

Press Release

Breaking new ground for sustainable parasite control

PARASOL – a European Framework 6 funded project

Gent, April 2006. The European Union has provided 2.9 Million Euro for an international research project to investigate and develop sustainable, low-input methods for internal parasite control in ruminants (Target Selective Treatments). The project known as PARASOL (Parasite Solutions), an abbreviation for “Novel solutions for the sustainable control of nematodes in ruminants”, has been designated for a period of three years and involves 12 academic partners and 5 business ventures from 7 EU countries as well as Africa. The project is coordinated by Professor Jozef Vercruysse of the Faculty of Veterinary Medicine, University of Gent.

Announcing the new project which has begun in March, Professor Vercruysse stressed the importance of effective chemical anthelmintics for the control of gastro-intestinal worms of ruminants as these pose the greatest threat to animal welfare and production. He also pointed out that current conventional treatment methods, such as the repeated dosing of whole herds with synthetic anthelmintics, are not sustainable as they produce food and environmental residues and promote the spread of anthelmintic resistance (AR) by failing to leave an untreated parasite population in refugia. As discontinuing the use of effective chemical anthelmintics is neither practical on animal welfare or economical grounds, the PARASOL-Project aims to reduce the need for drugs by developing Target Selective Treatments (TST) for animals showing clinical signs of parasitic disease or reduced productivity only. Animals with low worm burdens do not show symptoms and therefore do not require treatment. These strategies will thus reduce the risks of residues in food and in the environment and provide a parasite population *in refugia* to limit the development of anthelmintic resistance.

In order to achieve their goal, the PARASOL-Partners will: (1) determine the best methods of identifying animals and herds requiring anthelmintic intervention; (2) standardise existing tests for detecting anthelmintic resistance and develop new tests, if the current ones are inadequate; (3) optimise the efficacy and bioavailability of anthelmintics by modulating parasite P-glycoprotein detoxification systems and (4) assess the effect of targeted selective treatments on productivity, animal welfare and the spread of AR genes under a wide range of farming conditions. “By the end of the project, we will provide farmers, veterinarians and advisors with clear guidance and protocols for sustainable, low-input, user- and consumer-friendly nematode control”, so Professor Vercruysse.

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Notes for the editor:

1. European Framework 6 Program (FP6): The Framework Program (FP) is the European Union's main instrument for funding research in Europe. Six Framework Programs (FPs) have been implemented since 1984, each covering a period of five years with the last year of one FP and the first year of the following FP overlapping. The current sixth FP (FP6) aims to contribute to the creation of a true "European Research Area" (ERA). ERA is a vision for the future of research in Europe, an internal market for science and technology. It fosters scientific excellence, competitiveness and innovation through the promotion of better co-operation and coordination between relevant actors at all levels. The biggest part of FP budget will be spent on focussing and integrating future research activities on seven thematic priority areas such as Food Quality and Safety.

2. Gent University, Faculty of Veterinary Medicine, Laboratory of Parasitology, Merelbeke, Belgium

The Laboratory of Parasitology of the Gent University, Faculty of Veterinary Medicine, employs a total of about 22 veterinarians, biotechnologists and laboratory technicians with expertise ranging from parasite epidemiology and immunology to helminth molecular biology. The research group has extensive experience with the epidemiology and control of gastrointestinal nematode infections in cattle and small ruminants in Belgium and the tropics and strong expertise in a broad range of biochemical and molecular techniques including anthelmintic resistance. Laboratory techniques such as ELISA, (Real-Time) PCR, polymorphism and proteomic techniques, recombinant protein production and chromatography are applied routinely.