



RABID BYTES

The Newsletter of
The Alliance for Rabies Control

Rabies Prevention Materials Workshop, India.....	1
World Rabies Day	2
One Health Concept, West Africa.....	3
First MEERAB Meeting.....	3
Preventative Vaccination Project, Kenya	4
One Step at a Time	4
Humane Rabies Control in China.....	5
One Health Approach for Vet Master Students ...	5
Letter to the Editor	6
Indonesian Educational Materials	7
Views on Rabies in Latin America	7
Vaccinating Dogs in Bali.....	8
RabiesBlueprint.com	8-9
Flying the Flag for the Alliance.....	9
Rabies Poster Contest.....	10

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EDITORIAL

I have had the privilege of meeting many local ‘champions’ in the field of rabies during the past three years as I travelled throughout the world to talk about the Alliance for Rabies Control and the efforts that all of us are making to increase rabies awareness. As I read through this issue, I was again struck by the dedication that so many people are making in their own communities to change the lives of their fellow citizens living at risk of contracting rabies. These individuals are indeed changing the world! This month we have stories from individuals working to support rabies prevention in China, Czech Republic, England, Kenya, Ghana, Germany, India, Indonesia, Latin America, the Middle East and the US. We are especially grateful to Dr Harriet Brown who is walking across England, and to Prof Trevor Drew and his friend Dr Richard Parker who have just completed the round Britain sailing race to raise awareness about the work of the Alliance throughout the world. What fantastic ways to show support for rabies control!

We are also very excited to tell you about the launch of a brand new tool in the field of rabies: The “Blueprint for canine rabies control and human rabies prevention” (www.rabiesblueprint.com). Coordinated by Dr Tiziana Lembo with significant input from global stakeholders in rabies prevention and control including the Partners for Rabies Prevention, the Blueprint has been a year in the making.

The idea for developing a Blueprint for rabies control came from visiting many canine rabies endemic countries and realizing that information about exactly how to tackle the problem of eliminating dog rabies was often hard to find. The online document brings together critical information and recommendations from international organizations in one place so that it can be easily accessed by anyone interested in promoting rabies control in their own country. We consider the Blueprint a ‘living document’ which will be updated with new recommendations and tools as they become available. We look forward to translating the document into more languages for wider distribution and invite all of you to send us your comments so that we can continue to improve the availability of information to those that urgently need it.

I would like to remind you that the 4th World Rabies Day is quickly approaching (September 28th) and we encourage everyone reading this Newsletter to get involved, because it is only through all of our joint efforts that we will be able to lobby governmental institutions to support rabies control and prevention programs. We are already receiving information on scheduled events for 2010 and invite you to send the information about your event(s) to Peter Costa (peter.costa@worldrabiesday.org).

Best wishes, Deborah J Briggs, Executive Director

INDIAN WORKSHOP FOR DEVELOPING RABIES PREVENTION MATERIALS

A national workshop for the development of IEC (Information, Educational, and Communication) material on the prevention of Rabies for School Children and the public was held in Mysore, Karnataka, India on 20th & 21st of March 2010. It was jointly organized by the Association for Prevention and Control of Rabies in India (APCRI) and the Mandya Institute of Medical Sciences, Mandya. The workshop was inaugurated by Dr R L Ichhpujani, I/C Director of the National Centre for Disease Control. Forty-five experts in the field of rabies prevention and control from across India participated in the workshop.

A framework of power point presentations for school children and the public focusing on prevention of Rabies was finalized and this will now be translated into various Indian languages for use by qualified professionals for spreading awareness about rabies prevention.

A brochure with information about Rabies and its prevention was developed in the workshop which will also be translated into all major Indian languages and will be used to spread awareness among the public. An online quiz for children, college students and professionals has also been designed and will be hosted on the official website of APCRI. All the material developed will be available on the official website of the Association www.apcri.org.



The Workshop in progress

The article was contributed by Dr B J Mahendra of the Association for Prevention and Control of Rabies in India (APCRI) & the Dept. of Community Medicine, Mandya Institute of Medical Sciences, Mandya, India.

WORLD RABIES DAY IS SEPTEMBER 28TH



Stand United. End Rabies. World Rabies Day (WRD) is in its fourth year and moving forward with tremendous momentum! Since 2007, more than 1000 rabies awareness and prevention activities have been held in 125 countries. So far this year, 30 countries have submitted event details and the WRD Team again hopes to educate millions of people about the importance of rabies prevention.

Globally, a t-shirt design competition will engage approximately 100,000 children under 12 years of age. In the Philippines, the Philippine Association for Veterinary Medical Educators and Students (PAVMES) is offering an inter-school essay contest for students, with all 20 Veterinary Colleges eligible to participate in this concerted activity. In the U.S., the Alliance and the Centers for Disease Control and Prevention will broadcast a 24-hour webinar over the internet that will deliver rabies education across the world in real time. Rabies posters have been developed for French and Portuguese speaking nations throughout Africa and in Makurdi, Nigeria, a three-day event is being planned that will include a rabies awareness walk, educational symposium and free vaccination clinic. Throughout India, mass media is being planned with the support of celebrities and posters for a rural education drive are under development. Last year, the Association of Southeast Asian Nations (ASEAN) resolved to observe WRD each year, recognizing it as an opportunity to work together and ultimately combat rabies through a more coordinated approach. This year the WRD Team hopes to see similar announcements across the world.

