

# RABID BYTES

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## The newsletter of The Global Alliance for Rabies Control

#### **EDITORIAL**

World Rabies Day is a great opportunity for collective events, scientific discussions, renewed advocacy, educational outreach, applied research and the development of best practices and global policies on rabies control. Recently, GARC and its partners have been active in all of these areas.

Last month, GARC coordinated a health economics workshop in Ft. Collins, Colorado, hosted by the U.S. Department of Agriculture, Wildlife Services. One of the primary objectives of this event was to review recent and ongoing rabies projects in Africa and Asia, to try to answer two critical questions: How much does it cost to vaccinate a dog? What is the cost per human life saved? Although it is critical to immunize exposed persons promptly and appropriately, mass targeted canine vaccination as a whole is more cost effective than human prophylaxis alone in the long term, and economics arguments will help to make the case.

Concomitantly, GARC was represented at a meeting in Lima, Peru, coordinated by the Pan American Health Organization, to review progress in the regional rabies program. Within Latin America, human rabies decreased substantially from several hundred deaths per year during the mid 20th century to only 8 reported to date during 2013. Today, most human rabies cases in the Americas are due to exposures from rabid wildlife, rather than dogs. Of 35 countries in the Americas, many have been declared "free" of human cases of dog-transmitted rabies, and reports of human rabies transmitted by dogs are limited to only a few, including parts of Bolivia, Peru, Haiti, and Brazil.

Canine rabies in Brazil has been controlled throughout most of the country, with the exception of a few northeastern states where concentrated mass vaccination campaigns could eliminate it in 2-3 years. Recognizing the key role of biologics for such an enterprise, the Department of Agriculture, LANAGRO-SP, held a workshop in September in Campinas, Brazil, entitled "Animal Rabies: The Role of Government and Industry Manufacturers of Vaccines in Disease Control". Such conferences offer a glimpse of the resolve of international scientists in generating practical solutions to their local issues, with relevance to the region and the field as a whole.

In Chile, canine rabies has been eliminated for decades. Rabies here is perpetuated primarily by insectivorous bats, and the last documented human rabies death occurred during 1996. Hence, a report by the Ministry of Health of a case of acute progressive encephalitis in a man bitten by a dog during July was a cause for concern. GARC participated in the ongoing case investigation and public health response. Although no virus variant was identified, because of the risk posed by the event, tens of thousands of local dogs were vaccinated rapidly, incase a canine rabies virus was involved. Public education concerning responsible pet ownership, rabies and its prevention, and community engagement were exemplary. No other rabies cases were detected, and the patient continues to improve. While investigation of this very interesting case continues, the country is to be recognized for demonstrating that canine rabies transmission can be interrupted and that, if necessary, expertise can be harnessed in a timely period to respond to a possible reintroduction event.

Lastly, GARC participated in a scientific review during August of the discovery of wildlife rabies in Taiwan, which had been thought to be free of the disease for decades. The rabies strain, found in ferret badgers had been reported previously only from mainland China. This situation demonstrates not only how fragile 'rabies-free' areas may be, but also the key importance of laboratory-based surveillance of wildlife as rabies reservoirs, even after canine rabies has been eliminated.

Clearly, south-south shared experiences have much to offer in the near future. The Americas lead regarding animal rabies diagnosis and canine management on a continental scale. By comparison, human rabies prevention by multi-site intradermal postexposure prophylaxis has progressed well throughout Asia. Such key components are in need of much greater emphasis throughout sub-Saharan Africa. As this 28 September looms, three basic messages

are apparent. Human rabies can be prevented. Canine rabies may be eliminated. Wildlife rabies can be controlled. Embracing these facets lends itself beyond a mere day, towards a progressive pathway forward in the years ahead.

Charles Rupprecht, Director of Research, GARC

ORABIES

## **NEWS FROM GARC AND WRD**

## Rabies: Understand it to Defeat it

World Rabies Day is almost here and this year's theme is *Rabies:* understand it to defeat it. We want to make sure that those living with the risk of rabies understand how it is transmitted, how to prevent exposures, and what to do if bitten or scratched by a rabid animal.

Although we coordinate and support World Rabies Day events and resources, it belongs to everyone, and every year we are humbled by individual stories of dedication. This year in Syria, the Faculty of Veterinary Medicine of Al Baath University will be handing out <u>leaflets to children in refugee centres</u>. And in Kolkata, India, there's a <u>drawing and essay competition for school children</u>.



