



RABID BYTES

The Newsletter of The Alliance for Rabies Control

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EDITORIAL

As you will read, this month's newsletter is full of information about rabies from around the world. Each month, we receive information from many individuals working across the world that have dedicated their lives to helping prevent their fellow citizens from dying of rabies. These past several months, I have had the privilege to hear about several of these local heroes including Dr Mady in Mauritania who continues to work against all odds to save people in his country from rabies. Dr Mady works tirelessly to educate the public and to try to find precious life-saving vaccine for victims of vicious dog bites. We certainly need more local champions like Dr Mady to help prevent the human rabies deaths. As we look forward toward the arrival of spring, I would ask all of you to take a few moments to remember the unfortunate victims that died of rabies. We should also remember the families of rabies victims that are left to face life without their loved ones that have succumbed to this terrible disease. Every ten minutes someone dies of rabies that should and could have been saved. The lack of educational awareness is one of the main reasons why people continue to die of rabies, and we do understand that the tragic death of every rabies victim

could have been prevented. During this month of April, let us all take the time to remember all rabies victims including Zach Jones, a young man who would have been 20 years old on April 29th if he had not have contracted rabies four years ago at the age of 16. Zach Jones is just one of the tens of thousands of rabies victims that die every year and our thoughts and prayers go out to Zach's family and friends as well as all the families and friends of all rabies victims throughout the world. The Alliance for Rabies Control has been working hard over the last three years to educate as many people as possible throughout the world in an effort to make sure that someday there will be no more victims of rabies. The Alliance has sent educational messages to over 100 million people and continues to expand our outreach to the far corners of the world. Please join us to increase global educational awareness and to help spread the message that no one need die of rabies anymore. We invite you to send us your stories about how you are working to make a difference in your community, to donate to help us increase our outreach, or to sponsor one of our three dedicated fundraisers in the UK who have set themselves challenges to help raise funds to stop the devastation of this horrific disease.

Dr. Deborah J. Briggs

IMPROVING RABIES SURVEILLANCE IN DR CONGO

The Democratic Republic of Congo (DRC) is one of many countries where rabies is a serious public health burden. Every year, suspect cases are reported in 11 provinces, but the inefficiency or the absence of rabies surveillance has hampered the control of outbreaks in the country. During 2009 a total of 70 suspected human rabies cases were reported in the DRC. The majority of these cases were reported in the Kinshasa Province—which, with a population of approximately 12 million people, is the largest population center in the country.

To confront this problem and strengthen the country's rabies response capabilities, the DRC's Institute National de Recherche Bio-médicale (INRB) appealed to the expertise of the US Centers for Disease Control and Prevention's (CDC) Rabies Team. In February 2010, the CDC was invited to train INRB staff and 44 representatives from the Agriculture and Public Health Ministries as well as the WHO on the use of the direct Rapid Immunochemical Test (dRIT), a diagnostic alternative to the conventional direct fluorescent antibody test. One of the advantages of the dRIT is its relative affordability and adaptability for field use, which historically have been lacking in diagnostic methods used for rabies in the DRC. Training on the dRIT was conducted to help the DRC improve its animal rabies diagnostic capabilities and facilitate treatment decisions for patients potentially exposed to the rabies virus through animal bites. Material transfer agreements were obtained from INRB and the Kinshasa Central Veterinary Laboratory (CVL) to continue providing reagents and support for diagnostic testing using the dRIT test.

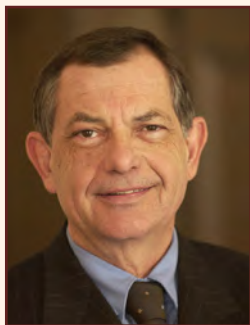
The CDC's Rabies Team also conducted training on epidemiological surveillance, described the framework for collection of animal bite data, and provided an overview on how to use CDC's Epi-Info and Geographic Information Systems to create a useful surveillance database. *Continued on page 2...*



Laboratory Training at INRB

OIE'S RABIES CONTROL EFFORTS

The World Organisation for Animal Health (OIE) is an intergovernmental organisation founded in 1924 with a mandate given from its 175 Member countries to improve world animal health, ensure transparency of animal disease situations worldwide, and control animal diseases including zoonoses such as rabies. The OIE publishes international standards in all fields covered by its mandate, including animal welfare. The OIE's missions rely heavily on the public and private components of the Veterinary Services of each Member. The OIE unceasingly promotes the quality of veterinary governance and calls upon international solidarity to assist countries requesting support in animal disease control.



*Dr Bernard Vallat,
Director General, OIE*

Animal disease-related events have covered the front pages of newspapers frequently during the past 15 years. Rabies, however, is rarely found on the front pages despite being one of the oldest and best-known zoonotic diseases. Rabies is still responsible for an unacceptable number of preventable deaths in humans due to exposure to infected animals, mainly dogs. I congratulate the Global Alliance and its partners for their achievements in bringing rabies back to the agenda of all organisations concerned, both governmental and non-governmental, and the greater public.