The WRD Shelter and Veterinary Outreach Programs have been busy preparing for this year's campaign. The Shelter program which reaches out to humane organizations across the world has established relationships with 700 animal agencies. Last year, the program teamed up with The Humane Society of the United States Youth to co-write Rabies education articles for the Kind News; reaching approximately 1 million children across 35,000 classrooms. This year, in observance of WRD, the Shelter Outreach Program has teamed up with an industry partner to donate and distribute 50,000 doses of animal rabies vaccine to qualifying humane organizations across the U.S.. The Veterinary Outreach Program seeks to engage students, professionals and veterinary clinics across the world to mobilize as a front line of defense against rabies. In 2009, educational packets were sent to 10,000 veterinary clinics. This year, the Veterinary Outreach program is working through partnerships to distribute a rabies clinic toolkit which provides information on how to hold a rabies vaccination clinic, including materials and staff needed, talking points for clients and media as well as guidance on how to forge community partnerships for an effective effort. Thanks to the support of our dedicated partners, the first two years of both programs have surpassed all expectations and the WRD Team aspires to build upon these successes and engage more international organizations in similar efforts.



The WRD Team would like to again congratulate the students at the Tufts University Cummings School of Veterinary Medicine for winning the third-annual rabies Symposium. This event will bring together noted public health and animal health speakers, veterinarians and veterinary medical students from around the world to discuss the important public health issue of rabies. The Symposium is awarded to the student chapter of the American Veterinary Medical Association having the highest percentage of its student body participate in a WRD event. More information about the [Symposium](#), including registration and continuing education, is available on the WRD website.

If you are planning a WRD event, please tell us more about it! Post your event information on our website by filling out the [event submission form](#). For WRD t-shirts, buttons or other giveaways for your event, please visit the [Official WRD Shop](#).

For general information about WRD or the upcoming webinar, please contact Peter.Costa@worldrabiesday.org. For Shelter Outreach, contact Mylissia.Stukey@worldrabiesday.org and for Veterinary Outreach, contact Robert.Weedon@worldrabiesday.org.

Contributed by Peter Costa, the WRD coordinator.



African Rabies Poster



Davao City, Philippines.

Photo: Victor Atienza

RABIES IN WEST AFRICA: THE “ONE HEALTH CONCEPT”

The United States Agency for International Development (USAID)'s West Africa Regional Mission organized a two day meeting in Accra, Ghana in collaboration with the Veterinary Services Department of Ghana, March 10-11, 2010. The meeting emphasized an integrated Veterinary/Public Health approach to combat zoonotic threats such as rabies. Participants included USAID, OIE, FAO, WHO



Department of Neglected Zoonotic Diseases, CDC, AfriCom, AFENET, private sector, as well as two-person teams from five African Nations: Ghana, Cote d'Ivoire, Senegal, Uganda, and Nigeria. Each country sent one animal health and one human health representative who gave a joint overview on the current rabies situation in their respective countries. This provided the opportunity to engage both Ministries of Health and Agriculture in the discussion of rabies prevention and control while also identifying regional and national gaps and needs. Experts on rabies shared the latest information on rabies control, good practices and achievements from other regions, as well as a template for the implementation of rabies elimination plans. The Ghana Field Epidemiology & Laboratory Training Program (FELTP) shared information on a cross-border rabies outbreak in Upper East Region in 2009. FELTP responded by conducting a descriptive study to determine when and where the disease occurred, who was affected, and even reviewing hospital and veterinary records to actively search out possible cases.

Rabies is a serious human health threat in West Africa and one that animal and human health professionals can cost-effectively address through the mass vaccination of dogs. There is a need for more baseline data as well as dog ecology studies, education of the public on how to manage dog bites and where to seek timely post-exposure prophylaxis. Improved sanitation to discourage gathering of dogs in communities, and policy changes starting with making rabies a mandatory reported disease are also essential. Linkages made during the meeting provided the basis for the creation of an inter-sectoral, regional rabies network for West Africa with close links to RABNET/SADC, AfroREB and SEARG. Participant countries are to come up with a clear rabies prevention and control program including coordination and communication between animal and human health sectors. Country representatives were excited about the prospect of using the newly developed “[Blueprint for Canine Rabies Control](#)”, a new easy to use manual just recently uploaded for free internet access by the Partners for Rabies Prevention group. Identifying sources of funding and advocating the need to address rabies is imperative if rabies in West Africa is to be controlled. The Accra meeting culminated in a half-day of energetic group work which further supported cooperation and collaboration of animal and human health sectors in addressing zoonotic diseases like rabies in Africa. The groundwork has been laid for the prevention and control of rabies in West Africa. The need is obvious, but there is still much work to be done.