Other events include vaccinating stray dogs, dog shows, fundraising fun runs, national media campaigns, the list goes on, and you can view many of these events on our <u>website</u>. And if you look at our <u>map</u> (pictured), you can see the truly global spread of events.



So, what can you do to get involved? Check our website for events near you, or set up your own event and tell us about it. One great way of saving lives is to teach children about rabies, and to help with this you can download free age appropriate lesson plans in various languages. There are also posters, flyers and videos – all free of charge – including some new Russian translations, and a new bat rabies prevention poster.

Write to your government representative to ask them what they are doing to stop rabies, a preventable disease, claiming tens of thousands of lives every year. If you live in a rabies endemic area, tell them about free resources such as <a href="https://www.rabiesblueprint.com">www.rabiesblueprint.com</a>, a step-by-step guide to what it takes to reduce the impact of rabies on their communities.

Join the One Health discussion on how rabies prevention is progressing <a href="here">here</a>. Or tune in for our Google Hangout with Al Jazeera. The exact time and date are yet to be confirmed but watch Twitter and Facebook for updates. The final recording will be broadcast on World Rabies Day.

Please remember to update your links to our website (our new address is <a href="www.rabiesalliance.org">www.rabiesalliance.org</a>), like our <a href="Facebook">Facebook</a> page and follow us on <a href="Twitter">Twitter</a> — use the hashtag #RabiesIsPreventable.

And last but not least, thank you. You make World Rabies Day a global movement. Together we can beat rabies!



Alexander McCall Smith, internationally acclaimed author and our patron, writes on the importance of getting involved in World Rabies Day. Read the whole message in his <u>facebook post</u>.



## Alexander McCall Smith

Author - 39,965 Likes



WORLD RABIES DAY - a note from Alexander McCall Smith, Patron, Alliance for Rabies Control

World Rabies Day is coming up on Saturday September 28th. This is an important day because it brings into focus the efforts being made by so many people to deal with a disease that is a terrible scourge for both humans and animals. The suffering that this disease causes is immense about sixty thousand peo...Continue Reading



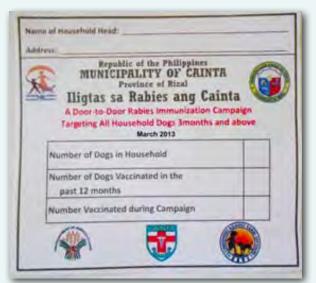
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Freeing people and animals from the threat of rabies Click here Click here Vaccinate children for \$8 a month Vaccinate dogs for \$2 a month Make a one off donation Other ways you can help 26 July A recent report has found that inconsistent reporting of rabies in African countries is leadin...

RABIESALLIANCE ORG

# Cainta, Philippines boosts its efforts to achieve a rabies-free community

December 23, 2012 started as a typical day for 11-year old JB. He played with his friends outside their house at Barangay Sto. Domingo in Cainta on the outskirts of Manila in the Philippines. While playing, JB saw a stray dog and teased it with his feet. Unfortunately, the dog bit JB on his waist. A few days later, the dog was found dead.



Household sticker used during the dog census

For treatment, JB's father brought him to a traditional healer. JB was not given any post-exposure vaccination. One month later, JB showed typical signs of rabies; hydrophobia and salivation. He was brought to the Bagong Cainta Municipal Hospital where he was diagnosed as a probable rabies case and referred to San Lazaro Hospital. That same afternoon, JB died.

The Municipality of Cainta has been trying to implement a Rabies control program in their area for many years. In 2012, in order to make Cainta a Rabies-free community, the local government signed a Memorandum of Understanding with GARC to develop and implement a comprehensive rabies control program anchored on mass dog vaccination and promotion of responsible pet ownership. The Municipal Agriculture Office (MAO) and Municipal Health Office (MHO) are the lead agencies implementing the project in collaboration with other partners like the World Society for the Protection of Animals (WSPA) and the World Animal Health Organization (OIE).

On March 2013, a dog census was done to determine the dog population in the municipality. This information is important in planning the mass dog vaccination campaign and dog population management. This census was done in cooperation with the municipal health officer, municipal veterinarian, and the village health workers (VHWs). Census stickers ( were posted outside each house visited. The census showed that there were around 30,000 dogs in the whole municipality.

A Knowledge, Attitude, and Practices (KAP) Survey on rabies and pet ownership was conducted among 300 households last April, in collaboration with the MHO and the Department of Health's Field Epidemiology Training Program. It aimed to identify the demographics, pet ownership, rabies awareness, health seeking behaviors, and

attitudes of residents towards rabies. Results showed that 80-90% of adult residents know what rabies is and 34-52% consider themselves to be at risk of getting rabies.

