



# RABID BYTES

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The newsletter of The Global Alliance for Rabies Control

## EDITORIAL

I have recently been asked to write a [monthly blog for the Huffington Post](#) online newspaper, which is a great opportunity to spread the word about current developments in rabies prevention outside the rabies community. I thought I would share with you this month's posting, which focuses on work of the Partners for Rabies Prevention economics sub-group on the assessment of the global cost of rabies:

"Most of us don't actually think about the cost of rabies as we go about our daily routine. After all, the disease is totally preventable and a person can be saved from dying even after an infected animal has bitten him. Right? Wrong.

Besides being the deadliest disease known to mankind, rabies also costs the world billions of dollars every year. A new study estimates the global impact of dog rabies - the source of over 95% of all human rabies cases - alone at over \$124 billion dollars annually.

Compare this to the 6 to 8 billion dollars that it would cost to vaccinate the world's dogs, thus eliminating the threat to humans. That equates to a return on investment of between 15 and 20 dollars for every dollar spent. Why would the world's health agencies and governments not jump at this chance to save money and lives?

Well, one of the reasons is knowledge. The cost of rabies, until now, has never really been accurately assessed. Most human cases occur in poor, remote regions where healthcare provision is minimal, and reporting even more so, plus awareness among the general population almost non-existent. And because most cases tend to be isolated, the statisticians tend to miss the bigger picture worldwide, which is that one person dies every eight minutes.

To give an example, a physician friend told me of a hospital in one Asian country which, last week, reported the admission of a 46-year old school clerk. He was admitted with the classic symptoms of rabies having been bitten by a dog four weeks ago but had not known to seek medical care. Worse, his wife reported that the same dog had gone on to bite several children and no one knew what had happened to them. It is too late for this man to be given prophylaxis and as a result the only option for doctors now is to give him 'comfort care'.

At the Global Alliance for Rabies Control, we're determined to bring rabies control up the political agenda in those countries where it hits hardest. Last week at the annual Americas meeting in Toronto, we supported the presentation of a new study examining the actual cost of dog transmitted human rabies which was given by Dr Stephanie Shwiff, a Research Economist, and her team in Ft. Collins, Colorado and Dr Katie Hampson, a statistical modeler at the University of Glasgow. If we can persuade the politicians to get behind these numbers and invest in what must be one of the easiest wins in public health, we can make a difference. We have the tools necessary to eliminate rabies transmission in dogs and to prevent rabies in humans and we know how to do it. We also have excellent examples of successful and sustainable programs that prove by eliminating rabies in dogs, human rabies cases caused by exposure to rabid dogs will disappear.

In many ways, rabies takes advantage of the special relationship between man and dog. The two species have lived in close quarters and relied on each other for protection, food and companionship for thousands of years. Preserving this cherished bond and delivering populations - urban and rural - from untold suffering and financial cost, must be a priority for governments wherever rabies holds sway."

*Deborah Briggs, executive director of GARC.*

## NEWS FROM GARC AND WRD

### World Rabies Day 2013: how it went and what you thought

Every year we are humbled by the extraordinary efforts people go to for World Rabies Day and 2013 is no exception. We'd love to hear how it went for you. If you organized or took part in a World Rabies Day event this year, we'd like to thank you.

Please fill in the online survey to receive your personalized certificate.

[English](#) / [español](#) / [français](#)

If you'd like to complete the survey in Portuguese, please get in touch.

*Continued on page 2...*

...WRD continued from page 1.

It was thrilling to have nearly 180 individual events registered on our website and every continent represented. The



[map of events](#) on our website shows more clearly than ever that World Rabies Day is an ever-growing global movement. Here is a small sample to give you a flavor of what took place.

As well as national awareness campaigns like those held in Brazil, Tanzania, Nepal and symposiums in U.S.A, Kenya and France and there were lots of smaller independent events.

Dr. Vinay M in Mandya City, India organized a [quiz-night](#) for student nurses. With

participants from all the nursing colleges in the city, this was a fun way of testing and improving their knowledge of rabies pre-exposure and post-exposure prophylaxis.

Meanwhile, in the small country of Guinea-Bissau, West Africa, Naio Cassama organized the distribution of leaflets and free vaccinations for cats and dogs. You can see the event details [here](#) and he also posted a comment on our [Facebook page](#) (look at Recent Posts by Others).