*Contributed by Kim Rock and Baba Soumare of USAID, with William Amanfu of the FAO.
The [full meeting report](#) is available on the [Meeting Reports](#) section of the Alliance website.*

FIRST MEEREB MEETING

Rabies experts from seven Middle East and Eastern European countries (Croatia, Egypt, Georgia, Iran, Serbia, Turkey and Ukraine) met for two days in Istanbul, Turkey on 8th and 9th June 2010. At the meeting it was decided to establish a new regional network - the Middle East and Eastern Europe Rabies Expert Bureau, MEEREB. It will be the third regional group of experts devoted to rabies prevention and control, after AREB (the Asian Rabies Expert Bureau, established in 2004) and AfroREB (a network of experts from francophone Africa, established in 2008). These networks recognize that rabies is transmitted by animals that do not respect borders and that rabies control requires inter-country cooperation at the regional level.



All MEEREB countries reported that rabies is present in animals, and some that cases in humans still occur. In Turkey, for example, rabies is present in dogs and, in certain regions, foxes. Approximately 180 000 people are bitten annually by suspected rabid animals, and 90% receive post-exposure prophylaxis. Sadly though, over the past decade, there has been a total of 21 human rabies cases. The Turkish Ministry of Health and Ministry of Environment and Forests are implementing programmes that aim at preventing rabies in humans and eliminating rabies in animals.

The MEEREB experts heard presentations about the current rabies situation in each country and then discussed possible control strategies. They recognized that control of canine rabies is an essential component of anti-rabies programmes - one that requires close collaboration between human and animal healthcare services. However, as long as canine rabies remains uncontrolled, the goal must be focused on educating the general population, particularly children who are the main victims of rabies, and proper management of animal bites. The new [Blueprint for Rabies Prevention and Control](#) was reviewed and was enthusiastically welcomed as a valuable tool for control efforts in countries where dog rabies is present.

Lives can be saved by increasing awareness about rabies and informing the population, healthcare personnel and authorities on how to manage animal bites. MEEREB members will develop communication plans adapted to their countries and collaborating with the Alliance will participate in World Rabies Day, each September.

Summarized by Louise Taylor from the MEEREB press release

PREVENTIVE VACCINATION OF DOGS IN MT. KULAL, KENYA

In Northern Kenya, a land of nomadic pastoralists, dogs are important components of day-to-day life. They accompany herds of cattle and goats, guarding both the domestic animals and their keepers against attacks from wildlife. Though there are virtually no stray dogs in the area and every dog belongs to a certain family (who give it a name), poverty constrains the dog owners' ability to ensure basic preventive measures. Rabies has been present in Kenya since colonial times, waxing and waning over the years, and though the number of deaths can only be guessed, it has certainly been hundreds of human lives per year.

The Mt. Kulal Dogs' Preventive Vaccination Project, taking place in the hinterland of Lake Turkana, Northern Kenya, was started in September 2006. This project, concerned with the population of dogs and cats of Samburu, Turkana, Rendille and Gabra pastoralists, had initially been balanced between research and rabies-preventative intentions, but the latter aim has gradually prevailed. Presently the main activities consist of free anti-rabies vaccination, raising of rabies awareness, funding of Post Exposure Prophylaxis costs and case monitoring.

Vaccination campaigns are held annually in twelve villages around Lake Turkana and to date more than 1200 dogs and 300 cats have been vaccinated. In certain locations rabies outbreaks occur particularly in ruminants, so the spectrum of vaccinated species



is occasionally extended to camels, donkeys and cattle. The campaign is announced several days in advance by local members of the vaccination team and spreads out very efficiently by word-of-mouth. Rabies awareness is boosted every year by discussions with elders of the village and short lectures given to schoolchildren, who take the main responsibility of managing the dogs and cats and thus are at the greatest risk of acquiring the disease.

In collaboration with two local hospitals in Gatab and Loyangalani, the project provides post-exposure prophylaxis to people who have suffered a bite from a dog or any other animal suspected of having rabies. Every such case is recorded locally ("rabieswatch"), thus providing a rough monitoring of the impact of the vaccination. Thanks to vaccination

certificates issued for every vaccinated dog which feature its color photograph, the vaccination history of every single animal is traceable. Though overall they are decreasing, new cases of rabies appear every year, necessitating the continuation of vaccination and an increase of the vaccination coverage in the area. Considerations for the future of the project include herd vaccination of camels, donkeys and cattle and implementation of the dRIT rabies diagnostic technique in the area.

The project benefitted from warm acceptance and cooperation by the local communities. Official responsibility for the project has been taken by district veterinary officer of the Marsabit district, Dr. C. Machira. Samuel Lolokote, a student of veterinary medicine born in Gatab, joined the vaccination team in 2008 and today is preparing himself for becoming "the pivotal rabieswatch agent" of the project. The project would not be possible without generous support of Californian charity organization CNLI and two NGOs; SHADE (UK) and Medela (CZ), as well as the support given by the Czech Embassy in Nairobi, Veterinary and Pharmaceutical University Brno, Czech Republic and the University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Romania. Currently, the project is managed by Kenyan NGO Lake Turkana Trust, being assisted by Vétérinaires sans frontières Tchèque (VSF-CZ). Full details are available on the [project website](#).

Contributed by Kateřina Albrechtová and Dr David Modrý, (the project coordinator) from the University of Veterinary and Pharmaceutical Sciences Brno, Czech Republic. Dr Modrý also works in the Parasitological Institute of AV CR, České Budějovice, and is managing director of VSF-CZ. He can be contacted at modryd@vfu.cz.