The mass dog vaccination was conducted from May 20 to June 1, 2013. Twenty-one veterinary students from the Central Luzon State University were invited to help in the vaccination. Working alongside the veterinary students were VHWs who recorded the vaccination of each dog, and the municipal veterinarian, Dr. Alex Siblag supervised the campaign. GARC used 20,000 doses of vaccines from the batch of vaccines received from the OIE regional vaccine bank, 29,000 dog collars and tags, 20,000 syringes, and other vaccination equipment to support this mass dog vaccination campaign. In a span of two weeks, the vaccination team was able to vaccinate over 15,000



Vaccination Truck

cats and dogs. According to Dr. Siblag, almost 18,000 cats and dogs have been vaccinated in the municipality since January.

Aside from the vaccinations, there have been efforts to increase the public's awareness on responsible pet ownership and rabies prevention. GARC has provided 20,000 brochures and 200 posters for distribution. Tarpaulin banners were also posted in strategic areas to raise awareness.

With the persistence of these concerted efforts and the cooperation of the whole community, Cainta will hopefully achieve a rabies-free status in the long run.

Submitted by Dane Medina, Communications officer for the GARC Philippines office.

## **GARC Communications survey results**

To better inform the rabies community and to help improve the usability and visibility of communications, the GARC newsletter team carried out a survey of newsletter readers in the spring of 2013. Over the course of the summer, 120 responses from 48 different countries were received. Respondents were asked about their location, their rabies knowledge level, the way that they accesses the newsletter and the content suitability.

By region, the largest number of respondents were from North America (29%), with Asia (23%) and Africa (22%) second and third. By country, the US (24%) and India (8.4%) had the greatest numbers of respondents. Most of the responders were actively working in rabies control (82%) and had a moderate to advanced knowledge of rabies (88.3%). Many of the respondents read the GARC newsletter quite frequently, and 74% of respondents read most or every issue. 12.5% had donated to GARC.

The content of the GARC newsletter is based on current research findings and newsworthy stories from around the globe. Almost all of the respondents (nearly 84%) found the content level to be suitable and provide sufficient detail on rabies-related news and literature. Fewer than 7% of respondents wished for more detailed reports on rabies stories, and just over 10% thought that GARC newsletter content was too detailed.

All of the different ways of accessing the information were used. Respondents read the overview of the articles in the circulated email content, and many also click through to the links referenced in the newsletter articles (over 52%). There were also a substantial number of readers (nearly 38%, mainly from Africa and Asia) who download the full pdf version, which can be printed and distributed to colleagues in the field who may not have access to the internet. The readers generally keep in touch with GARC through emails and the GARC and WRD website. Fewer than 10% of responses indicated that readers are using social media (Facebook or Twitter) for GARC communications.

Overall, the feedback we received was very positive. We greatly appreciated the time spent giving us feedback, and for your support. Additional comments received were very helpful to the team, with ease of access to information on rabies and the newsletter being the concern raised most frequently in the comments section. Several readers lamented their poor internet connections, a lack of resources in-country to put towards effective on-going education on rabies-related issues, and a lack of communications translated into other languages. There were also suggestions to include more topical news related content and developments from different regions of the world. The team will seek to include these in future issues.

Finally, a few respondents asked about making donations. You can donate to GARC online from anywhere in the world through our <u>PayPal donation engine</u>.

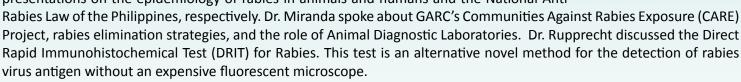
Contributed by Laura Baker, a volunteer for GARC and newsletter editor, Louise Taylor

# GARC Holds Rabies Diagnostic Laboratory Training

In an effort to strengthen the rabies laboratory capacity of its program partners at its Asian project sites, GARC, in coordination with the Rabies Research Program of the Research Institute for Tropical Medicine (RRG-RITM), conducted a Rabies Diagnostic Laboratory Training held at the RITM Training Center in Muntinlupa City, Philippines last 08-12 April 2013.

The week-long training was well-attended by representatives from GARC's project partners in Metro Manila and the provinces of Ilocos Norte, Sorsogon, and Bohol. Representatives from the Regional Animal Disease Diagnostic Laboratory (RADDL) of Regions 1, 5, and 8, and two veterinarians from Indonesia also attended the event. Also present were GARC's Research Director, Dr. Charles Rupprecht and GARC Asia Director, Dr. Mary Elizabeth Miranda.