The Philippines topped the list of countries with the most events listed with all-sorts going on from [local vaccination clinics](#) to a [‘One-of-a-Kind Dog Show’](#) to a nationwide responsible pet ownership [awareness campaign](#). And this year we also saw a new world record when in [Sacramento, USA](#), they gave over 2250 pets free rabies shots and free microchips. A fantastic achievement!

And finally, in [Syrian refugee camps](#), the Faculty of Veterinary Medicine of Al Baath University in cooperation with the Directorate of Health in Hama distributed leaflets and booklets outlining the safe handling of dogs and rabies prevention measures to children.



They also ran a month-long free dog vaccination campaign. Their dedication, in spite of the unrest and difficulties, is inspirational.

These are only a handful of what took place. We celebrate every single event: Each one shows the passion and dedication of individuals and organizations to bring and end to the immense suffering that rabies causes.

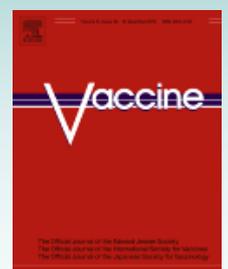
Again, if you took part, a huge THANK YOU. We would love to hear about and share your experiences: Please remember to comment on and share photos of events you organized or attended. (To do this, [find your event](#), click on it so you can see the full event details and share your experience at the bottom of the page.)

If you didn't take part this year, then perhaps you'll be inspired you to join in next year? Together we can beat rabies!

## Latest rabies research available free for a limited time

If you have an interest in the latest advances in the field of rabies, you can get free access to the latest research papers and reviews until 31st December 2013.

Elsevier, the world's leading provider of science and health information, have made the links available on in the latest issue of Virtual Special in celebration of World Rabies Day. You can access the papers [here](#).



## NEWS FROM THE COMMUNITY

### International Advocacy for Rabies Control moves forwards

The last few months have seen several encouraging developments in international support for rabies control:

In July, the Global Alliance for Vaccines and Immunisation (GAVI) invited comments from member countries on an [expanded vaccine portfolio](#), with rabies amongst an additional 5 new vaccines being seriously considered. Inclusion of rabies in the GAVI portfolio would be a huge step towards making rabies control

affordable and better accessible for those countries least able to tackle the problem without external support.

At the 14th REDIPRA in Lima, Peru in August, the heads of the Latin American Rabies Control programmes came together to reassert their commitment to the elimination of canine rabies from their continent by 2015. The meeting concluded that dog-mediated human rabies is feasible and that their objective is in reach, that there is technical knowledge available in the region to achieve this, but that there remain challenges related to sustainability and the political responsibilities at the different administrative levels. The meeting developed a specific action plan to address remaining issues including strengthened surveillance and regional standards for the declaration of dog-rabies free areas.

Rabies was also on the agenda of the 2nd World summit of the World Veterinary Association, held in Prague, Sept, 2013, with the theme “Partnerships for effective prevention, control and emergency response”. The discussions concluded that a true one health approach to disease management requires not only different professional disciplines engaging together, but also the consideration and inclusion of the communities’ “local expert” knowledge. Additionally, a sustainable implementation of a one health approach relies on an effective interface between research and policy uptake.

On the occasion of World Rabies Day, FAO, OIE and WHO issued a [joint statement](#) which reconfirmed all three organizations’ commitment towards the control of canine rabies, but especially their willingness to co-ordinate their positions and activities under the tri-partite umbrella to jointly work towards the goal of global canine rabies elimination. The resolution for a tri-partite world rabies day statement was taken during the [Partners for Rabies Prevention](#) meeting convened by GARC this year. For the tri-partite organizations, rabies (alongside zoonotic influenza and antimicrobial resistance) has become a priority to showcase the evident benefits of a one health approach.

A special symposium organized by the World Small Animal Veterinary Association (WSAVA) and the OIE and entitled [“One Health: Rabies And Other Disease Risks From Free-Roaming Dogs”](#) took place in Paris in early November. The meeting participants concluded the two-day meeting with a [joint statement](#) signed by the Directors of WSAVA and the OIE. The statement lists seven key recommendations that recognise the bond between humans and dogs, but also the risks for disease transmission. Jointly they urged the governments of the world, especially of countries in which canine rabies virus infection is endemic, to engage with control programmes to work towards the global elimination of rabies, as this is major vaccine-preventable zoonosis.

Each of these developments individually represents a clear and valuable role in keeping rabies on the agenda of the members of each of those organizations. Taken together, however, these discussions, statements, recommendations, and action plans constitute a growing movement towards raising canine rabies control and its eventual global elimination up the international health agenda.