ONE STEP AT A TIME

If it's the weekend, then Harriet Brown, a veterinarian in Worksop, England will probably be high in the hills walking across Northern England to raise funds for the Alliance (her fundraising page is at: www.justgiving.com/harrietcoast2coast). Here is her account of the journey so far:

The start of my Coast to Coast walk on the shore of the Irish Sea in February already seems so far behind me. Since then I've had four weekends walking; some alone, and some with friends and family joining me. The walk has taken me from the red cliffs of St Bees on the coast of Cumbria to the flower filled meadows of Swaledale in Yorkshire, over the spectacular hills of the Lake District and the heather covered Pennines. There's been a change from snowy and icy mountain paths on my first weekend to hot hazy summer days walking across moorland. The route has been constantly interesting, hardly touching roads and crossing diverse scenery. The literal high points have been the peaks of St Sunday Crag and High Street in the Lake District, and these have given me extensive views, but equally enjoyable have been the details- wild flowers, lambs in fields, the call of a cuckoo, ducklings in a stream. Every day has been memorable, and dividing the route into weekend stages has kept it fresh, avoided any blisters, and given me something to plan and look forward to during the week! So far at the end of the long days hiking I've collapsed into a camper van, stayed at a youth hostel, a few campsites, and a wild camp high up on the shore of a tarn in the Lake District, where we had marshmallows and drank hot chocolate watching the sunset over the mountains. I've been rained on only once- and that was crossing the Pennines, the watershed of Britain. So now I've walked 102 miles- I'm halfway- and I've started to feel that the end of this route will come too soon!



FORUM ON SCIENTIFIC, EFFECTIVE AND HUMANE RABIES CONTROL IN CHINA

In response to the Hanzhong dog culling incident, a forum was organised in Beijing on June 28th, 2009, to discuss scientific and humane alternatives for rabies prevention and control in the country. Currently, the mass killing of dogs is one of the main measures used by local government authorities to control rabies.

The forum was organised by the China Medical Foundation, China Medical Rescue Association, Capital Animal Welfare Association and ACTAsia for Animals. This is the first time that government authorities, representatives from central and local Disease Control Centres, animal protection NGOs, epidemiologists and experts from other fields have come together to discuss methods of scientific and humane rabies prevention and control and practical measures to implement these methods. The aim was to provide local areas, particularly rural areas, with practical guidelines and to make a joint effort to promote rabies prevention in China.

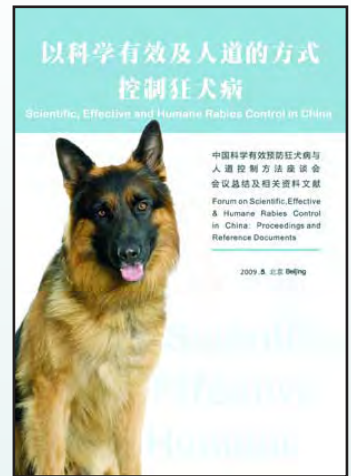
At the forum, Jia Youling, China's Chief Veterinary Officer, pointed out that "currently, the coverage of rabies vaccination in China is less than 10%, which cannot prevent rabies effectively". He also added that when human rabies deaths are reported, some local governments react with panic and start killing dogs indiscriminately, which is not only expensive, but is also detrimental to the Chinese government's goal of a harmonious society. Tang Qing (China Centre for Disease Control and Prevention) said, "A humane rabies control programme in China should be recognized and adopted by the authorities at central and regional levels."

Every participant, no matter from which field, condemned the inhumane mass culling carried out by the Hanzhong government and others. They also agreed that indiscriminate mass culling of dogs is an ineffective and unscientific measure of rabies control.

The forum provided recommendations which we hope will be a starting point to review the current methods of rabies control and move towards preventing and controlling rabies through scientific and humane methods. The forum proceedings covered the case for humane rabies control in China; research on the current rabies situation in different parts of China (including vaccines, public education, dog culling incidents and epidemiological trends); the cost of culling; and canine rabies control programmes around the world. The proceedings have been compiled and sent to relevant government departments in different parts of the country.

The [forum summary in English](#) provides more details on the views of the participants and the key points of the discussion. The [complete forum proceedings](#) are available in Chinese on our website at www.actasia.org.

Contributed by Deepashree Balaram, Programme Director for ACTAsia for Animals



ONE HEALTH APPROACH FOR AFRICAN VETERINARY MASTER STUDENTS

Recently, a "Joint Master's Programme in Transboundary Animal Disease Management" (MTADM) project was initiated. Its aims are to build human resource capacity by training an effective pool of professionals in cross-border animal disease control and management and by strengthening the regional network of veterinary faculties. The course is organized by Addis Ababa University in Ethiopia and the Freie Universität Berlin with strong input and later endorsement by other partner universities in Uganda and Sudan. It is an ACP-EU Cooperation programme in Higher Education, a joint programme of the African, Caribbean and Pacific Group of States (ACP) with the financial assistance of the European Union and scholarship provision by the German Academic Exchange Service (DAAD) and the Ethiopian Ministry of Agriculture and Rural Development (MoARD).



