



GALVmed is a not-for-profit global alliance of public, private and government partners. By making livestock vaccines, diagnostics and medicines accessible and affordable to the millions for whom livestock is a lifeline GALVmed is *protecting livestock and saving human life*. It is currently funded by the Bill & Melinda Gates Foundation, the UK Government's Department for International Development and the European Union.

GALVmed has initially focused on four priority diseases: East Coast fever (which affects cattle), Rift Valley fever (cattle, sheep, goats, camels and also people), porcine cysticercosis (pigs and also people) and Newcastle disease (poultry). This newsletter has a special feature on Newcastle disease, also known as Ranikhet in parts of India, which is a major killer of backyard and village poultry in Africa and Asia.

Dr Jane Wachira, of Kenya Veterinary Vaccines Production Institute, in discussion with GALVmed VACNADA coordinator Fred Musisi. KEVEVAPI is benefiting from both capital investment and capacity building under the VACNADA programme (see page 7)

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"VACNADA is about providing the resources and knowhow to take eight African vaccine laboratories to a new level. The next challenge is what additional support can be offered to keep them at the top of their game?" The answer? Extend the support package with help from the Pfizer Global Health Fellows programme.

GALVmed at FAO meeting on Rift Valley fever

GALVmed recently attended an international workshop on Rift Valley fever organised by the Global Framework for the Progressive Control of Transboundary Animal Diseases.

Key partner profile:

CAHNET – the Community Animal Health Network

CAHNET is a membership forum that brings together stakeholders engaged in animal health activities in eastern Africa.

Board Development

The GALVmed board meeting was held in March 2011 at Kuriftu Resort, Debre Zeit, Ethiopia at which four new board members were proposed.

Good advice on sustainable delivery of vet products for GALVmed

In mid January GALVmed met with members of its Global Access Advisory Committee (GAAC).

East Coast Fever Taskforce update

The Taskforce reviewed plans which should result in 1.3 million cattle being vaccinated against ECF over the next three years.

Steve Sloan, GALVmed's CEO, has the **Last Word**... on being galvanised to support low income farmers ... and their husbands.



GALVmed and Newcastle disease

Ambitious plans to develop and make available tailor-made solutions to minimise the impact of Newcastle disease on small-scale poultry keepers in Africa and Asia are currently being implemented by GALVmed and partners.

For Africa this includes registration, commercialisation and sustainable delivery of a thermotolerant vaccine based on the I-2 virus strain (see box 2). For India, where in many places Newcastle disease is known as Ranikhet disease, a similar process is being pursued for two types of vaccines: a conventional freeze-dried live vaccine and a pelletized vaccine which will be administered via poultry feed, both based on the Indian D58 virus strain.

The disease

Newcastle disease is a highly contagious viral disease, spread via airborne droplets produced by infected birds coughing and by direct contact with their faeces, contaminated feed, implements or clothing.

It is the most common disease affecting village and back-yard poultry in developing countries. It affects all types of poultry, especially chickens and turkeys. The virulent strains common in Africa and Asia cause enormous losses, often wiping out all the poultry in a village and surrounding villages.

There is no effective treatment for the disease.

Commercial poultry worldwide is usually routinely vaccinated with inactivated or live vaccines which protect birds from clinical disease. Inactivated vaccines are administered by injection. Live vaccines are administered through spray via aerosols, in drinking water or by direct

inoculation. This means that they can be delivered to a large number of birds relatively quickly and effectively on commercial poultry farms. Vaccines are produced by many of the major veterinary pharmaceutical companies and their products are well suited to the needs of large-scale commercial poultry producers in both the developed and developing world.

Small-scale poultry keepers

Free-ranging scavenging poultry are the most common form of livestock kept throughout the developing world. For the poorest households they are likely to be the only type of livestock kept; an important source of high-quality protein and essential micro-nutrients, and their most readily saleable asset.

Poultry are often owned and managed by women and children for whom they represent an important source of cash income in times of need through the sale of adult birds, chicks or eggs. Newcastle disease is currently one of the most important constraints to village and back-yard poultry production, impacting on household nutritional security and income generation.

In a recent study in Mozambique it was shown that controlling Newcastle disease had the potential to increase incomes derived from poultry by 42%: adoption of additional simple low-cost husbandry measures increased this to 82%.

Making Newcastle disease vaccine available to small-scale poultry keepers

Currently very few backyard or village poultry keepers in sub-Saharan Africa or Asia vaccinate their poultry against Newcastle disease or any other diseases – or, indeed, provide any other inputs or management. As a result, although poultry production in these free-ranging systems is almost free, output is very low and losses to predation and disease, especially Newcastle disease, are high. In these conditions almost all eggs are required to maintain the flock and few birds survive to maturity.

The main constraints to vaccine usage in these systems are:

- a lack of awareness of the existence of vaccines by poultry keepers
- a lack of awareness of the benefits that can result from their use
- large pack sizes of vaccines that are more suited to the needs of large-scale producers

- lack of access to vaccine or vaccinators in the locality due to non-existent or unreliable supply chains
- the need to keep vaccines under refrigeration
- the difficulty of catching free-ranging birds for vaccine administration.

Even when poultry keepers graduate to small-scale commercial production – keeping several hundred birds – they often still struggle to access vaccines, especially in Africa.

“Machakos District, Kenya has got about 1.2 million chickens and only ten thousand doses of vaccines are used. There is a huge market potential and what we have found out is ...the farmers can afford the vaccine... including the service charges as well.”

Sam Thevasagayam, former Research and Development Director, GALVmed



Ideal vaccine profile

At a workshop on Newcastle disease and Newcastle disease vaccine jointly organised by GALVmed, African Union-PANVAC and Instituto de Investigação Agrária de Moçambique (IIAM) and held in Maputo, Mozambique from 5 – 9 October 2009, participants defined the properties of the 'ideal' Newcastle disease vaccine for traditional village poultry. These ideal qualities include:

- > thermotolerant
- > combined with other common poultry diseases
- > cheap/affordable
- > small dose package
- > easy to administer
- > long immunity
- > safe to use
- > preferably be only one type of vaccine (rather than several brands/types)
- > suitable for multi-age of bird use and especially within the first month of life

GALVmed and Newcastle disease in Africa

GALVmed's programme in Africa includes work with a vaccine based on the I-2 strain.