Dr. Beatriz Quiambao and Dr. Fidelino Malbas, Jr. from the RITM gave background presentations on the epidemiology of rabies in animals and humans and the National Anti-



Demonstrations on laboratory procedures enabled participants to try their hands at preparing reagents, performing necropsy, processing brain samples and microscopy. A test was done after the hands-on sessions. The participants were also provided with starter kits at the end of the training to facilitate the setting up of DRIT in their respective laboratories.

Following this activity, the RRG-RITM and GARC will conduct a post-training follow-up on the laboratories to ensure that the DRIT method is properly set up and effectively utilized.

Submitted by Dane Medina, Communications Officer for the GARC Asia office in the Philippines.



### **NEWS FROM THE COMMUNITY**

## New leader for Neglected Zoonotic Diseases at WHO



Dr Bernadette Abela-Ridder has recently taken on the role of team leader for neglected zoonotic diseases in the Department for the Control of Neglected Tropical Diseases of the World Health Organization (WHO), with responsibility for rabies control.

With degrees and a PhD in veterinary medicine and Tropical Veterinary medicine she has worked in clinical practice, carried out research in Cameroon and worked for the Food and Agriculture Organization of the United Nations and the US Food and Drug Administration on veterinary drug approval before joining the WHO. Within WHO, she worked in the Department of Food Safety and Zoonoses, leading a capacity building network, the Global Foodborne Infections Network (GFN) and was the WHO focal point for the FAO, OIE, WHO Global Early Warning System for transboundary animal diseases, including zoonoses (GLEWS).

Here she presents her views on rabies control:

"First and foremost, rabies is preventable!

Human rabies prevention needs a partnership approach to improve coordination, advocacy and to translate research evidence into policy. Understanding the lessons learnt from control and elimination programmes for rabies and other diseases around the world and incorporating research findings will help the community identify what is needed and how to adapt strategies to fit the context of countries and regions.

Mass dog vaccination, responsible dog ownership and dog population control play a critical role in reducing the burden of disease in humans, when accompanied by rabies awareness and education, prompt attention of bite victims in endemic areas and more accessible and affordable post-exposure prophylaxis. We need to increase the understanding of rabies prevention at all levels of society and what each person and organization can contribute in order to limit the burden of human disease and its associated costs.

In some parts of the world, rabies transmitted by wildlife is (or has become after dog rabies has been controlled) the most prominent pathway for human rabies transmission. Bat-transmitted rabies in South America is one such example that has emerged as changes in the environment and closer human contact with wildlife can lead to increased human exposure to rabies-infected wildlife species. Besides addressing rabies in dogs, rabies transmitted by wildlife also requires due attention.

There is a growing momentum to see human rabies eliminated. During the World Health Assembly of 2013, Member States requested that the World Health Organization to sustains its leadership in the drive to overcome neglected tropical

diseases (NTD), in Resolution WHA66.12. Rabies is listed as one of the priority NTDs. The goals have been set for Latin American countries and South East Asia to eliminate human rabies transmitted by dogs by 2015 and 2020 respectively and then to maintain this status over time. Other countries and regions are following suit. It will be important over the foreseeable future for international organizations to work with countries and



the wider community, including donors, pharmaceutical companies, agencies, NGOs, philanthropists and universities, to maintain and expand their commitments to eliminating rabies in humans."

Contributed by Dr Bernadette Abela-Ridder.

## The Marwar Animal Protection Trust Canine Population Control and **Human Education Program: An Efficient Combination**

The Marwar Animal Protection Trust (MAPT) in Jodhpur, India, has participated in the Animal Birth Control (ABC) program since 2004. To this day 76,406 dogs (36,401 females and 40,005 males) have been sterilized and vaccinated for rabies. Yearly mark-resight surveys have shown that the herd immunity achieved is consistently between 85 and 90%. In addition, mark-recapture dog population estimates, virus isolation from brain specimens and serological analysis of pre and post vaccination sera have provided an essential scientific dimension to the program.

Concurrently, MAPT, supported by the Foundation for human rabies education and eradication, has conducted an "awareness program" to inform children, in both private and government schools, about rabies transmission and prevention, through informal lectures and distribution of illustrated pamphlets and comic books. Following each of these informative visits, knowledge of the material presented is assessed by a questionnaire, and a certificate of attendance is issued. A T-Shirt is offered to the best students. Illiterate children were reached by means of puppet shows showing a dog biting someone in the street. The audience actively interacts with the Puppeteer describing what must be done with reinforcement from his drums. The ultimate incentive is that the message will be brought home to the family environment. MAPT also participates in "rabies days", offering free vaccination to owned pet dogs.

