The Threat Posed by Counterfeit Animal Pharmaceuticals and the Consequences for Labelling Companies

Sophisticated criminal counterfeiting networks are targeting veterinary medicines on a worldwide scale, with serious implications for animal health and welfare. Protecting the integrity of the food supply chain, the danger to lives of farm, companion and zoo animals plus costs to brand trust are a few of the resulting problems which require solutions. What can be done to guard against the erosion of drug safety and to protect pharmaceutical companies against large economic losses?

One of the key problems is when ineffective drugs or insufficient doses are used to treat animals, it can lead to increased anti-microbial resistance. This poses risks for the animal itself. Where it is a food production animal, harmful chemical residues can accumulate that may then lead to anti-microbial resistance in humans. If the animal or human then requires the use of antibiotics, they may then be resistant to them. The illness will then remain untreated, leading to a worsening of the patient’s condition or even leading to death.

Another problem is the major administrative costs in bringing an animal pharmaceutical product to market, where packaging and labelling play a key role. According to the European Commission’s figures, compliance with labelling rules constitutes 34% of manufacturers’ total administrative burden. This can have such an impact on small markets that it actually reduces the availability of veterinary medicines. With this in mind, it would make economic sense if the packaging and labelling provided multiple benefits to the manufacturer — going way beyond protection in transit and imparting regulatory information.

Pharmaceutical industry partners have been developing special features which can be included at the packaging and labelling stage of production. They allow manufacturers effective solutions in the fight against the counterfeiters. The special features range include overt and covert anti-tamper and counterfeiting printed label solutions. These solutions can help strengthen and protect manufacturers’ market position and make the packaging multi-functional.

There are key differences between overt and covert protection. Overt features are clearly visible and do not require detection. Covert solutions offer an extra level of security and could include UV light or temperature-revealed hidden text. A multi-layered approach with a mix of overt and covert features is what the printing industry recommends. It is also recommended that features are frequently varied in order to make it more difficult for counterfeiters to keep up.

A wide range of high-level covert solutions containing some form of taggant are already available. Taggants are only visible or detectible through more sophisticated handheld readers, which range from laser pens to dedicated readers with controlled distribution. These may include acoustic tags, magnetic security strips and radio frequency identification (RFID) tags.

High-value pharmaceuticals are ideally placed to be protected by RFID tags hidden under labels or within the packaging. The products can then be scanned and tracked by RFID readers to match the data to medical databases. Tagging has proven benefits to manufacturers. RFID tags allow easy tracking and tracing of products while acoustic tags and magnetic security strips can be easily attached to
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high value items to deter shoplifting. Business productivity can be significantly boosted too, as taking an inventory with an RFID handheld reader is 25 times faster than with a barcode reader.

Printed label specialists offer comprehensive strategies to bolster manufacturers’ ability to maintain the integrity of their product. Such strategies include: deliberate print imperfections incorporated into labels, the use of microtext (only legible through a magnifying glass), complex holograms and 2D matrix codes.

2D matrix codes have a number of advantages over traditional one-dimensional barcodes. They include:

- More information – an average 2D code can incorporate 2000 alpha-numerical characters,
- Easier to read – specialist reading equipment is not required as most can be read with the latest mobile phones using their built-in cameras,
- Increased security – the information within 2D matrix codes can be secured by encryption, which locks the information from those who do not have permission to open it.

Another anti-counterfeit tactic is the use of specialist inks when printing labels, such as fluorescent ink – where UV light reveals hidden information, or heat-sensitive thermochromic ink which will make print features disappear or appear. Another useful device is coin reactive inks which reveal hidden information by rubbing over the surface of the label.

The use of tamper-evident labels and strips extended over the lid or closure will alert the end user to tampering. Printing of unique serial numbers to identify and authenticate individual products, cold foiling and others are all serious weapons in the manufacturers’ fight against counterfeitors.