How is OIE fighting against rabies? National Veterinary Services are a key buffer between the animal source and human rabies infection, and their veterinarians must apply their knowledge and skills in animal disease control to break the link between the infected animal and exposure to humans. The in-depth studies of OIE have revealed that the national Veterinary Services of many developing or in-transition countries need to increase their financial and technical capacity to effectively control rabies. This may be needed to carry out sustainable, high quality vaccination campaigns in dogs to eradicate rabies, or to increase accurate laboratory diagnosis to rule out rabies infection in dogs, which can avoid unnecessary and costly post-exposure treatment of bitten humans. This is because the cost of a post-exposure treatment in humans is about 20-100 times higher than the vaccination of a dog against rabies.

For ethical, ecological and economical reasons, the OIE advises against killing potentially infected animals as a sole method to control and eradicate rabies. All successful rabies eradication campaigns in the developing world have included both programmes for the control of overabundant stray dog populations and the systematic vaccination of owned dogs. OIE developed international standards to guide Veterinary Services and supporting institutions in fulfilling their responsibility to control stray dog populations, thereby respecting animal welfare standards and taking account of the newest scientific knowledge available.

Successful rabies control and eradication requires raising public awareness of rabies and collaboration with other professions involved, namely the public health sector and non-healthcare services of municipalities. Control of rabies is an international public good – not only for the current generation, but most importantly for all future generations! Since 2007, the OIE, along with its partners, has been strongly supporting and promoting the World Rabies Day held every year on the 28th of September. I trust that consolidated partnership amongst all stakeholders will bring rabies control worldwide to the next step.

Contributed by Dr Bernard Vallat, Director General, OIE. The OIE's rabies information including guidelines are available online in [English](#), [French](#) and [Spanish](#)

...continued from page 1

Following discussions during the CDC's visit, the DRC has created a rabies task force to set up a national rabies surveillance system. This team is scheduled to meet twice a month. Immediate goals of the group include establishing systematic data collection for suspect human cases, standardizing prophylaxis protocols using WHO guidelines, and monitoring cold chain adequacy for rabies vaccine and immunoglobulin storage.

Currently, the implementation of expert recommendations discussed during CDC's visit is ongoing and INRB is now prepared to use the dRIT. However, challenges still exist that may hinder efforts to substantially improve laboratory-based rabies surveillance in the country. One challenge is that most personnel who have been trained on the dRIT technique have not been vaccinated against rabies, which may prevent the use of the dRIT in field locations without biosafety controls. Other roadblocks include public misconceptions and lack of knowledge regarding rabies and rabies prevention. Dogs in the DRC are often immediately destroyed following a bite attack, and when this occurs, samples of brain tissue become unavailable for testing. Education campaigns are needed to address this issue in addition to raising awareness about the value of animal rabies testing.

One of DRC's goals is to establish the INRB as a national reference laboratory for rabies. Additionally, plans are underway to enhance the Kinshasa CVL's capacities. It is also hoped that future collaboration with CDC and other interested partners will help foster the development of an effective surveillance system in the DRC, and promote much-needed educational outreach to the public.

Contributed by Dr Pati Pyana and Dr Karhemere from the INRB, who helped to organize the laboratory and surveillance training in Kinshasa.

THE GATES FOUNDATION/WHO PROJECT ENTERS ITS SECOND YEAR

At the end of 2008 the Bill and Melinda Gates Foundation (GF) agreed to fund a 5 year project (2009-2013) for human and dog rabies elimination in parts of the Philippines, South Africa and Tanzania. The goal of this project is to prevent human rabies through the control and eventual elimination of canine rabies, creating a paradigm shift for human rabies prevention in Africa and Asia. The project which is managed by the World Health Organization will demonstrate in today's context in Asia and Africa the feasibility and sustainability of human rabies prevention through dog rabies elimination, and catalyse similar initiatives in Africa and Asia within the next decade.

Since project initiation in early 2009 much has been achieved in Kwa Zulu Natal (KZN), Republic of South Africa, to reach project objectives. For example, dog ecology studies across the province to determine required baseline data as well as advocacy and "primary canine health care" activities were initiated in 2009. These activities are essential preparation for mass vaccination campaigns aiming to reach more than 600,000 dogs during 2010. The "primary canine health care" concept developed in KZN aims at providing dog owners with more than free rabies immunization services. General health care and reproduction control are also provided to help secure participation in dog mass vaccination campaigns and responsible dog ownership. The official launch of the project will take place at the end of May.

In the Philippines the first phase of the project covers the Western Visayas and 2 provinces of Central Visayas with a human population of 8.7 million. The Western Visayas (region 6) have consistently reported the highest number of animal bite patients of the entire Visayas. Collection of baseline data on dog population and rabies cases were completed in the area at the end of 2009. Social preparation, health promotion and advocacy activities as well as dog vaccinator training and preventive immunization were conducted during the 1st quarter of 2010. Dog registration and rabies vaccination are now being initiated. Some 650,000 doses of dog rabies vaccine are being despatched to cover the requirements of the western Visayas. Ceremonies for the official launch of the project recently took place in region 6 provinces: For example on 30 March the Bacolod City Government (Province of Negros Occidental) launched the provincial project with the Department of Health and the WHO; other launches took place on March 1 and 2 for Antique and Capiz provinces respectively with the participation of their Governor, vice governor, provincial and municipal human and animal health officers and representatives from the national Department of Health and Bureau of Animal Industry.