## Partnership Will Develop Roadmap for Rabies Elimination



Dr Gebreyes, who is leading the rabies program.

Rabies remains a widespread problem in Ethiopia and a major burden in sub-Saharan Africa, where an estimated 22,000 deaths occur each year. Dr. Wondwossen Gebreyes, director of Global Health Programs for the College of Veterinary Medicine at The Ohio State University, and professor in the Department of Veterinary Preventive Medicine, is leading a program to develop a plan of action to eliminate rabies in Ethiopia.

The first comprehensive One Health Summer Institute, representing a long-term partnership between Ohio State and a number of Ethiopian government agencies, service organizations and academic institutions, took place during the summer of 2013 The initiative's inaugural series of classes, projects and workshops partnered 20 Ohio State faculty and students with hundreds of Ethiopian students, health-care professionals and policymakers eager to improve their nation's well-being. "One Health," according to the Centers for Disease Control and Prevention, refers to a

worldwide effort to "attain optimal health for people and animals by promoting global collaboration between human and veterinary medicine while engaging the principles of public health and ecosystem health."

Developed last year over a series of meetings in which all seven of Ohio State's health sciences deans visited Ethiopia to develop plans, the "One Health" partnership is designed to create sustainable and mutually beneficial collaborations primarily in the areas of teaching, research and outreach. In addition to its contribution to Ohio State's emphasis on global health and outreach, the initiative represents the first time the university's health sciences colleges have teamed for an international project of this scope.

According to Dr. Gebreyes, there is no effective surveillance system for numbers of rabies cases or outbreaks. In addition, there is a great deal of education that needs to take place. "There is even a lack of knowledge (among the people) about what happens if a rabid dog bites you," explained Dr. Gebreyes.

Dr. Gebreyes spent about a month teaching courses and helping run a stakeholders' workshop on rabies prevention and control intended to "enable us to develop a roadmap document that will outline a way to eliminate rabies from the region, and to later scale up the program beyond Ethiopia's borders," he said.

Submitted by Melissa Weber, Director of Communications and Marketing and The Ohio State University College of Veterinary Medicine and taken in part from Ohio State news release, "In To Africa: Ohio State Partners with Ethiopia on Major Health Initiative")

#### ... Marwar continued from page 6.

In March 2013, 6 urban-suburban districts representing low to high socio-economic areas were surveyed, to collect information on rabies knowledge and attitude, the occurrence of dog bites and their treatment, and historical family experience with rabies. At the same time, street dogs were counted and their vaccination status recorded. Of 300 households visited, 93% were of Hindu religion. Pet ownership reached 10% in high income districts, was around 2% in low to medium income areas, and dropped to 1% in commercial/ urban districts. Pets were regularly vaccinated

with documentation to prove it, but never sterilized, although few litters were reported. Awareness of rabies varied between 72% and 95%. Children often referred to the school visits, and one proudly showed his certificate. Overall, 12.9% of the 1711 residents visited reported a dog bite, and almost all received PEP. Currently PEP consists of four tissue culture vaccine shots, but for bites just two years ago 14 shots with nerve tissue vaccine in belly was most commonly reported. The wound was sometimes attended to at home in a proper manner, but most often people rushed to a private doctor or a government hospital. No visits to holy men, astrologers or shamans were reported. Incomplete PEP vaccination was recorded, because some hospitals only pay for three shots (out



of the four vaccine and two antibiotic doses required). In most cases, bites occurred when children were teasing the dog, which sometimes was a neighbor's pet. During the household survey only a relatively low number of street dogs were encountered. Between 60 and 93% of these had an ear notch, indicating that they had been sterilized and vaccinated at the Marwar shelter. It is noteworthy that survey respondents regard these dogs not as widely roaming, but as having adopted a few streets where they act as guardians of the residents with whom a subtle relationship has evolved.

The household survey provides evidence that the combination of canine population control strategy and education does work in reducing the number of unvaccinated street dogs, reducing the dog population and raising the awareness of people, and their response to rabies exposure. There have been no human deaths due to rabies in the survey area in the past two years.