Newcastle disease virus strain I-2

is an avirulent (non-disease causing) Australian Newcastle disease virus isolate, chosen for its antigenicity (the ability to induce a strong immune response) and thermostability.

Strain I-2 has properties similar to those of a commercial vaccine strain, V4 (isolated in Australia in 1966). For I-2, however, there is no proprietary ownership: the master seed was prepared at the University of Queensland with support from the Australian Centre for International Agricultural Research and is made available to developing countries who wish to produce a live, thermotolerant Newcastle disease vaccine based on this strain. The master seed stock was derived from parent stock that had survived at 56°C for thirty minutes.

GALVmed's achievements in Newcastle disease in Africa to date include:

- > Refocusing international attention on the importance of the disease, especially for the traditional village poultry (FAO's Sector 4 classification), by jointly organising the 2009 Maputo workshop, referred to in Box 1.
- > Completing a market study for the Southern African Development Community (SADC) region.
- > Undertaking trials on reversion to virulence of the I-2 vaccine, as part of the development of a generic registration dossier.
- > Signing an agreement with KYEEMA Foundation, an Australian NGO, to support activities related to the production, registration and field use of I-2 vaccine in Africa.
- > Reaching agreement with the Australian agencies and AU-PANVAC to sequence the I-2 virus strain currently held at PANVAC, Debra Zeit, Ethiopia.
- > Identifying potential commercial partners in Africa to manufacture the I-2 vaccine.
- > Commissioning the development by the Spanish company Bases & Datos of special software to measure socio-economic, production and commercial parameters, and training enumerators and developing and testing questionnaires.
- > Piloting sustainable vaccine delivery systems in Tanzania (Manyara Region; partner CAHNET), Lesotho (Mafeteng, Mofale' Hoek, Berea, Maseru and Bulta Bulte; partner Rural Self- help Development Association), DR Congo (Bas-Congo; partner Centre Agrovétérinaire Tropical de Kinshasa) and Cameroon (Far North District; partner Heifer International).



The design of the vaccine delivery system is being informed by baseline surveys, which utilise the commissioned software. These are identifying the locations for the pilot projects as well as constraints to vaccine use and indicators to be used in project monitoring and evaluation. A previous plan which was focused only on community-based vaccinators was found to be unsustainable; the vaccinators could not earn enough income from this activity alone. The revised plan, which has sustainability at its core, considers the whole vaccine chain, from the vaccine manufacturer, through wholesalers and distributors, agro-vet shops, market traders, community animal health workers and community vaccinators, women's groups, poultry traders and poultry keepers (see diagram).

At the request of local farmers, many of whom keep poultry and goats, systems which can deliver both Newcastle disease and peste des petites ruminants (PPR) vaccines are being developed when suitable and feasible in both Africa and Asia.

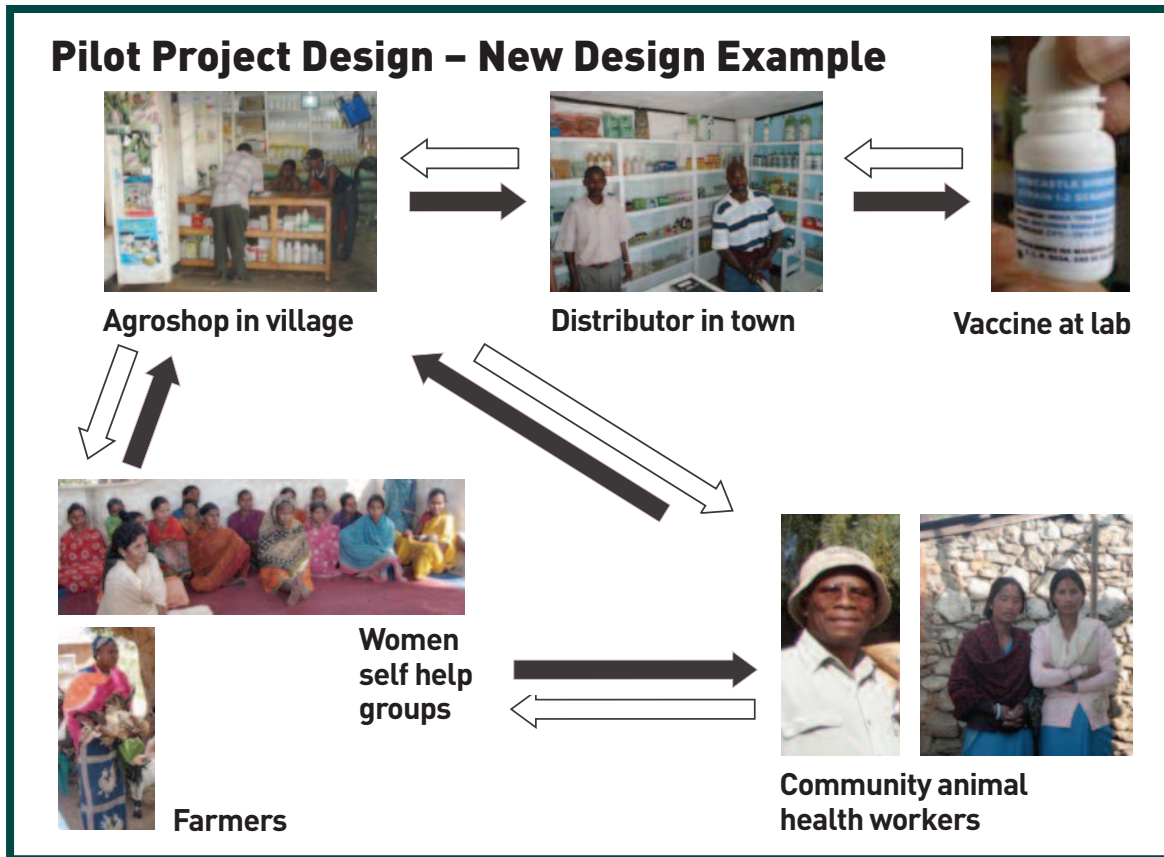


Diagram showing one of the Newcastle disease vaccine distribution networks being tested in the pilots (unshaded arrows show flow of vaccine; shaded arrows show flow of money)

GALVmed and Ranikhet (Newcastle disease) in Asia

In Asia, GALVmed's work on Newcastle disease includes developing and making available two vaccines, both based on the D58 virus strain: a conventional live freeze-dried vaccine and a similar vaccine formulated as pellets which can be administered via feed.