MTADM students after the rabies lecture

Part of the curriculum is held at Freie Universität Berlin with seminars given also by guest lecturers including staff from the Friedrich-Loeffler-Institute and the WHO Collaborating Centre for Rabies surveillance and research. Within the schedule a whole day was devoted to rabies and rabies control focusing on the "one health" approach. The participants vividly explained their experience with rabies in their African home countries Ethiopia, Sudan, Kenya and Uganda. Besides current knowledge in the global perspective of rabies and lyssaviruses, the veterinarians were introduced to modern concepts of dog rabies control using a beta version of the blueprint (www.rabiesblueprint.com) and other resources from the ARC and WRD webpages. A veterinarian from Ethiopia said: "I had not known about the diverse structure of dog populations and its influence on rabies control. I had assumed most dogs wandering around in the villages or cities were simply stray animals." He added that such control efforts using mass vaccination are difficult to perform in some areas of Africa with only limited veterinary authorities. Rabies control is still mostly based on killing dogs sometimes with strychnine. "The fact, that in some countries these veterinary services will be privatized is not going to be beneficial for animal disease control in Africa in the future", he assumed.

On the other hand new diagnostic tests for rabies such as a lateral flow test were regarded as an important opportunity to improve surveillance efforts, focus PEP where needed and to provide objective numbers of rabies in animals and humans for decision makers, eventually to break the "circle of neglect". At the end of the day, there was a passionate belief among the students that rabies is a dreadful zoonosis that needs to be controlled.

Contributed by Dr. Conrad Freuling, Scientist and Editor of the WHO Rabies Bulletin Europe, WHO Collaborating Centre for Rabies Surveillance and Research, Friedrich-Loeffler-Institute, Wusterhausen, Germany.

Letter to the Editor: CONTROLLING DOG POPULATIONS

Controlling street or stray dog populations is an important issue for the control of Rabies and the welfare of the dogs. There is ample research¹ to show that dog control coupled with Rabies vaccination is a significant benefit to both aims. However it is tempting to suggest that dog control can be achieved easily and to simplify any such project to neutering a few dogs. Nothing could be further from the truth.

A large number of factors including the availability of food, local climate, endemic disease and the attitude of the human population affect dog life expectancy and fecundity. Left to its own devices a population will stabilise at the level that all those factors will support.

In a relatively free roaming population, dogs will breed in an opportunistic manner. A bitch in season is likely to be mated more than once, so litters may have mixed paternity. It is to be expected that virtually all bitches will breed every season. The number of puppies produced therefore relates to the number of breeding bitches and the number of puppies each whelps. The influence of the number of breeding male dogs is minimal, if it has any influence at all. The fecundity of the bitches and viability of the puppies, and therefore the number reaching breeding maturity, will depend on the factors outlined above.

In view of this I was concerned to read in the last issue of the Newsletter an article extolling the virtue of chemical sterilisation of male dogs to control the population. In my view, sterilising male dogs without addressing the females is unlikely to have any significant effect on the size of the population for the reasons outlined above and consequently on the control of Rabies.

I accept that it is difficult to explain to the general public that only females need to be neutered. So a neutering programme has to apply to dogs of both sexes. I also accept that costs are a significant issue, but whether male dogs' welfare is affected by the use of chemical sterilants is an additional matter that might merit further discussion. For organisations working to control Rabies and, as part of that activity, control and vaccinate dog populations the minor value of neutering male dogs as opposed to females must be clear.

Mr Chris Laurence is Veterinary Director of Dogs Trust UK. Dogs Trust run subsidised neutering campaigns in the UK and catch/neuter/release projects in Romania and Malta.

¹ *Reece J F and Chawla S K Veterinary Record 2006 159, 379-383.*

Response from Ark Sciences :

Without question, dog population management is a challenging endeavor that requires more than neutering a few dogs. To this point, there can be little argument. The truth is, right now we have more questions about population management than we have answers. Ark Sciences is assisting many independent researchers in hopes to better understand population dynamics and until more research is done, statements about controlling dog population, which may seem sound and logical, are mostly based on supposition and not evidence.

We do know – effective rabies vaccination campaigns should integrate population management. We do know - Esterilsol is an effective tool to sterilize male dogs, especially in those areas where cultural attitudes are such that surgical castration is not widely accepted. We do know - Esterilsol is a cost-effective, non-invasive alternative, especially in remote areas where surgical conditions may not meet the ethical standards necessary to conduct proper surgery. That is what we know.

Ark Sciences is working to end human acquired rabies transmitted from the canine reservoir. Esterilsol is an important tool to help us achieve this goal. Population management programs should have a moral responsibility to humanely sterilize both sexes, but the truth is – considerable efforts have been placed on sterilizing female dogs only. Yet population management continues to be an unresolved issue, why? Maybe we are focusing on the wrong sex; in fact, one study found most free-ranging females breed only once a year¹ and not every season. As more scientific data becomes available, we can evaluate all methods of sterilization and determine where each method is most impactful - openly, honestly, scientifically.