Contributed by Baldev Singh, Manager Marwar Animal Protection Trust, Alex Wandeler, Canadian Food Inspection Agency Scientist Emeritus and Martine Jozan Work, Executive Director Foundation for Human Rabies Education and Eradication. Martine\_jozan@verizon.mail

#### Rabies Education in Grenada

Grenada, a Caribbean island nation with just over 110,000 citizens, has seen a large increase in the number of rabies cases during the 2013 dry season. The reservoir for the rabies virus in Grenada is the small Indian mongoose (*Herpestes javanicus*), an exotic mammal that thrives near human dwellings. In an average year, 5-10 suspect rabies cases are submitted for diagnosis to St. George's University, School of Veterinary Medicine; however, during this last dry season alone (Dec 2012 - April 2013), 15 rabid animals were diagnosed with

#### Rabies in the Caribbean

Mongooses have been introduced onto most of the large Caribbean islands and rabies has become established in mongoose populations on the islands of Puerto Rico, Hispañola (Dominican Republic and Haiti), Cuba, and Grenada. Bats are also a reservoir for rabies in Cuba and Trinidad. In Grenada, Dominican Republic and Haiti, large numbers of unvaccinated dogs create a public health hazard.

rabies, mostly mongooses and dogs. Most of these rabid animals had exposed humans and additional livestock or pet animals. Each of these cases required post exposure prophylactic vaccinations to be administered.



According to the Grenadian government, only 20-25% of dogs on Grenada are protected against rabies. Dog vaccination rate is low because rabies awareness is lacking on the island. In an effort to increase awareness and reduce exposure, Dr. Samantha Wisely of the <u>University of Florida's Institute of Food and Agricultural Sciences Extension</u>, and Dr. Ulrike Zieger of <u>St. George's University School of Veterinary Medicine</u> have teamed up with Grenada's <u>Ministry of Health and Social Security</u> and the <u>Ministry of Agriculture</u>, <u>Lands</u>, <u>Forestry</u>, <u>Fisheries</u>, and <u>the Environment</u> to produce educational material for Grenadians. With the help of Rabid Bytes' graphic designer, Peter Else, they formulated a message and designed large format posters that will be distributed in markets, post offices, and school rooms throughout Grenada (Pictured).

The message has 5 points: rabies is a lethal disease if untreated, vaccinate all dogs and cats, avoid contact with mongooses, handle sick livestock with care, wash all animal bites thoroughly and seek medical care immediately. Next Drs. Wisely and Zieger plan to create a rabies awareness curriculum and hold educational workshops for Grenadian school teachers so that rabies awareness becomes incorporated into the educational environment.

 $Submitted \ by \ Dr. \ Samantha \ Wisely \ of \ the \ Institute \ of \ Food \ and \ Agricultural \ Sciences, \ \underline{\textit{Dept. of Wildlife Ecology and Conservation}} \ at \ the \ University \ of \ Florida.$ 

# **Upcoming Conferences**

The 24th Rabies in the Americas (RITA) meeting will be held October 27-31, in Toronto, Canada and abstracts are now being accepted. Go to the website: www.rita2013.com



ONE HEALTH: RABIES AND OTHER DISEASE RISKS FROM FREE-ROAMING DOGS a special symposium organized by WSAVA and OIE will be held at the OIE Headquarters in Paris, France on November 5, 2013 - November 6, 2013. You can register at <a href="https://www.bsava.com/wsava">www.bsava.com/wsava</a>

2nd GRF One Health Summit 2013, entitled "One Health - One Planet - One Future: Risks and Opportunities" will be held 17 - 20 November 2013 in Davos, Switzerland. See <a href="mailto:onehealth.grforum.org/">onehealth.grforum.org/</a>

The International Society for Infectious Diseases has announced that the next International Congress on Infectious Diseases will be held in Cape Town, South Africa from the 2nd to the 5th of April 2014. Sign up for the 16th ICID mailing list at <a href="https://www.isid.org/icid/">www.isid.org/icid/</a>

The second International Conference on Animal Health Surveillance (ICAHS2) will be held in LaHavana, Cuba, May 7-9, 2014. The theme is "Surveillance Against the Odds". See their website <a href="https://www.animalhealthsurveillance.org">www.animalhealthsurveillance.org</a>

The editor of the Alliance newsletter is Louise Taylor and the layout and typesetting is by Pete Else. If you have news items about rabies, please contact Louise at <a href="mailto:louise.taylor@rabiesalliance.org">louise.taylor@rabiesalliance.org</a>. For further information on the Alliance's work see <a href="https://www.rabiesalliance.org">www.rabiesalliance.org</a>.