*Contributed by Louise Taylor and Lea Knopf of GARC*



*Image by CIA World Factbook [Public domain], via Wikimedia Commons.*

## Rabies control in rural Tanzania: Problems and Solutions

The title of the article in the Arusha Times from October 27, 2012 read simply, “Boy dies of rabies despite sangoma intervention.” Melio Thadayo, 14 years old from Landani village in the Simanjiro district, Manyara region succumbed to his illness on October 19, 2012. After sustaining a dog bite wound on September 24, 2012, his parents chose not to seek medical care on the advice of a traditional healer in their village who claimed to have a cure for rabies. Newsprint does little to convey the parents’ grief over the loss of a child or their outrage at the misinformation that resulted in their inaction. Everyday around the world, 60 families receive the heartbreaking news that their child under the age of 15 has died from rabies. Everyday around the world, rabies claims 90 more victims over the age of 15 – 150 victims worldwide every day. Most of the victims come from rural communities in Africa and Asia. Dog bites are the most common route of exposure. The travesty lies in the fact that rabies vaccine for dogs is inexpensive, widely available and extremely effective in preventing human exposure.



For four days in September 2013, a team of 10 volunteers from Full Dimension Ministry

USA led by veterinarian Dr. Dan Randall, Greenville, South Carolina, USA in cooperation with Dr. Thomas Dotto, District Veterinary Officer, Iramba District, Tanzania, visited seven villages in the Yulansoni Valley administering free rabies vaccine to dogs. In the Iramba district alone in 2012 there were 50 confirmed cases of rabies in dogs. The resulting human exposure is unknown. This was the first time that any rabies vaccination programs had been provided in this region.



Left to right: Pastor William Makali, Founder of FDM, Felicho Simbee, Livestock Field Officer, Iramba District, Abdullah Hamis, Chief Livestock Field Officer, Iramba District and Dan Randall, DVM

When the numbers were tallied, a total of 502 dogs out of an estimated 750 dogs in the targeted area were vaccinated for rabies. In conjunction with the vaccination effort, educational programs on rabies virus, bite prevention, wound care and post-exposure treatment were provided for those in attendance as well.

It is difficult for westerners to appreciate the difficulty of obtaining rabies post-exposure prophylaxis for the average resident of rural Africa. Villagers may have to walk for miles to get to an improved road where they might catch a bus or hire a motorcycle taxi to take them the 45-60 kilometers to a district hospital that may or may not have rabies vaccine. If they are able to pay for transportation, often the full vaccination series – five injections at about \$16 US per injection - is cost prohibitive on an average household income of \$18 US per month. Canine rabies vaccination programs have proven to be the most effective strategy for reducing the threat of human exposure to rabies.

Funding for this project was provided through a cooperative effort between Merial, USA, Foothills Veterinary Hospital, PC, and Full Dimensions Ministry USA. Through our efforts we hope to continue to improve the quality of life for the residents of the Yulansoni Valley by reducing the risk of rabies. Our goal is to hold vaccination clinics in the valley every 2-3 years for the foreseeable future.

*Submitted by Daniel Randall, a veterinarian from South Carolina, USA on behalf of the Full Dimension Ministry volunteer team.*

## The 14th REDIPRA in Lima, Peru

Since their first meeting in Ecuador in 1983, the regular Meetings of Directors of National Programs for Rabies Control in Latin America (REDIPRA) have established regional agreements for and driven progress towards the elimination of dog-transmitted human rabies and the control of wildlife rabies in the region. Under the institutional umbrella of PAHO, they integrate both human and veterinary health services and have achieved remarkable success. The 14th REDIPRA was held in Lima (Peru) in August 2013, and was focusing on the elaboration of an action plan targeting the countries or pockets within countries where dog-mediated rabies circulation still persists in order to accelerate progress towards dog-mediated rabies elimination in Latin America by 2015. This will be submitted to the all Ministries of Health and Agriculture for their endorsement and political commitment. Additional objectives focused on strengthening surveillance, preventing wildlife-mediated rabies (mainly in vampire bats), defining and

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...REDIPRA continued from page 1.

characterizing risk areas, strengthening awareness campaigns, and improving regional programme coordination (in terms of vaccines, funding and data management). There were contributions from countries on the progress of their rabies elimination programmes, and also valuable reports on individual projects; on the appropriateness of pre-exposure vaccination in remote high risk areas, modelling control of bat-transmitted livestock rabies, developing a new regional rabies diagnostic laboratory network (REDILAR) and the perspectives of international organisations and NGOs including GARC.