These vaccines have been under development since the late 1990s by a team led by Dr J John Kirubaharan, associate professor in the department of veterinary microbiology in Madras Veterinary College, India (now a constituent college of Tamil Nadu Veterinary and Animal Sciences University – TANUVAS). The D58 isolate of Newcastle disease virus was isolated from an unvaccinated village chicken. The pellet formulation is made up of lactose, starch and a dye derived from the amaranthus plant. If successful, this vaccine will overcome the problem of catching and handling free-ranging birds prior to vaccination.

For both vaccines GALVmed and partners are working on registration trials, vaccine registration, and selection and reaching agreement with a manufacturer and ensuring that sustainable delivery systems are in place.

To date a market study has been carried out and agreement has been reached with TANUVAS to develop the pellet D58 vaccine. Pilot projects to develop and test vaccine delivery systems are currently underway in Orissa, India (see below).



Ranikhet (Newcastle) disease pilot projects: Induction workshop and launch in Bhubaneswar, India

GALVmed and Ranikhet (Newcastle disease) in Asia

A sustainable Ranikhet (Newcastle) disease vaccine delivery system moved a stage closer in India recently as GALVmed and partners carried out an induction workshop to launch the pilot.

The pilot activity will take place in Orissa, eastern India (Keonjhar and Mayurbhanj districts) and will involve community animal health workers who will be trained to administer vaccine in the backyard poultry sector. At the same time the cold chain needed for maintaining efficacy of vaccines will also be bolstered. These activities have been aligned to the India Government's strategic aims or the control the Ranikhet disease.

The pilot has come about as a result of a partnership brokered by GALVmed involving:

- > **Professional Assistance for Development Action (PRADAN)**, an NGO which has been active in promoting various livelihood options for the poor in the project area since 1992
- > **Bhodal Milk Producers' Cooperative Society (BMPCS)**, a primary cooperative of women milk farmers which has been providing veterinary health care service in the Kantapada block of Cuttack District for the last seven years
- > the **Society for Management of Information, Learning and Extension (SMILE)**, which is providing technical guidance

Dr Kornel Das, an independent consultant, has been hired as the project coordinator.

The official launch took place at the induction workshop on 9–10 March 2011 in Bhubaneswar, India. The partners were joined by officials from the Department of Animal Health amongst other departments.

In his address to launch this year-long pilot, the Commissioner for Fisheries and Animal Husbandry, Sri Satyabrata Sahu, expressed his happiness at GALVmed's efforts to reach the men and women farmers involved in the backyard poultry sector. He emphasised the need to replicate both best practice and lessons learnt in the pilot in other areas of Mayurbhanj and Keonjhar. Mr Sahu also suggested holding orientation workshops at district levels with all the stakeholders to ensure effective delivery of the proposed services.

Mamta Dhawan, GALVmed Programme Manager South Asia, said: ***"It was great to have so many positive ideas coming out of the workshop, facilitated by Ms Lucy Maarse, and from the eminent guests who joined us for the launch of this important pilot programme. GALVmed's CEO Steve Sloan visited India at the end of 2010 and he was struck by the opportunity for us to make a difference in the backyard poultry sector. This pilot represents our first tangible progress towards this aspiration."***

Other distinguished guests present included: Ashok Kumar Sahu, Director, Animal Husbandry and Veterinary Services, Government of Orissa; Dr Sanat Mishra, CEO, Orissa Livestock Resources Development Society; Dr US Patro, Joint Director SMILE; and Dr GC Bidhar, Principal, Veterinary Officers Training Institute.



Delegates at the GALVmed launch workshop (from left to right): Lucy Maarse, facilitator; Satyabrata Sahu, Commissioner for Fisheries and Animal Husbandry; Ashok Kumar Sahu, Director Animal Husbandry and Veterinary Services; Dr US Patro, Joint Director SMILE; Sharmila Dutta, GALVmed; Dr Gopal Tripathy; Dr Mamta Dhawan, Programme Manager: South Asia, GALVmed; and Dr Kornel Das, Project Coordinator.



A chicken and egg situation: What comes first, the vaccine or the increase in earnings?



Chenbanu Bibi, (left) and Mariam Bibi, both from Murshidabad District, West Bengal, India

These two women illustrate some of the challenges GALVmed faces with its work in India.

Chenbanu recently told GALVmed about the crushing effect Newcastle disease (or Ranikhet disease as it is known locally) had on her poultry: "Last time 20-25 chickens died. I had to borrow money from the neighbours and relatives. We lost 3,000 rupees (US \$ 50)." Following advice from the local livestock officer and dispensary, she now understands the problem of Newcastle disease and would be prepared to pay for vaccination if this was available.

At the same time Mariam lost five chickens but does not know what killed them. In any case she considers herself too poor to pay for vaccines: "The chickens are like our sons and daughters. When they die I feel very bad." Without better awareness of the disease and benefits of vaccination it appears very likely that Mariam will continue to lose chickens to Ranikhet disease and fail to make financial headway.

Dr Mamta Dhawan, GALVmed's Programme Manager: South Asia said: "Clearly there is a role for extension to create better awareness and a need to get vaccines into the hands of people like Chenbanu and Mariam. For the poorest livestock keepers it may be necessary to heavily subsidise initial rounds of vaccination until they see the benefits of the vaccination and are ready to pay for it subsequently."

Women like Chenbanu and Mariam from West Bengal are highly dependent on livestock for their livelihoods: crop-based agriculture is not always an option and often their husbands are working away from home as low-paid daily wage labourers.

Inject your ideas into a new on-line database of livestock vaccines ...

VETVAC.org aims to become a free to access, database of all livestock vaccines marketed globally.

We are looking for people to test the database. You will have between 4 – 8 weeks unlimited use of Vetvac.org and access to an expanding record set of large animal and avian vaccines for African, South American and Asian markets. The feedback process takes only a few minutes. Your input will help shape Vetvac.org's expansion.