Guaranteeing a product’s authenticity brings with it numerous business advantages, including a better managed inventory system. Additionally, it will bring an ability to streamline product recalls, thus minimising their financial impact. It will also demonstrate compliance with product security regulations, increased brand protection and heightened animal and public safety through better traceability in the supply chain.

If products are aiming at, for example, a Europe-wide market, then country-specific packaging and labelling is limited. An all-encompassing labelling system such as a multi-page label combined with anti-counterfeiting properties would, on the other hand, be an economically better choice. Manufacturers of animal healthcare products are increasingly turning to comprehensive labelling systems in order to meet all their specific needs.

The leaflet label plays an important role in ensuring that all of the legal, instructional and ingredients information can be fitted onto the container or pack. Applying a multi-page label offers anywhere between two to 100 additional pages for complex user-instruction, in one or more languages, as well as providing space for any necessary charts or diagrams.

Production processes can be improved too, as leaflet labels can be applied directly onto the product or container at high speed using standard label application equipment. They can also help to cut down excess packaging. The labels remain securely attached to the product or host container throughout the life of the medicine being used. This then avoids the end user losing or misplacing key usage and safety information. A multi-page label is therefore additionally vital in helping to ensure that the animal gets the correct dosage at the correct interval.

As a conscientious supplier, Denny Bros takes the view that the most important aspect of anti-counterfeiting solutions is protecting the life of the end user, which in this case is the animal. Forgery-proof marking methods are becoming increasingly important in the pharmaceutical sector worldwide. Technology is adding another interesting layer to the ammunition available to combat the fraudsters. Smartphone apps have now been developed which mean that manufacturers and consumers can verify the authenticity of drugs anytime, anywhere using mobile devices.

This technology detects certain codes on a label or packaging that are otherwise imperceptible to the eye. Verification of the authenticity of any product with coding on the label can be carried out at any point in time, including the point of sale. Branded products can be monitored at critical points in the supply chain from manufacture to point of sale, globally and in real time, so that manufacturers can be made aware of the emergence of a counterfeit issue or grey market movements.
It works by photographing the coded imprint and in a matter of seconds the app responds to show whether the product is genuine or fake. The result is then transmitted, along with important information such as date, time, location, and user identity via the mobile network or data connection to the corporate headquarters. The pharmaceutical company learns immediately where counterfeit products are in circulation, enabling them to form a strategy for defending their position.

Labelling suppliers are seeing more animal pharmaceutical producers becoming aware of the real threats to their profits from counterfeiters. Many are starting to include anti-counterfeit properties within their products’ packaging and labelling as standard. It is expected that protecting the integrity of their products and reputation, the safety of animals and humans is intrinsically linked to protecting profits. Animal pharmaceutical manufacturers will increasingly be looking to specialist industry partners to help improve their defences against the fraudsters.

Specialist print partners often work with companies to ensure that they obtain the optimum mix of anti-counterfeit features and information storage to suit their needs. Revenue lost to counterfeiters harms the ability of a company to invest in further product development. Given the rise in anti-microbial resistance that is threatening animal health, research and development into drugs which offer alternatives to vets is going to be vital.

The European Commission is proposing to overhaul EU legislation on veterinary medicinal products and has the full support of the IFAH-Europe. It is aiming to increase the availability of veterinary medicines, reduce administrative burden, and stimulate competitiveness and innovation. It will improve the functioning of the internal European market, and address the public health risk of antimicrobial resistance. Good news for manufacturers, veterinary practices, animals and meat eaters alike, but only if the counterfeiters are not allowed to undermine any aspects of the process.

Simply put – beating the counterfeiters at their game will mean advantages to global animal health, with knock-on effects on the drug supply chain. It will also affect the human food chain, the health of profits of manufacturers and associated industries. Additionally, it will mean a sense of trust being re-established by users that the medicine bought is genuine and will do exactly what it says on the box.

References

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