Dr Brian Corbett, Ark Sciences

¹ *S.K. Pal/Applied Animal Behaviour Science 111 (2008) 95-107*

DEVELOPMENT OF INDONESIAN EDUCATIONAL MATERIALS

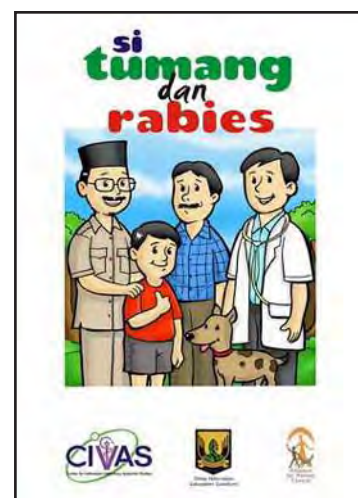
Indonesia has a complex rabies situation. Some of the islands in the archipelago are endemically infected with canine rabies, other islands are 'rabies-free' (since an eradication program in 1997), and some historically free islands have experienced rabies outbreaks for the first time (ie the islands of Bali and Nias).

Sukabumi district, within the province of West Java, is an area with a high incidence of canine rabies. In 2007, 192 animal bite cases in humans were reported in the Sukabumi district, and in 2008 a rabies outbreak was declared after 187 people were bitten and 2 died between January and May.

With funds raised from the WRD campaign, the Alliance is supporting an education program being developed and delivered by the Livestock Service Office of Sukabumi District and the Center for Indonesian Veterinary Analytical Studies (CIVAS). The targeted audiences are children and the wild boar hunters. Children were chosen as one of the main focuses for this educational campaign because they are the most frequent victims of dog bites, and they readily receive and learn new information and take it home to tell their families. The wild boar hunters were also targeted because they often refuse to get their hunting dogs vaccinated against rabies, believing that it will weaken them. These dogs are often exposed to local wild species in the forests as well as other unvaccinated dogs and are therefore at high risk of spreading rabies infection.

The program is currently focusing on 5 villages and will be conducted for one year from December 2009 to December 2010. Several rabies prevention educational models are being developed for both target audiences with the hope that the most effective one could be found. Different presentations and materials (oral presentations, a flip chart presentation, a booklet, a comic book (pictured) and an animated movie) have been developed for use in elementary, junior high and high schools and for the hunting community. The effectiveness of holding more than one session is also being evaluated. The children are tested before and after the programme to assess the success of the educational modules. Early data indicate that all levels of school children that have been involved in the programme have increased their knowledge of rabies.

The project is being lead by Dr Erianto Nugroho of the Center for Indonesian Veterinary Analytical Studies and an interim report is now available in the [projects section](#) of the Alliance website. It includes all of the educational materials developed in Indonesia.



A Comic book telling the story of a boy who is bitten by his father's hunting dog

LATIN AMERICAN RABIES EXPERTS EXPRESS THEIR VIEWS

Many rabies professionals dream of eradicating rabies from their countries. If there is consensus on this point, personal opinions on the strategies needed to achieve this goal may differ. How can we best prevent and eradicate canine rabies? How can institutions involved in the control of zoonoses work together to achieve this goal? What are the difficulties in achieving these goals?

The Alliance for Rabies Control together collaborating with Centro Panamericano de Fiebre Aftosa (PANAFTOSA, part of the PanAmerican Health Organization) interviewed several professionals who have devoted their working lives to the problem of rabies in Latin American countries, as well as representatives of some institutions responsible for control and prevention programs for this disease.

In total, 14 rabies experts expressed their opinions, including the need for countries to provide the maximum possible commitment to rabies prevention programs in order to avoid the re-occurrence of rabies, and their own personal suggestions for the introduction of innovative ideas. There was a consensus among professionals that vaccination campaigns, held periodically, are the flagship of all rabies control activities. At the same time, many experts stressed that these campaigns should involve not only vaccination against rabies, but also the dissemination of guidelines on responsible pet ownership. Many of the experts also stressed that there is a need for states to assume responsibility for effective rabies control programs as they are conducted throughout the years. The biggest obstacles that were identified included financial and bureaucratic problems. These roadblocks can partially be alleviated by the dedicated efforts of healthcare professionals and other individuals who engage passionately to support efforts to prevent and control rabies. The results of this interview project should contribute to a growing awareness that through education, we can prevent most cases of human rabies.

This article was written by Phyllis Romijn of the Agricultural Research Institute of Rio de Janeiro (PESAGRO-RIO) who conducted the interviews as part of an Alliance / PAHO joint partnership project. There are more [details of the partnership](#) available on our website where the [full text of the interviews](#) are being posted as translations become available.

VACCINATING DOGS IN BALI

The Indonesian island of Bali is home to over 3.5 million inhabitants and is a favourite tourist destination, hosting an average of 2 million visitors every year. It is the only island within the Indonesian archipelago where the main religion is Hinduism, which explains why the dog population there is much larger than in the other, mainly Muslim, islands. It is estimated that there are approximately 450,000 domestic and stray dogs on Bali. Even when they have an owner, these animals are seldom treated as pets and roam in the streets, where they often get hit by passing traffic. Saddened by the plight of the Balinese dogs, Janice Girardi, who has been living on the island for 30 years and designs jewellery, founded the [Bali Animal Welfare Association \(BAWA\)](#) in 2000 to provide veterinary care, dog sterilization, and education on animal welfare.