Are you involved in vaccine research, development, manufacture or marketing? If so, email info@vetvac.org to register for the trial.

Large animal vaccine pilot runs until 4 June 2011

Avian vaccines pilot 4 May – 15 June 2011

Vetvac.org has been jointly developed by GALVmed and Inocul8, part of the Moredun Group. See future newsletters for information about the launch.

Vetvac.org



VACNADA update

GALVmed is implementing a body of work funded by the European Commission's Vaccines for the Control of Neglected Animal Diseases in Africa (VACNADA) programme. The aim is to improve the quality and quantity of vaccines produced by selected national laboratories across Africa on a sustainable basis by providing capacity building for their staff and upgrading of laboratory equipment, facilities and processes.

Support provided under the VACNADA project is focused on reducing the impact of four neglected diseases – Newcastle disease, contagious bovine pleuropneumonia (CBPP), contagious caprine pleuropneumonia (CCPP) and peste des petits ruminants (PPR) – through increased access to, and use of, quality vaccines.

The GALVmed newsletter team caught up with managers from the Kenyan and Cameroonian labs to see what they thought about the support they are receiving.

Update on Kenya Veterinary Vaccines Production Institute (KEVEVAPI)



Dr Jane Wachira and Raphael Cheserek stand in front of an aged incubator at KEVEVAPI, one of the key pieces of equipment that will be replaced through VACNADA

"This incubator is older than anyone in this room" said Dr Jane Wachira, Deputy Managing Director of the Kenya Veterinary Vaccines Production Institute, and it certainly looked like it. Dr Wachira was giving a guided tour of her institute to show the impact that the VACNADA programme will have.

The capital investment programme at KEVEVAPI is extensive: The lift is no longer working and will be replaced – currently materials have to be hauled up four storeys by hand. The freeze drier dates back to 1998, but it is about to get an extensive overhaul, including a US\$250,000 software upgrade which will help to ensure that the machine stays within its optimal working parameters. And a new automatic vial sorting machine will significantly increase the efficiency of vaccine packing. A flexistand machine will be provided by VACNADA to concentrate antigen after culture in the new bioreactor. This will improve on efficiency in the antigen harvesting process. VACNADA is also providing a new reverse osmosis machine to improve the quality of water used in the lab.

Dr Wachira said: *"The VACNADA investment has made a lot of difference to us. We will be able to produce Newcastle disease vaccine at a higher volume. The new lamina airflow equipment will also reduce the risk of contamination. And staff members have received training in quality control techniques. We also now have new procedures in place and support to maintain these new ways of working. VACNADA is taking us to a new higher level in the four vaccines which were identified as priorities."*

Update on progress from LANAVET, Cameroon



LANAVET was established by the Cameroon government in 1983 with the following objectives:

- > production of vaccines
- > diagnosis and study of animal diseases
- > training

Much of the equipment in the laboratories has never been replaced and some of it, including the essential freeze drying machine, is out of order. Amongst the vaccines produced by LANAVET, the thermotolerant I-2 strain of Newcastle disease could be a real opportunity for the backyard poultry and village sector. Other vaccines tackle CBPP and PPR.

LANAVET is an important regional resource: around half of its production is exported to Benin, Burkina Faso, Chad, Central African Republic, Cote d'Ivoire, Ghana and other West African countries and there is potential for further growth in these markets.

LANAVET was selected as one of the labs to benefit from the VACNADA project. This has given it access to both advice and funding to renew or update equipment. It has also been supported to build its skills and knowledge base in regard to marketing. Christian Ndamkou Ndamkou, Marketing and Sales manager at LANAVET, said: *"We were very pleased to see how responsive and unbureaucratic the VACNADA programme was, because usually development grants are very prescriptive. The emphasis was always on how we could be supported to get the best out of this experience and investment."*

So, we are working with an engineer (Seamus Pender) who is on assignment in LANAVET as part of Pfizer's Global Health Fellows programme. The assignment goals are to help us put in place a regime of preventative maintenance which will support us to have continuous production runs of vaccines. We have had support to help us to assess the equipment we needed to move forward and build our business."

We also had a great deal of support from Fred Musisi, the GALVmed VACNADA coordinator. He came to Cameroon to visit the lab and he has been touch with us frequently – offering advice from his considerable experience and helping us to keep the project on track."

The market study has pulled together really useful data and we are now in the process of developing an action plan for the business to increase our income and double our domestic market over the next five years. This will require us to work through some of the barriers to distribution of vaccine, in particular the opening up of the vaccines to veterinarians in private practice, not just the vets who are part of the government service as it is the case at the moment. We also have plans to grow our export markets once we have consolidated our home markets. VACNADA showed us a much better way of working than many other programmes we have been involved in."





(From left to right) GALVmed consultants Dr Aboubakar Njoya and Keith Sones and Fred Musisi, GALVmed VACNADA coordinator, discuss the vaccine market in Cameroon with Christian Ndamkou Ndamkou, marketing and sales manager at LANAVET.

VACNADA tender updates

GALVmed has recently signed contracts worth €1.8 million (US\$ 2.5 million) to upgrade 8 African vaccine-producing labs.

The contracts include:

Four lyophilisers (freeze driers) to be built by India PVT and delivered to laboratories in Cameroon, DRC, Ghana and Senegal. This equipment, valued at €464,702 (US \$651,000), will support production and development of PPR, CCP, CBPP and Newcastle disease vaccines.

A €355,519 (US \$498,000) contract awarded to Priddy International UK (trading as Wellspring Development Capital Ltd based in Malawi) to deliver basic business and management training to eight selected national laboratories in Botswana, Cameroon, DRC, Ethiopia, Ghana, Kenya, Mali and Senegal. The purpose of the training is to strengthen management skills in attaining a more commercial focus to vaccine production. Face-to-face training is supplemented with Open University business management programmes for key management staff.

Contracts have been awarded to Neri SpA in Italy and Dara Pharmaceutical Packaging in Spain totalling €454,725 (US \$637,000) for vial filling and labelling machines that can produce 3,000 vials per hour. These will be supplied to laboratories in Botswana, Ethiopia, Kenya and Senegal.

