

## Cysticercosis Working Group in Eastern and Southern Africa – 6th General Assembly

Veterinary, medical, agricultural and socioeconomic researchers met in Nairobi in October 2009 to review their research information on porcine cysticercosis/taeniosis and plan how to translate this information into intervention research for control of this serious but neglected zoonotic disease

The 6th General Assembly meeting on cysticercosis/taeniosis was held at the International Livestock Research Institute (ILRI) in Nairobi, Kenya from 21–23 October 2009. The meeting was organised by the Cysticercosis Working Group in Eastern and Southern Africa (CWGESA) in cooperation with the Faculties of Medicine and Veterinary Medicine of the University of Nairobi in Kenya, ILRI, and the FAO/WHO Collaborating Centre for Parasitic Zoonoses in Denmark with support from the DBL – Centre for Health Research and Development in Denmark and the Global Alliance for Livestock Veterinary Medicines (GALVmed) based in Edinburgh, Scotland. The CWGESA was established in 2002 to promote communication, collaboration and coordination of integrated research and control activities to combat cysticercosis, a serious and sometimes fatal disease transmitted between pigs and people by the zoonotic tapeworm, *Taenia solium*. The 6th CWGESA General Assembly provided a forum to reflect on the progress of implementing the *Regional Action Plan for*

*Combating Cysticercosis in Eastern and Southern Africa* formulated during the International Action Planning Workshop on *Taenia solium* Cysticercosis/Taeniosis held in Arusha, Tanzania in August 2002, and in particular to focus on translating research information into intervention research for control.

The principal risk factors for cysticercosis and the high rate of infection in people and pigs in rural communities in eastern and southern Africa are well established. Pig husbandry systems that permit access to human waste in settlements where sanitary facilities do not exist or are poorly managed, lack of meat inspection and consumption of under-cooked pork, poor personal hygiene, and ignorance of how cysticercosis and taeniosis are transmitted are major risk factors that are linked to poverty. Information available from research undertaken in various countries in eastern and southern Africa reveals a similar pattern of unhygienic pig exploitation, lack of human hygiene and high levels of neurocystocercosis. Although

cyst-infested pork is condemned at meat inspection, resulting in financial loss to the owner of the pig and depriving the formal market consumers of pork, which is an excellent and affordable source of high quality protein, unscrupulous dealers may sell such meat clandestinely, thus perpetuating the disease. Papers presented at the meeting indicated that creating awareness and providing education in communities at risk are critical in the campaign against this long-neglected zoonosis.

The 6th General Assembly meeting of the CWGESA was attended by 38 delegates from 19 countries: Angola, Burundi, Democratic Republic of Congo, Kenya, Madagascar, Malawi, Mozambique, Rwanda, South Africa, Tanzania, Uganda, Zambia, and Zimbabwe in the ESA region as well as Australia, Denmark, Gambia, Nigeria, Sweden and the United Kingdom. The aims of CWGESA remain the improvement of human health and economic development through prevention and control of this human and pig disease



by increased awareness, better surveillance and more support for upgrading pig production to increase domestic food supply and export opportunities for pork. The group also aims to facilitate investigation of the link between the high prevalence of epilepsy in the region and neurocysticercosis. Since its inception in 2002, members of the CWGESA and many other colleagues have been involved in research that has significantly increased the amount of information available about cysticercosis/taeniosis in the region. For example, human cysticercosis surveys using Antigen-ELISA in the southern highlands of Tanzania and Tete province, Mozambique revealed that 16.7 % and 14.5 %, respectively, of people sampled had active infections. The time has come to use this type of information to formulate and evaluate control interventions that are likely to succeed in greatly reducing and eventually eliminating cysticercosis and taeniosis in the region.

Meeting participants provided updates on the status of porcine and human cysticercosis in the 13 endemic countries in the ESA region, including Madagascar, represented at the meeting, as well as in Nigeria and Gambia/Senegal. There were

also updates on the Global Campaign for Combating *T. solium* Cysticercosis, in the form of a report on the WHO Experts Meeting on Cysticercosis Elimination held the week before the 6th General Assembly meeting of the CWGESA; on the ground covered during a meeting of the CWGESA Technical Advisory Group in September 2008; and on ongoing and commencing regional projects, as well as more general aspects such as progress in developing a vaccine for pigs, the schistosomiasis control initiative in the region, and the activities of GALVmed. In regions where the zoonoses overlap, the integration of schistosomiasis and taeniosis control through human treatment with anthelmintics appears feasible and is already being done in some countries, including Madagascar, although concerns about the possible effect on persons with undiagnosed and dormant neurocysticercosis were raised. The potentially high contribution that raising awareness and providing information on prevention of cysticercosis can make to control and elimination was highlighted in particular in reports from Tanzania and Zambia, where a measure of success has been achieved in target communities. The

importance of improving pig husbandry was also reflected in reports, and initiatives in Kenya, Mozambique and Tanzania as the focus of ongoing and commencing projects were described. Working groups considered the theme 'Moving from securing the evidence base to intervention research'. They proposed various integrated control approaches. Ideally these would consist of improving pig husbandry, ensuring good sanitation and hygiene including meat inspection, and providing education and training in good practices, but recognising that not all of these could be achieved in the short term, interventions such as mass vaccination and/or treatment of pigs and mass or targeted treatment of humans at risk were also incorporated. Participants were reminded that the CWGESA website is available at [www.cwgesa.org](http://www.cwgesa.org) It was concluded that the status of cysticercosis as a neglected zoonosis remains unchanged, and that innovative approaches that integrate a variety of options for control of the disease in people and pigs will be needed to change that situation.

The next General Assembly will be held in Mthatha, Eastern Cape, South Africa, in 2011.

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