OIE Twinning: *a valuable tool for regional development*

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The Veterinary Laboratories Agency (VLA) is a UK Government institute, committed to improving animal and human health through control of important diseases. The UK government supports much of VLA's international activities through full sponsorship of its 15 OIE Reference Laboratories, as well as additional RL roles for other international bodies, where top-up funding is provided. In addition to providing ad hoc consultancy, expertise and diagnostic services, reagent supply and training, VLA is also actively engaged in the OIE "Twinning" scheme.

What is "OIE Twinning"?

The World Organisation for Animal Health (OIE) Reference Laboratories (RL) and Collaborating Centres (CC) provide a global service, providing member states with expertise and diagnostic capacity concerning diseases important to trade of livestock and related commodities.

OIE aims to enhance regional representation and development by establishing new RLs elsewhere in the world.

A key objective is sustainable capacity building.

- Links are made between an existing OIE RL or CC with a Candidate Laboratory (CL).
- Knowledge and skills are exchanged allowing the CL to develop capacity and expertise for a disease or topic that is a priority in its region.
- Eventually the CL will be able to provide support to other countries and may apply to become an OIE RL or CC.

Examples of planned activities under the scheme

We are privileged to have a Twinning project currently running with the Changchun Veterinary Research institute (CVRI), Jilin, P.R. China, on classical swine fever (CSF) and rabies.

The Chinese government is investing heavily in redevelopment of CVRI and other institutes. In addition to activities for specific diseases, the Twinning project includes input to the following areas:

- Facilities design
- Biosecurity and biosafety

Classical Swine Fever

Pig production in China provides a primary source of protein, as well as fulfilling an important societal role, providing a source of additional income for poorer families. Despite high vaccine coverage, outbreaks still regularly occur both in the village and commercial sector.

Prof Changchun Tu of CVRI supported by Profs Tony Fooks and Trevor Drew of VLA

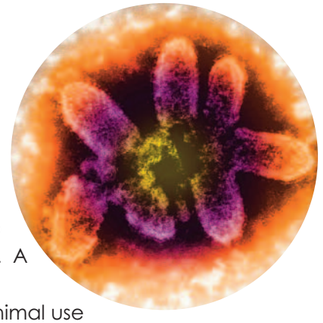
In January 2009, VLA staff visited CVRI to exchange information on scientific activities and to perform a "gap analysis" to prioritise future collaboration. Two Chinese scientists are due to visit VLA in the autumn to undertake two months training, in diagnosis and to carry out short research projects.

Additionally, it is anticipated that the close working relationship will provide opportunities for collaborative research, also with joint applications to international calls.

Priority areas for CSF include:

- Improved diagnosis
- Vaccine manufacture, quality and efficacy
- Molecular epidemiology
- Pathogenesis of diverse strains of virus

Rabies



Human rabies in China continues to rise exponentially, largely due to poor vaccine coverage in naïve dogs - 2.8% in rural areas. Tragically, victims are mainly children, which has profound societal impact. There is a lack of detailed surveillance information, but the high percentage of disease prevalence in dogs – up to 6.4% - confirms that they a continual health threat. A recent collaboration between CVRI and VLA also indicated that the quality of rabies vaccines for animal use did not satisfy the efficacy requirements for fully eliminating rabies from the dog population. These are likely the major factors that result in the high incidence of human rabies in China. Priorities therefore include:

- Implementation of diagnostic testing for rabies
- Validation of in-house diagnostic tests for rabies
- Participation in proficiency schemes and ring trials for internationally approved diagnostic tests for rabies
- Epidemiological surveys of rabies in humans and animals
- Development of oral recombinant vaccines for dogs
- Evaluation of the vaccination coverage in community-owned dogs
- Studies of vaccine-elicited immunity in community-owned dogs
- Assessment of rabies vaccine quality for animal use

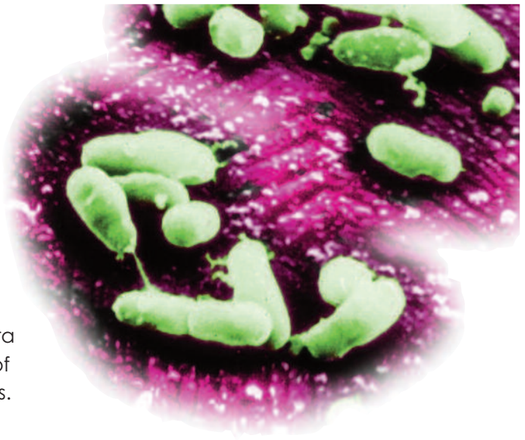
Brucellosis

We are currently working closely with the Pendik Veterinary Control and Research Institute (PVCRI) in Turkey on brucellosis. Brucellosis is one of the most important bacterial zoonoses worldwide, causing abortion and infertility in livestock. It is endemic Turkey where it causes important economic, veterinarian and some public health consequences. The Twinning project includes the following topics to enhance the diagnostic capability of PVCRI.

- Preparation of National & Working Standard Sera to improve & monitor the quality of diagnostic tests.
- Application of molecular techniques to obtain more details on epidemiological situation.
- Antigen production.
- Exchange material and samples to ensure harmonisation.

A poster on brucellosis on display in PVCRI Turkey

We have already held two meetings where we spent valuable time in eachothers laboratories, exchanged presentations on the skills within both institutes and examined antigens and reference sera according to OIE Manual of Diagnostic Tests & Vaccines.



Future Activities

Twinning with the brucellosis group at The Central Veterinary Research Laboratories Centre, Khartoum, Sudan is in the early stages of development. Future VLA objectives for Twinning are to establish the Botswana National Veterinary Laboratory as a regional centre for Avian Influenza and Newcastle Disease diagnosis and to establish an OIE Avian Influenza and Newcastle Disease Reference Laboratory at the Onderstepoort Veterinary Institute in South Africa.