Local contractors have been selected to support refurbishment upgrades of laboratories in Cameroon, DRC, Ethiopia, Ghana and Senegal totalling over €550,000 (US \$ 777,000). This includes new generators, laboratory extensions, improved water supplies, electrical upgrades, lift repairs, improved access and air conditioning.

Overall, GALVmed will manage over €4 million (US \$5.6million) in support of the equipment, training and refurbishment activities mentioned above, with an additional €2 million (US \$2.8 million) for the improvement of distribution systems, market surveys and quality assurance.

News from the VACNADA Steering Committee

The third VACNADA Steering Committee meeting was held on 1 March 2011 in Debre Zeit, Ethiopia. We are grateful to AU-IBAR for giving GALVmed Newsletter an update on what happened at the meeting.

The purpose of the meeting was to review the progress of the project and provide guidance on the way forward. GALVmed is providing equipment and a range of technical and marketing support to the target vaccine producing laboratories; other elements of VACNADA being undertaken by other partners include vaccination programmes and evaluation trials of CBPP vaccines.

During the meeting Katariina Bastos from the European Union in Brussels praised the good collaboration between the technical partners of VACNADA, namely AU-PANVAC, CIRAD and GALVmed.

The Result Oriented Monitoring (ROM) mission carried out in 2010 gave VACNADA a good scoring grade, reflecting the progress made on the project. This made the steering committee hopeful that a follow up project on the basis of success stories and lessons learned from the VACNADA project might be well received by the funder.

The members of the steering committee who were present during the meeting included: **Dr Abebe Haile Gabriel AU Commission; Katariina Bastos EU Delegation Brussels; Stephen Wathome EU Delegation to Kenya; Dr Walter Masiga OIE; Dr Ahmed Elsawalhy AU-IBAR; Dr Baptiste Dingu GALVmed; M. F. Thiaucourt CIRAD-BIOS-UMR15 Secretariate; Karim Tounkara AU-PANVAC; Brian Nsofu COMESA; Cyprien Biaou ECCAS; Cyrille Dademanao Pissang VSF Belgium; Hon. Ali Wario Pastoral Policy Initiative; Dr Berhe Gebreegziabher DVS Ethiopia; Dr Batawui Komla Batasse DVS Togo; Dr Nicholas Kauta DVS Uganda; and Dr Moto Peter Crispin Mangani DVS Zambia.**



Two new Pfizer Global Health Fellows will make the investment in VACNADA work harder!

“VACNADA is about providing the resources and knowhow to take eight African vaccine laboratories to a new level. The next challenge is what additional support can be offered to keep them at the top of their game?”



Nancy Ng (left) & Seamus Pender (right): images courtesy of Pfizer

The answer to the question, posed by Meritxell Donadeu, Director of Operations at GALVmed, was to extend the support package with help from the Pfizer Global Health Fellows programme to enable two specialist engineers to work with the labs over a six month period. So, **Nancy Ng** and **Seamus Pender** will be working as part of the GALVmed team until August 2011 to optimise production processes and ensure compliance with quality standards.

Nancy Ng said: “I’m supporting the National Vaccine Institute (NVI) in Ethiopia to make improvements to their maintenance programme and provide advice on installing and upkeep of new equipment purchased through the VACNADA programme. In addition, I am also collaborating with the Ethiopia based-Panafrican Veterinarian Vaccine Centre of the African Union (AU-PANVAC), overseeing the construction of a Process Development Lab and later installing the equipment and training the technicians.”

Nancy will also spend two months at KEVEVAPI in Nairobi, Kenya.

Nancy, from Andover, Massachusetts, will draw on her experience as a process engineer (including expertise in process development and validation engineering) gained in her work with the Specialty BioTechnology Operating Unit at Pfizer since 2006.

Seamus Pender, from Cork, Ireland, has been a process engineer and project manager at Pfizer since 2002. His work has already been referred to by Christian Ndamkou Ndamkou from LANAVET, Cameroon (see page xx). Seamus will conduct this preventative maintenance work as part of his assignment in the Pfizer Global Health Fellow program: this additional support has been successfully integrated with the VACNADA investment.

In addition Seamus will work with the Centre for Ticks and Tick Borne Diseases (CTTBD) in Malawi. Although not part of the VACNADA programme, the lab has had a similar capacity building support package from GALVmed to enable it to produce quality East Coast fever vaccine on a sustainable basis. Meritxell Donadeu said: “The work being done by CTTBD is strategically very important in relation to East Coast fever and so we wanted to ensure they had a similar package of support to the VACNADA labs. Seamus’ expertise will help to consolidate new ways of working at CTTBD.”

GALVmed is increasingly able to bring together funding and other resources to create more coherent packages of support for its partners through alliances. This form of facilitative leadership is an essential part of development and brings considerable added value – especially where there is an attempt to support new working practices. The GALVmed newsletter team will check in with Seamus and Nancy in July to learn more about their accomplishments.

What are Pfizer Global Health Fellows?

Pfizer’s Global Health Fellows programme is a skills-based volunteer programme in which Pfizer staff work on specialized assignments for three to six months with international development organizations designed to address global health issues and improve care for underserved populations. Assignments are focused on strengthening health systems around the world to promote access, quality and efficiency of health services. The programme is managed by the Pfizer Headquarters’ Corporate Responsibility team, based in New York.

To learn more about the Global Health Fellows programme, visit www.pfizer.com/ghf

GALVmed at FAO meeting on Rift Valley fever

GALVmed’s Senior Director: Research and Development, Dr Baptiste Dungu, recently attended an international workshop on Rift Valley fever (RVF) organised by the Global Framework for the Progressive Control of Transboundary Animal Diseases.

During the two-day meeting, held at FAO headquarters in Rome on 19/20 January 2011, Dr Dungu brought participants up to date with GALVmed’s work on RVF.

Commenting on the meeting Dr Dungu said: “This was one of the best RVF meetings I have attended. It was very focused and brought together almost everyone that is involved in the issues that were to be addressed.

GALVmed’s role and approach to addressing RVF – developing a multivalent RVF vaccine that will help build immunity to RVF

through the regular vaccination against the associated disease, stockpiling of the emergency monovalent vaccine and development of a field rapid assay, especially for poor livestock keepers’ communities which are often the least protected during outbreaks – was considered as very critical contribution to the control of this devastating disease of livestock and people.”