However, when the first cases of human rabies were reported in November 2008, BAWA switched to more immediate priorities. Rabies rapidly spread across the island, and medical centres are currently dealing with up to 300 dog bites a day, with limited supplies of essential rabies immunoglobulin and periodic shortages of rabies vaccine. No bite victims have previously been immunized, and many are too poor to pay for the hospitals' vaccination administration fee (around \$40) or the vaccine costs from private pharmacies which are higher. Officially, 62 people have died of rabies, likely an underestimation as deaths in remote villages are rarely reported or investigated. Due to lack of awareness, bites are left unattended until it is too late. Until mid-2009, no dog rabies vaccine was available in Indonesia, and roaming dogs were subjected to mass culling. When dog vaccine arrived at last, the local authorities set up a vaccination campaign. Posters were put up throughout the island, asking people to bring their dogs to be vaccinated, but this met with little success as dogs could not be handled.

Meanwhile culling continued, and Janice arranged meetings and seminars with internationally acknowledged rabies experts and requested support from various international organisations to set up a pilot vaccination program in the Gianyar area. Thanks to generous donations but also mostly to her own financial input, a fleet of 6 vans sets off each morning towards various villages, each with a team of dog catchers equipped with nets, a vet, and a clerk who writes out the vaccination certificates. With the village headman, they walk from house to house, harmlessly netting each dog, easily administering vaccine, tie a red ribbon around its neck, mark it with coloured paint, and issue a vaccination certificate to its owner. A couple of days later, they return to the village to estimate the proportion of dogs wearing a ribbon, or marked with paint. If this is below the recommended 70%, they will return to complete the job. Dog owners are grateful for this free service. Indeed, dogs play a vital role in Balinese culture, and if they are culled, people will buy potentially rabid puppies from other areas. The pilot program has been a resounding success, as within 6 months the target of 40,000 vaccinated dogs in the Gianyar district was reached.

But BAWA's actions in favour of rabies control are not limited to vaccinating dogs: a presentation in Balinese to raise awareness is being shown at village meetings, and schoolchildren are taught how to avoid rabies, what to do in case of a bite, and about animal welfare. The plan is now to extend the program all over the island, as thanks to BAWA's tireless efforts, it is winning support both from the local authorities and donor organisations.

Contributed by Dr Brigitte Dunais who met Janice Girardi of BAWA and travelled with one of her vaccinating teams during a recent visit to Bali.

A NEW TOOL FOR RABIES CONTROL

This year brings exciting new developments in the fight against rabies. The recently launched online Blueprint for Rabies Prevention and Control (www.rabiesblueprint.com) is a comprehensive new tool aimed at guiding practitioners in implementing canine rabies control programs with the overall objective of preventing human rabies deaths. The Blueprint is applicable to countries where canine rabies is endemic or has been re-introduced.

Global rabies experts have come together to contribute to the initiative which has been led by the Global Alliance for Rabies Control and Partners for Rabies Prevention with technical support by FAO's Regional Central Animal Health, Bamako. The substantial online document is not meant to replace existing published documents or national guidelines. Rather, concise take-home messages based on key current knowledge on rabies control strategies from several parties, including international bodies, academic institutions, animal welfare organizations, vaccine producers and other global stakeholders, are presented in a simple and understandable style. The website has been developed in a user friendly format and at a resolution that even countries with low-speed internet connections will be able to navigate through it. Hyperlinks connect users to more detailed online or paper-based information, including previously published guidelines and field studies. The economical design of the website also allows those who connect to the internet via mobile phones to access rabies control information. At present the Blueprint is available in English and French and a number of other languages are being considered.

The Blueprint currently focuses on canine rabies elimination, which is the first of two phases. The next phase of the project will deal with wildlife rabies control. The Blueprint first introduces the users to the document and provides basic information about rabies and canine rabies control. The following section on "Roles and Responsibilities" identifies the agencies for all activities related to a dog rabies control program. The minimum infrastructure required, role of legislation in the fight against rabies, resource



Continued on page 9...

RABIESBLUEPRINT.COM...continued from page 8.

requirements, costs and funding opportunities are provided in the section on “Infrastructure, legislative framework, costs and funding”. The importance of raising awareness on rabies prevention and control and how effective communication planning can help achieve this are highlighted in the “Communications plan” section. Specifically, this section provides a planning framework and guidelines for developing a country-specific rabies communication plan. Finally, the “Operational activities” section contains details of the actual implementation of the program including the epidemiological information necessary, supplies needed, personnel and training requirements, operational activities related to dog rabies control, human rabies prophylaxis, indicators that will help determine the success of the program, and mechanisms for sustainability. Country-specific case studies are also included which illustrate how rabies control programs have been successfully implemented and provide useful examples as to how problems can be addressed.

We encourage people to visit the site and share it with other stakeholders. We welcome comments, suggestions and updates. This new tool will undoubtedly prove to be very useful in the coming years for the design and implementation of large scale control programs aimed at canine rabies elimination.

Contributed by Tiziana Lembo of the Alliance and the University of Glasgow, UK who coordinated the Blueprint's development.