The Latin American rabies control and elimination is frequently cited in the rabies community as the exemplary regional programme, and there are many reasons why this region can be proud of its achievements. Since 1983, the number of cases of human rabies has dropped 95 % (from 355 cases in 1982 to 10 in 2012). Cases of rabies in dogs have fallen by 98 % (from ~25,000 cases in 1980 to 400 in 2010), with a very localized geographic distribution. Of the 570 provinces and states in Latin America, only 11 (2 %) have recorded cases of human rabies in the last four years. These were concentrated on the outskirts of large cities and in international border zones, where transient and marginalized populations have little knowledge of the risks of the disease and limited access to quality health services.



Sitting in the meeting one could feel the deep commitment of all participants collectively striving towards the goal of eliminating dog-mediated human rabies from the region and event start to seriously tackle the next step of better managing wildlife-mediated rabies risks. This region has accumulated considerable knowledge in on how to achieve dog-mediated rabies elimination and has a story to tell to other regions who are still struggling. Of course there are still challenges, notably of maintaining high political commitment and funds for national rabies programmes, despite the disappearance of human rabies cases. Or how to certify elimination of dog-mediated rabies for an entire region and deferring from it what would be the appropriate level of surveillance feasible to prove this and satisfy international standards. Other aspects discussed were the involvement and responsibilities of actors beyond the medical and veterinary field, such as municipalities, private sector, tourism, communication and education and other disease control programmes. For the latter Peru presented an interesting case on how PrEP vaccination on Amazonian populations for protection against rabies it an enormous effort to prevent bat-mediated rabies exposures. Many countries of the region have observed an increase in tourism, particularly ecotourism to remote areas leading to wildlife exposures, e.g. in caves. There was a call for new strategies and international guidelines how to better deal with awareness creation on rabies risks in ecotourism.

WSPA, in collaboration with GARC and PAHO, presented the newly developed educational materials entitled the “Five keys for dog bite prevention”. Together with training of medical personnel on risk assessment for post exposure prophylaxis, these have role to play in reducing the large proportion of funds allocated to rabies control currently still spent on PEP, especially where areas are close to elimination Dog bites, regardless the rabies risk, seem to be a rising public health issue and prompted discussions on to the difficulties of implement existing legislation on responsible dog ownership.

The network decided to enhance its activities between meetings through reinforcement of technical working groups (on epidemiologic surveillance, laboratories, prevention, communication and education) to accelerate the implementation of the action plan.

The REDIPRA has proven again that it is a solid network which has not only the necessary technical expertise, but also the long term ability to effectively coordinating across borders, to maintain an excellent spirit of trust among the participating countries and individuals, including solidarity and assistance to the weakest within the region.

*Contributed by Lea Knopf, Institutional Relations for GARC who attended the REDIPRA meeting.*

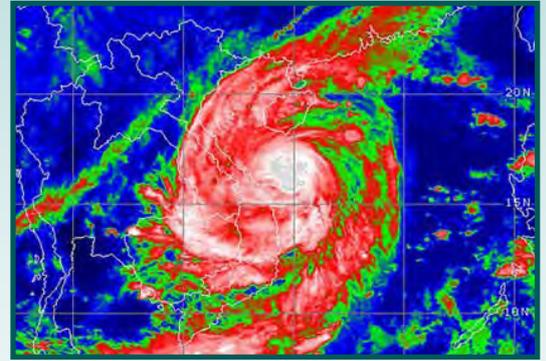
## ASEAN rabies community withstands the typhoon Nari

From 15-17 October the city of Da Nang (Vietnam) kindly hosted a rabies workshop for ASEAN countries. Vietnam currently holds the rotating presidency for the ASEAN and thus issued the invitation to this working meeting. Since 2008, when countries first called for a regional rabies elimination strategy for ASEAN members, a lot of progress has been made, both by the public health and the animal health bodies at the regional level.

This meeting's objective was to bring together representatives of ASEAN, country focal points on rabies, international organisations and NGOs like GARC to assist in the elaboration and synthesis of the ASEAN joint human - animal elimination strategy for rabies. However, the typhoon 'Nari' (which literally means 'beautiful woman') hampered the participants' eagerness to join this workshop. It made its abrupt appearance just when most participants were attempting to travel from Hanoi or Ho Chi Min City to the coastal city of Da Nang.