The Global Framework for Progressive Control of Transboundary Animal Diseases (GF-TADs) is a joint FAO/OIE initiative, which combines the strengths of both organisations to achieve agreed common objectives. GF-TADs is a facilitating mechanism which will endeavour to empower regional alliances in the fight against transboundary animal diseases (TADs), to provide for capacity building and to assist in establishing programmes for the specific control of certain TADs based on regional priorities.



Key partner profile: CAHNET – the Community Animal Health Network

CAHNET is a membership forum that brings together stakeholders engaged in animal health activities in eastern Africa. Since 2008 GALVmed has provided significant support to dramatically increase the profile and capacity of the Community Animal Health Network (CAHNET).

CAHNET's mission is to contribute to improved animal health status in the eastern Africa region through enhanced information sharing, capacity building and lobbying for favourable policy and legal environment. By promoting learning and sharing, CAHNET can also facilitate the formation of strong linkages between the researchers who develop animal health innovations and the livestock keepers who will use them.

CAHNET uses a number of approaches to foster networking and information sharing. These include radio, print, audio and visual podcasts, word-of-mouth, mobile phones and blogs on its website www.cahnetafrica.net

It was established in October 2001 through a collaborative partnership with the CAPE (Community Animal Health and Participatory Epidemiology) unit of AU/IBAR, FARM-Africa, the Community Livestock Initiatives Program (CLIP) under Practical Action (formerly the Intermediate Technology Development Group – ITDG) and Pact-Kenya, a local Kenya NGO.

Since 2005, CAHNET has been hosted and supported financially by FARM-Africa. Its activities are implemented through a secretariat spread across eastern Africa: Ethiopia, Kenya, Tanzania and Uganda. CAHNET's head office is in Nairobi, Kenya where it is housed by FARM-Africa. A team of experts drawn from the four countries, appointed through a competitive bidding process, forms the advisory panel which provides strategic direction on network activities.

Since 2008 the network has received funding from GALVmed as one of the priority activities funded through its joint £17 million grant from the Bill & Melinda Gates Foundation and the UK Government's Department for International Development.

Meritxell Donadeu, GALVmed's Director of Operations, explains: "One of GALVmed's aims during this three-year project is to put in place a system to allow information flow, in both directions, between GALVmed, policy makers, researchers, drug and vaccine manufacturers, livestock keepers and other partners. By providing an opportunity for livestock keepers to participate and dialogue with various stakeholders, including GALVmed, this will help to ensure that better, more demand-responsive products, services and programmes are developed. Creating a significantly expanded and strengthened Community Animal Health Network is a key GALVmed strategy to effectively fulfil this communication role, initially in East Africa."

So far the partnership with GALVmed has enabled CAHNET to recruit a full-time regional coordinator, administrator and an ICT officer at the office in Nairobi. At the national level, GALVmed's support has enabled coordinators to be recruited to facilitate implementation of activities. With this enhanced capacity CAHNET can now be more proactive in addressing its mandate and consequently contribute to improved productivity of the livestock sub-sector in Eastern Africa.

Steve Sloan, GALVmed CEO, sees great potential for CAHNET: "The network is a great asset which will enable GALVmed to link in a very cost-effective way with our key end-users in the East African region – livestock keepers and local animal health service providers. With rapidly improving connectivity and dramatically falling charges, there is now a real opportunity to engage with our stakeholders, taking advantage of these transformational changes in mobile communication technologies."

Board update

The GALVmed board meets four times a year: twice in person and twice via tele-conference. The last board meeting had one substantial agenda item – to set the strategy for the new six-year business plan.

The new business plan sets out to solve three key challenges to 2017:

- > **a focus on scaling up operations: market development to deliver hundreds of millions of vaccinations over the life of the plan, and to enable poor people to have access to the diagnostic tools, veterinary medicines and vaccines needed to keep their livestock healthy**
- > **moving towards sustainable approaches and business models**
- > **concentrating on the endgame: clarifying the difference that six years of concentrated effort by GALVmed will have made in its priority diseases and the related value chains for diagnostic tools, veterinary medicines and vaccines**



GALVmed board members met in March 2011 in Debre Zeit, Ethiopia

The next GALVmed newsletter will contain a feature on the new and emerging priorities for GALVmed, but in the meantime if you have any comments or suggestions about this approach please contact Steve Sloan the CEO of GALVmed steve.sloan@galvmed.org.

Team changes

Welcome to Pfizer Global Health Fellows **Nancy Ng** and **Seamus Pender** who will be working as part of the GALVmed team until August 2011.



Board development

Four new board members were proposed at the GALVmed board meeting held in March 2011. This development is driven by two factors: the need to align the expertise of the board with the evolving needs of the organisation and to enable the succession of board members as specified in GALVmed's constitution.

Steve Sloan, GALVmed CEO, explains:

"We have a six-year succession cycle for board members. We are now coming up to six years of operation and so the board members we have been working with from the outset, including our chair, will soon need to step down. But before I say anything about the new members I need to emphasise the debt of gratitude that GALVmed owes to Mike Witty who is both our outgoing board chair and chair of our policy and external affairs committee.

I feel very humbled by the quality of individuals attracted to work with GALVmed and our board is a case in point. An already strong board will be strengthened by the arrival of four new members. I will try to sum up some of the qualities and skill-sets they will bring to the table:

*As a McKinsey consultant **Dr Lutz Goedde** brings a great strategic planning approach with him. He has experience in the public, private and not-for-profit which gives him an unusually broad oversight of the key areas where we function.*

***Dr Narayan G Hegde** has already proved invaluable as the chair of the South Asian Regional Advisory Committee. He has decades of experience of articulating the needs of rural poor people in South Asia and he will make sure we target our interventions well in that area.*

***Professor Emmanuel Sonaiya** is based in Nigeria and has worked with us previously on our Expert Scientific Committee. He is an academic with a very practical approach and considerable internationally recognised expertise in the poultry sector.*

***Peter Wells** has over 30 years experience of research and development of veterinary vaccines and he has held senior positions in the veterinary pharmaceutical and biotechnology industries.*

Individually these people are impressive; together they have a set of interlocking skills and knowledge which be of immeasurable value to GALVmed in the years to come."