FLYING THE FLAG FOR THE ALLIANCE

Trevor Drew, head of Virology at the Veterinary Laboratories Agency Weybridge and his friend and co-skipper, Richard Palmer, successfully completed the two-handed Round Britain and Ireland yacht race in the last days of June. They set off on the 2,200 mile (3,500Km) race from Plymouth, on the south coast of England in Richard's J109 yacht 'Jangada Too' and completed the course in 14 days, 6 hours, with an additional four compulsory 48 hour stops.

We asked Trevor to recount the experience for us:

“Each leg of the race offered a completely different challenge. The first leg from Plymouth to Kinsale in Ireland was a relatively easy one – more of a shakedown leg. But we did have some quite strong winds and a few yachts had to make repairs to rigs and sails on arrival. The leg from Kinsale to Barra in the Outer Hebrides was true ocean sailing with huge swells and high winds – we recorded 35kt at times. The headwind necessitated a long tack right out into the Atlantic, before heading back northeast towards Barra. We were very pleased to get there in one piece. The longest leg from Barra, around St Kilda and Muckle Flugga the top of Shetland to Lerwick was also very rough at times and you know you are a long way from home and a long way from help. At one point, you are farther north than Cape Horn is south. By that time, many of the yachts had suffered damage, but we were very fortunate, with only one broken shackle. The fourth leg, from Lerwick to Lowestoft, was the first really tactical one, where decisions made at the start could really make a difference. There was also the added challenge of the numerous oil and gas rigs, not to mention shifting sandbanks off the East Anglian coast.”

“At this stage, the fleet was strung out all along the East coast, and we were lying 5th in class and 10th overall. The final leg from Lowestoft to Plymouth was a real game of chess. We picked our way across the Thames Estuary and took an inside line around the Goodwin Sands, but found very little wind inshore. However, position reports also indicated poor progress by the yachts that had chosen the offshore option. So we plumped for a course about a km out and, apart from a wind hole off Beachy Head, did amazingly well, catching up the leaders before we were all dumped in Lyme Bay. At one point, I thought we might even win, but the wind filled from an unfavourable direction. However, we still managed to gain five places, coming in to Plymouth under spinnaker, to cheers from the balcony of the Royal Western Yacht Club, in 4th position in Class and 5th overall. The race was a great experience but I had quite a bit of sleep to catch up on!”



Light winds off the south coast of England



Trevor (left) and Richard celebrate arriving in the Outer Hebrides

Trevor has raised £700 so far for the Alliance for Rabies Control and is still looking for more donations, so if you are feeling generous, please go to www.justgiving.com/trevordrew. You can find out more on their blog at www.jangada.co.uk.

RABIES AWARENESS POSTER CONTEST

The Zach Jones Memorial Fund is working with Bonny Mayes from the Texas Department of Health in the US to get the word out about the dangers of rabies. Skunks and bats are the most common rabies infected species in Texas, and school grounds are the number one location for exposure of children to rabid bats. Bat bites are not always noticeable and many people are unaware that exposure to bats poses a risk. Most of these rabies exposures are preventable through education.

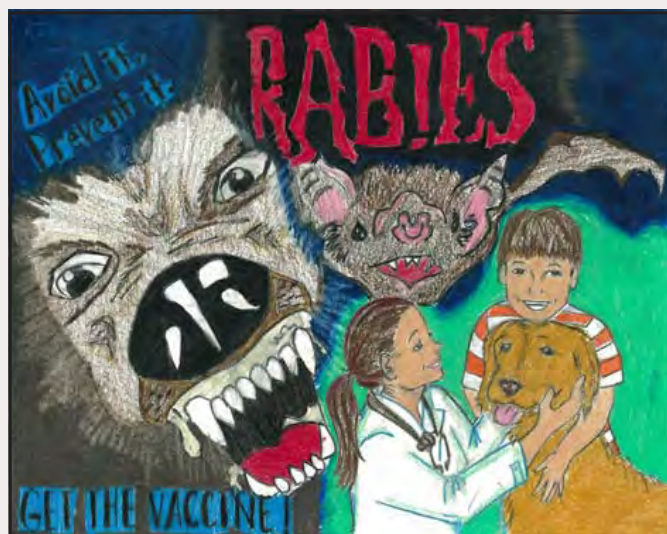
So, aiming to educate young school children, the Fund has sponsored a state-wide poster contest for children in grades K- 8 (ages 6 – 14) for the last 2 years. There were more than 1200 entries this year, from 89 different schools, with a very high standard of entries. The winning posters will be enlarged for display and used in a statewide rabies prevention campaign. All the winning posters can be seen on the [Texas Department of Health website](http://www.dhs.texas.gov).



Grades 3-5 winner. Annaliese Kramer from Maplebrook Elementary, Humble.



Grades K-2 winner. Ruben Lopez from John Drugan Elementary, El Paso.



Grades 6-8 winner. Lizeth Terrazas from Lamar Middle School, Laredo.



UPCOMING CONFERENCES

The 21st International Conference on Rabies in the Americas (RITA) will be held from October 17th to October 22nd, 2010 at the Camino Real Hotel in Guadalajara City, in Jalisco, Mexico. For further details please go to www.senasica.gob.mx/?id=2511

The editor of the Alliance newsletter is Louise Taylor. If you have news items or information of interest to those working to defeat rabies, please contact her at louise.taylor@rabiescontrol.net. For further information on the Alliance's work see www.rabiescontrol.net.