But the rabies community showed true commitment to advancing the ASEAN rabies strategy, regardless of the capricious typhoon! Immediately the stranded meeting participants got organised and spontaneously started exchanging comments on the draft strategy document from three separate locations across Vietnam. Luckily the typhoon moved away before the end of the meeting and all the participants could join together in Da Nang to celebrate the progress of the document and to discuss the next steps and meetings – hopefully without typhoons!

*Contributed by Lea Knopf who attended the workshop on behalf of GARC*



## Taking the Bite out of Rabies

A new book will be published in 2014, entitled "Taking the Bite out of Rabies: The Evolution of Rabies Management in Canada". The book is a multi-authored, science based chronology of events in Canada's efforts to manage rabies. It revisits and reviews the history and science of past events as told by many of those directly or indirectly involved and recognizes the pioneers and visionaries in this quest. The rabies program has involved many agencies, scientists and students for over a century. We hope that documenting past and current efforts on rabies management will demonstrate to managers, researchers and students how Canada has provided innovative solutions to disease control on a regional, national and international scale. We feel that the book will provide a better understanding of rabies and its management and will become an invaluable comprehensive reference text for future work.

The book is divided into 9 sections: 1. The Basics of Rabies in Canada; 2. The Role of Federal Agencies in Rabies Management; 3. The History of Rabies Management in the Provinces; 4. The Development of Vaccines and Delivery Systems; 5. Data Collection and Diagnostic Methods; 6. The Ecology and Epizootiology of Wildlife Rabies; 7. Prevention and Management of Rabies in Humans, Domestic Animals and Wildlife; 8. Special Interest Groups; 9. Canada's Contributions to Rabies Management

*Contributed by Dr. David Gregory who can be contacted at [landdgregory@gmail.com](mailto:landdgregory@gmail.com).*

## Rabies Control measures implemented in DR Congo

In August 2013, Médecins Sans Frontières (MSF/Doctors Without Borders) started a rabies intervention in the east of the Democratic Republic of Congo after an alarming number of people were bitten by rabid dogs, and at least 10 people died. Doctors will provide PEP to people bitten or scratched by a suspected rabid dog in the Lemera region in the province of South Kivu.

After decades of conflict and instability in the Democratic Republic of Congo, measures to control canine rabies have not been implemented, and data on the size of the problem is simply not available.

"The current rabies situation now affecting humans in Lemera is exceptional and must be urgently addressed," said Dr Jantina Mandelkowitz, who is leading the MSF team. "We're doing all we can but we urge others to recognise the severity of the situation and commit resources to its containment and resolution."

*Summarised by Louise Taylor, from the MSF [press release](#). With a barely operational health infrastructure and escalating violence in the east of the country, it is hard to see how an effective canine rabies control programme could be established, and protecting human lives through the provision of PEP would appear to be the only possible option at this time.*



*MSF teams struggle to help in an isolated area of South Kivu*

## The 24th RITA meeting Toronto, Canada

The annual Rabies in the Americas (RITA) meeting was held October 27 to 31st in Toronto Canada, with a theme of rabies in a changing world. In keeping with this, it combined contemporary rabies research with first nation cultural performances for everyone's enjoyment. Several talks highlighted changes affecting rabies control, from political and policy related to those driven by climate change.



Luis Escobar, of the Universidad Andres Bello, Chile received the George Baer Award for a young investigator from Latin American and presented on his research into geographical and ecological characteristics of bat rabies lineages. The first GARC young investigator award was given to Jessy Joseph (pictured), a student at the University College of Medical Sciences at Delhi University, India, who presented her analysis of the reasons for delay in patients receiving PEP.

There were several keynote addresses, including one by Deborah Briggs on the social and cultural aspects of rabies control, drawing on her many experiences with GARC projects.

A roundtable discussion with representatives from the research community, industry, NGO and government highlighted their impressions and themes at the end of the conference.

From the research perspective, Charles Rupprecht of Ross University School of Veterinary Medicine, and GARC, summarized a few key messages. There is a growing understanding that rabies is caused by all lyssaviruses, not just rabies virus. Gaps in surveillance data were highlighted by many, pointing to the need for more decentralized and Point of Care Diagnostic capabilities. Whilst new biologics may not be needed to control rabies, there's a need to adjust how they are used to be able to protect as many people as possible.