Good advice on sustainable delivery of vet products for GALVmed

In mid January, GALVmed met with members of the **Global Access Advisory Committee (GAAC)** – independent advisors with expertise in pro-poor access issues pertaining to the sustainable delivery of livestock vaccines, diagnostics and drugs in the developing world.

The advisors are drawn from 11 different countries and span a wide range of disciplines. In total 22 people, including GALVmed team members, attended the inaugural meeting in Debre Zeit, Ethiopia, just outside Addis Ababa, on 19 and 20 January 2011.

The GAAC started to think through the issues which are integral to a systems approach to creating demand for animal health products. These include:

- > **legislation**
- > **risk management**

- > **financial incentives**
- > **awareness raising**
- > **communications loops**
- > **market coping**
- > **markets**
- > **development and business planning**

Steve Sloan, CEO of GALVmed, stated:

"We spent a lot of time thinking about communication and advocacy and the key messages which are necessary for global access to appropriate and affordable animal health products. This includes work which emphasises the role of livestock as a viable part of economic development as well as a food security issue. We will have some exciting news about our approach to this challenge shortly."

GALVmed CALENDAR

For more up-to-date information on upcoming events see:
www.galvmed.org/news-resources/events



East Coast Fever Taskforce reviews plans for 1.3 million cattle to be vaccinated

The East Coast Fever Taskforce, chaired by AU-IBAR, met on 22 March 2011. The meeting reviewed plans which should result in 1.3 million cattle being vaccinated against ECF over the next three years. The GALVmed newsletter team has taken this opportunity to check in with the East Coast fever programmes to highlight the progress that has been made.

Charlotte Nkuna, Assistant Director, Global Access and Marketing at GALVmed said: *"We had a very successful meeting of the East Coast Fever Taskforce. This is a strong group which is working together to address issues of production, distribution and use of ECF vaccines. Part of the overall strategy has seen significant investment in the Centre for Ticks and Tick Borne Diseases (CTTBD) in Malawi, which is now home for the production facility. This move has presented some compliance issues which need to be addressed. However, the ECF vaccine has been registered in Kenya, Tanzania and Malawi. We are now keen to clear the regulatory hurdles to start work in Uganda and ensure that we meet the requirements for each country as a result of the production facility changing. Our plan is the ECF Taskforce should continue to meet and offer support until CTTBD is supplying the market with vaccines. The Taskforce is confident that we are on track to get over a million cattle vaccinated in the next three years."*

58,539 cattle immunised in Tanzania

So far in 2011, 58,539 cattle have been immunised, mostly in the north of Tanzania where the cattle population is concentrated. However, GALVmed is working with the registration holder to make

the vaccine available to distributors and is addressing some of the supply issues. GALVmed is also in discussion with the government about a potential distribution depot to serve the Lake Zone region.

Kenya immunisation trial underway

An immunisation trial in the Kenyan dairy sector started in November 2010. So far 1,019 cattle have been vaccinated. Serology results are currently being analysed but preliminary results appear very encouraging. The present immunisation trial ends in April 2011 and the results and consequent decision of the Director of Veterinary Services should be known by June 2011.

In Kenya, currently there is no private distributor and access to the vaccine is virtually non-existent. The ECF Taskforce aims to find two private distributors and work to get them established.

Finally, the ECF Taskforce is planning to work more closely with the National ECF Taskforce in Kenya.

Immunisation starts in Malawi in March 2011

20,000 doses of ECF vaccine were procured by GALVmed to kick-start immunisation in Malawi, which started at the end of March. This has been possible because at the end of 2010 GALVmed facilitated an ECF awareness campaign which got a very good response from the farming community. A private sector distributor, GSJ, has been selected. The ECF vaccine is currently being stored at the CTTBD which will serve as a depot and wholesaler for GSJ and any other future distributors.

Centre for Ticks and Tick Borne Diseases in Malawi

The CTTBD in Malawi has been identified by the taskforce as the future production facility for ECF vaccines. US\$ 1.7 million has been allocated for improvements and capacity building. This includes the US\$ 80,000 freeze drier, (featured in the November newsletter) and a US\$ 77,000 liquid nitrogen plant. Architectural drawings are complete for the building renovation work and contractors will soon be engaged. Staff training has been undertaken, including four technicians trained at ILRI in tick and rabbit breeding and management, and ELISA and flow cytometry. Dr Michael Pearce, a Pfizer Global Health Fellow, conducted training in clinical trial management between March and September last year and Seamus Pender (see page xx) is going to CTTBD to support them on laboratory equipment calibration and maintenance through this transitional period.

A Material Transfer Agreement has been signed by CTTBD and ILRI, and ECF seed stabilates and ticks have already transferred to Malawi. Funding for the first two batches of ECF vaccine has also been provided as part of the capacity building package.

Distribution and marketing

The ECF Taskforce strategy is to get one or two distributors in place in each country. Several user groups have been identified to take on this role.

Charlotte Nkuna reports: *"GALVmed, where required, offers one-off support to distributors and user groups. This is to assist them to upscale ECF vaccine delivery and uptake by the farmers who are in dire need of this vaccine. Support takes the form of assistance and advice on the preparation of business plans which contribute to ensure they are robust and practically implementable and therefore support more sustainable businesses."*

Other support includes convening meetings and workshops where lessons and experiences are shared and networking supported.

Looking ahead, the taskforce is keen to explore whether vaccine dose reduction is a possibility.

Attendance at the ECF Taskforce meeting

Dr D Chibeu, AU-IBAR, (Chairman of meeting); **Dr B A R Chimera, Malawi**; **Dr H Kiara, ILRI**; **Dr V Mbao, GALVmed**; **Dr S Mbwiria, Kenya**; **Dr K Mugabi, Uganda**; **Dr Charlotte Nkuna, GALVmed**; **Dr G Nsengwa, Tanzania**; **Dr H Nuru, GALVmed**; **Dr Baba Soumare** (chairman of Taskforce); **AU-IBAR**; and **Dr K Tounkara, AU-PANVAC**. GALVmed would like to extend its thanks for the hard work put in by this group.

