Businesses and academia work together to develop alternatives to antibiotics in livestock farming

The scientific and business communities have found common ground in the development of alternatives to the use of antibiotics in livestock farming. After agreeing to a scientific ‘proof of principle’, the veterinary pharmaceutical industry has begun actively participating in the Immuno Valley ALTANT programme. ALTANT stands for ALTernatives to ANTibiotics, and works to develop innovative solutions to replace the use of antibiotics in livestock farming. The programme is a collaborative effort by Utrecht University’s Faculty of Veterinary Medicine, the University Medical Centre Utrecht, Pfizer Animal Health and MSD Animal Health, coordinated by the Immuno Valley foundation and financed in part by the ministry of Economic Affairs, Agriculture and Innovation. The total project budget amounts to approximately 18 million Euros, of which half is provided by the industry partners. This makes the partners the front runners in the new Top Sectors Policy within the focus area Life Sciences & Health. The parties recently signed the contract for the two projects, which may be able to produce the first alternatives within the next four or five years.

Within ALTANT, there are two very promising lines of scientific research that may grow to become concrete products or methods for treatment: ASIA (Animal-Specific Immunomodulatory Antimicrobials) studies the ‘old’ molecules in humans and animals that have been able to maintain their function as infection blockers over the course of millions of years. Pfizer Animal Health is the partner collaborating in the ASIA project.

EVAC (Evasion Molecules in Bovine Mastitis VACcines) examines the function of ‘Evasion Molecules’ – proteins created by certain harmful bacteria that appear to halt or delay every step of the immune system at the molecular level. This makes them a serious obstacle to the development of effective vaccines. In the EVAC project, researchers study whether these molecules can be disarmed using a vaccine in order to prevent inflammation of the udder in dairy cattle as a result of infection with bacteria such as Staphylococcus aureus. MSD Animal Health is the partner collaborating in the EVAC project (www.msd-animalhealth.com).

‘One Health’: animals and humans bound inseparably together

Immuno Valley brings together research, scientists and the business community based on the ‘One Health’-concept. ‘One Health’ means that human medicine and veterinary medicine are inseparably bound together, and that therefore far-reaching integration of knowledge and expertise is vital to ensure that healthy people can live in harmony with healthy animals in a healthy environment. Bundling the knowledge of both disciplines can prevent and combat epidemics, zoonoses and new infectious diseases; one of the important goals of the Life Sciences & Health Top Sector Plan.*

Golden triangle: government, science and business

Immuno Valley is a collaborative effort of the veterinary and human medical faculties at Utrecht University, Universiteit van Amsterdam and the Vrije Universiteit, the Central Veterinary Institute, Sanquin, the Gezondheidsdienst voor Dieren and the industrial parties MSD Animal Health, Pfizer Animal Health, Merial, Elanco Animal Health, Eurovet, NOVUS and relevant small- and medium-sized businesses, facilitated in part by the government. Over the next few years, Immuno Valley will work to complete the integration of knowledge and expertise within the framework of government policy.


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