GARC was privileged to present a summary of the meeting from an NGO's perspective, and Louise Taylor started by highlighting the inequality in rabies control across the world. She challenged participants to think about how 'gold standard' research in well provisioned labs could benefit countries struggling with inadequate facilities and a large rabies burden, and pointed out that collaboration and partnership, epitomized by the RITA conference and evident in many talks, has enormous value in addressing this inequality. The necessity of building political will for rabies control was clear, and an appreciation of the economic burden of rabies may help it move higher up many countries' health agendas. Presentations on the application of ORV techniques to vaccinate difficult dogs, reduced regimens for PEP in previously vaccinated patients, and development of canine immunocontraceptives, amongst others, demonstrated how rabies control might be made easier and more affordable for those that need it most.



*First Nation dancers entertained participants at the gala dinner*

Presenting an industry perspective, Dieter Gniel of Novartis Vaccines congratulated the participants on being part of a passionate and powerful network for rabies control that he does not see in other disease areas. This is necessary to raise the profile of rabies within companies that need to choose which diseases to focus long term investments in. Publications, news items and other events focusing on rabies help to keep the disease high on companies' agendas. He also noted that travel medicine is an aspect that is very important to companies who are focused more on PreEP than PEP, but was not mentioned often during the conference.

Finally, Dennis Donovan from the Ontario Ministry of Natural Resources, Canada presented his reasons for RITA participants to be optimistic. First, that the conference demonstrates an unusually open and cooperative collaboration between different sectors. He argued that the focus on the Americas is important to allow the demonstration of success in rabies control that other regions of the world can follow. The inclusion of more younger people in the meeting gave him encouragement for the future, and using a hockey analogy he pointed out that the depth and strength in the room should continue to be used to score goals and avoid fisticuffs!

*Contributed by Louise Taylor of GARC. The next meeting will be a celebration of 25 years of RITA and will be held in Mexico in October 2014.*

## Clinical Rabies – or not?

The following report from Dr. Mahfoud Brahimi of the Institut Pasteur d'Algérie shows the value of integrated health care and specialist experience to guide the differential diagnosis of rabies infections in endemic countries.

The Infectious Diseases Service in Algiers (El Kettar Hospital) informed me in June that a nine year old child had been hospitalised, with clinical signs that could be rabies. I took the precaution of taking the necessary kit with me: gloves, eye protectors, transport for samples of saliva and ice for transporting the samples under cold conditions.

When I arrived at the hospital, I met Dr. Abed who showed me the child lying on the bed. He was surrounded by his relatives who never stopped hugging him or speaking to him, despite what the doctors said. He had been in the hospital for seven days, presenting with fever and back pain, and then started to have hallucinations (saying “Bye-bye” to things that only he saw), and periodically, tossing and turning in the bed.

However, the child was doing well and his condition did not look like rabies to me. His face had no signs of fatigue, and he did not remind me at all of rabies cases I had seen previously. There had been no recorded contact with a biting animal and the cats and dogs in the household were all safe and sound, and had been watched closely every day. Some doubt remained, however, as the child used to walk with his friends to a Qur’anic school around 2km from his house. It was possible that he had had contact with an animal, and had hidden it from his parents.

Tests were done, and a lymphocyte infection was discovered, which the doctors put down to an unknown viral infection. The child was drinking water normally, and eating, and therefore we agreed that he should not be regarded as having rabies, and instead be treated with analgaesics. I took a first saliva sample easily, but when I tried to take a second one he clenched his jaw, and I was forced to take the second sample between his teeth and the oral mucous membrane. The same day, all the samples were inoculated into newborn mice which had been weened.

I remained in contact with Dr. Abed, who told me the child was improving all the time, and after four days he was discharged. The results of the intracerebral inoculation of the samples were negative, and no mouse had died after 15 days.

It is a miracle that this child had been so well cared for, and a good example of how collaborative working within health teams can benefit everyone involved. It also shows how the care given by the doctors, and the affection shown by the parents saved the life of a child whose case could otherwise have been consigned to the register of human rabies cases for 2013.

## Upcoming Conferences

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 <http://www.isid.org/icid/>

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 [www.animalhealthsurveillance.org](http://www.animalhealthsurveillance.org)

The 5th International Meeting on Emerging Diseases and Surveillance (IMED 2014) is scheduled for October 31 - November 3, 2014 in Vienna, Austria, organized by ISID and ProMED.

See <http://imed.isid.org>

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@rabiesalliance.org](mailto:louise.taylor@rabiesalliance.org) For further information on the Alliance's work see [www.rabiesalliance.org](http://www.rabiesalliance.org)