R4D publishes GALVmed case study: Protecting African cattle from East Coast fever

DFID's Research for Development (R4D) website – an on-line database containing information about research programmes supported by DFID – has recently published a case study reviewing GALVmed's work on East Coast fever. The case study was commissioned by DFID and produced by WRENmedia. The case study can be viewed at: <http://www.dfid.gov.uk/r4d/caseStudies.asp?ArticleID=50741>



The GALVmed team under the microscope

Here members of the GALVmed team talk about their role in the organisation and also tell us a little about themselves. We anticipate the latter will help break the ice when you first meet them.



Ms. Randip Basra

Job title: Director of Development

Role in GALVmed: Randip is responsible for developing and managing relationships with donors/ investors; identifying potential partnerships; and building the organisations internal and external structures, relating to this area, to ensure good practice.

Nationality: British

Joined GALVmed: She joined GALVmed in 2006

Relevant career highlights: Randip has over 14 years experience in raising income, developing partnerships, implementing communications (marketing, media and PR) and managing development strategies. She has worked with a diverse range of organisations on a local, national and international level, from a range of different sectors including the arts, social welfare, children with disabilities and young people from socially excluded backgrounds.

Education: Randip graduated from the University of Sussex with a Bachelor of Science Honours degree in neuroscience.

Interests: She enjoys walking and through this exploring the UK countryside. She has a passion for cooking and enjoys stand-up comedy 'that provides an observational spin and amusing take on life.'



Josef Geoola

Job title: Intellectual Property (IP) and Legal Officer: R&D

Role in GALVmed: Josef's role at GALVmed is to develop and exercise a sound IP policy and management strategy which will support the organisation in achieving its ultimate mission. As part of this role, he assesses the IP surrounding technologies which scientists at GALVmed identify to be interesting, creates IP plans for accessing, protecting and disseminating technologies, and drafts agreements that capture GALVmed's IP plans and secure GALVmed's humanitarian interests.

Nationality: American

Joined GALVmed: Josef joined GALVmed in May 2010.

Relevant career highlights: Josef previously worked as an IP analyst for a US-based organisation called PIPRA which specializes in IP management within ag-biotech. He also worked as a business developer for an early stage medical technology venture based in Sweden helping it meet financial and technical criteria for entering an incubator setting.

Education: B.Sc. in Microbiology from the University of California, Davis, and M.Sc. in Business Development and Entrepreneurship from Chalmers University of Technology.

Interests: Josef has lived in Iran, Germany, Israel, the US, Sweden and now the UK and can speak Persian (Farsi), Hebrew and Swedish as a result.

The different experiences he has enjoyed in each of these countries have been influential in the different passions he's developed in life.

Josef also enjoys keeping fit and has more recently developed an interest in rock climbing and cross-country skiing both of which he is hoping to do more of in Scotland.



Last word

Galvanised to support low income farmers... and their husbands



GALVmed CEO Steve Sloan writes:

Since the last newsletter I have been on a journey. I went to visit low income farmers in India and I also joined 650 of our peers for a One Health gathering in Australia. At the same time I have been working through the options for our second five-year plan with the GALVmed team. These three contrasting activities really reinforced for me what it is GALVmed is looking to achieve.

GALVmed was a sponsor of the 1st International One Health Congress, held from 14 – 16 February 2011. At Melbourne I presented the GALVmed vision for One Health to around 180 delegates. For me conferences are often crystallised by a few key contributions to the debate. At Melbourne this occurred when Professor John David Kabasa from Makerere University, Uganda asserted that One Health had to consider African diseases from an African perspective and not be blinkered into an agenda about stopping these diseases moving to the West. Too many animal diseases, he reminded us, are contributing to a situation where African children are starving.

David Nabarro, the United Nations Special Representative on Food Security and Nutrition, developed the idea that the One Health agenda had to extend to the role of livestock as a source of nutrition and not just be defined in relation to zoonotic diseases. This was encouraging for GALVmed: in our advert in the conference brochure we had talked about lives, livestock and livelihoods, of which food and nutritional security are key elements. It is hard to see the benefits of a One Health agenda which involves reducing people's disease burden, only to have their intellectual and physical development thwarted by poor nutrition. This definition of One Health was not universally accepted – but GALVmed is in good company regarding our position and this thinking will underpin our new business plan.

At the end of 2010 I was in India – you will have seen some of the images of the women livestock keepers I met earlier in this newsletter. I saw at firsthand how Newcastle disease and peste des petits ruminants (PPR) can have a devastating effect on these women's chickens and goats. However, these women also left me with a clear image of how we could work in South Asia for the

benefit of the backyard and village poultry sectors and goat keepers, opening up sustainable access to vaccines and other animal health products and services. The women in India knew that livestock meant livelihoods. They consistently told me how their livestock was providing the cash to pay for the educations their daughters and sons need to escape such a tough way of life.

The recent meeting of the South Asia Regional Advisory Committee (SARAC) also helped to chart the way ahead for us and I am really please that Dr Hegde is joining the board of GALVmed in addition to his role as chair of SARAC. South Asia represents a great opportunity for GALVmed to make a significant change, but it also graphically portrays another real challenge we need to address in our next business plan – how to scale up and have impacts on many millions of people. The first business plan has been defined by our development of delivery systems and pilots; the next business plan has to be about racking-up big impact numbers achieved through our global alliance. I believe that we have the delivery team, board and partners in place to galvanise us to achieve this.

In India I also witnessed consultation techniques which reached people whose voices are seldom heard. Directly engaging with farmers to find out what they really need is an important part of the GALVmed approach. We can then employ the best possible advice from the local and international experts to find ingenious effective solutions. In the longer term this market development must lead to effective commercialisation and sustainable delivery. In this way GALVmed will be able to move on to address other priority disease burdens.

The women of India have convinced me that GALVmed has a great deal to offer millions of small-scale livestock keepers. Or more accurately, as Nicoline de Haan, FAO's Socio-Economics Coordinator, said to me recently, to livestock keepers and their husbands. Refining the way we work with women livestock keepers will be another tenet of our new business plan.

If you would like further information,
or you wish to make any comments,
please contact us by email on
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