpost.com/andrew-gunther/antibiotic-resistance-con\\_b\\_967970.html](http://www.huffingtonpost.com/andrew-gunther/antibiotic-resistance-con_b_967970.html)

c. Cargill's Tainted Turkey: Just the Tip of the Iceberg?

[http://www.huffingtonpost.com/andrew-gunther/cargill-turkey-salmonella\\_b\\_919924.html](http://www.huffingtonpost.com/andrew-gunther/cargill-turkey-salmonella_b_919924.html)

6. Anna Bassett, AWA's Lead Technical Advisor, compiled Animal Welfare Approved Briefing Paper #2 *Comments on research from UK's Glasgow University on Antimicrobial Resistance* in consultation with Richard Young of the Save Our Antibiotics Alliance.

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[Animal Welfare Approved](#) (AWA) is a national nonprofit organization that audits, certifies and supports farmers raising their animals according to the highest welfare standards, outdoors on pasture or range. Called a "badge of honor for farmers" and the "gold standard," AWA has come to be the most highly regarded food label when it comes to animal welfare, pasture-based farming and sustainability. All AWA standards, policies and procedures are available on the AWA website, making it one of the most transparent certifications available.

AWA's online directory of farms, restaurants and products enables the public to search for AWA farms, restaurants and products by zipcode, keywords, products and type of establishment. Visit [www.AnimalWelfareApproved.org/product-search](http://www.AnimalWelfareApproved.org/product-search) .