In the United Republic of Tanzania the framework for management of the project is now in place with a staffed rabies control project central office located in the WHO country office in Dar es Salaam. Three training workshops were held during the last part of 2009 with the support of Glasgow University: one for District Veterinary Officers in Arusha which greatly benefited from the support of the Serengeti Health Initiative, one for Laboratory technicians in Dar Es Salaam and one for Clinicians in Kibaha. This latter event included practical training in intradermal application of rabies vaccines for post-exposure prophylaxis (PEP). Following its successful introduction during this training the Ministry of Health plans to extend the use of the intradermal route for PEP to the entire country. Vehicles and motorcycles are being delivered to the Ministry of Livestock for dog rabies immunization and animal rabies surveillance. The project will be launched officially soon and the target is to vaccinate some 450,000 dogs in the south-eastern part of Tanzania plus the island of Pemba.

As adherence with established international animal welfare principles are considered essential by both the GF and WHO, experts from the International Companion Animal Management (ICAM) Coalition visited 2 of the 3 rabies project areas in 2009 and 2010 to observe and discuss activities that could have a negative animal welfare impact. ICAM experts made recommendations for improvements adapted to local conditions, and they will be requested to continue advising the project during the coming years.

This second year of implementation is crucial as many of the field activities, particularly those aiming at establishing a 70% vaccination coverage in the dog population, are now starting. The second international coordinating group meeting of the GF/WHO project will be held in Geneva in October 2010 to review achievements in the 3 project areas.

Contributed by Francois X. Meslin, International Coordinator for the project, WHO Headquarters, Geneva. The WHO's rabies website can be found [here](#).



A Department of Health car accompanying the provincial veterinary services during mass dog vaccination campaigns in KwaZulu Natal

NEW CHEMICAL STERILANT FOR MALE DOGS

Today, there are over 400 million free-roaming dogs in the world — with about one-half of the world's human population living in rabies endemic areas. According to the CDC, mass culling of the animals has no significant impact on the spread of rabies, and even worse, many of these countries do not have the necessary infrastructure to conduct massive spay/neuter campaigns.

The recent launch of a zinc gluconate compound with L-Arginine, tradename EsterilSol™, addresses the dog overpopulation problem with a minimally invasive injection. A single injection with the zinc gluconate compound safely and permanently sterilizes male dogs older than three months and the product can be administered in concert with rabies vaccination programs for even greater efficiencies for animal welfare campaigns.

EsterilSol™ is currently being used in projects throughout the world in areas where dog overpopulation poses the greatest health risk to humans. Through education and training on the new injection technique, veterinarians can greatly reduce the adverse reactions and sterilize more dogs without the need for anesthesia.

A few of the projects underway or completed using this product include the US Army Veterinary Corp's Pacific Partnership 2009 campaign that was aimed at controlling the dog overpopulation problem on several islands. Pacific Partnership was led by Captain Jay Coisman and a team of volunteers and Army veterinarians working with health departments and local animal welfare organizations in the Marshall Islands, Tonga, Samoa Islands and the Solomon Islands. The work in the South Pacific is continuing with a more recent program funded by the Alliance for Contraception in Cats and Dogs (ACC&D) with Animal Balance's Emma Clifford and Byron Maas working in the Samoa Islands.

EsterilSol™ is also being used in field clinics throughout much of Latin America, including the Municipality of Mexicali, Mexico where a campaign to sterilize 4,000 dogs is currently underway. This comes after the successful implementation of a pilot program funded by the Mexican Government's Health Department where 10,000 dogs were sterilized using the product.

Canine overpopulation, especially evidenced by the number of stray dogs, has been and continues to be a significant problem worldwide. This new sterilization product can provide a low cost, effective, culturally acceptable alternative to surgical castration, and is an important tool in high volume sterilization programs for male dogs. Working with key stakeholders, animal welfare organizations, and governments to jointly help control male dog reproduction and curb the spread of rabies, will help build sustainable, safer and healthier communities in developing nations where their citizens are at the greatest risk from diseases caused by canine overpopulation.

This article was contributed by Drs Carlos Esquivel and Brian Corbett of ARK Sciences. More information on EsterilSol™ can be found [here](#).



Sterilization project in Mexicali, Mexico

HEALTHY PEOPLE. HEALTHY ANIMALS. HEALTHY PLANET.

Peter Costa, our global communications coordinator will represent the Alliance in a new Scientific Advisory Council established by the Animal Health Institute (AHI) in the US, as part of its Healthy People. Healthy Animals. Healthy Planet. program. AHI launched this multi-year educational initiative to increase public awareness about the important connection between human health and animal health.

“Many people are unaware of the health issues they can share with pets and all animals, though it is imperative for the public to recognize this connection and its impact on health and wellness, and preventing disease transmission from pets and food animals,” said Alexander Mathews, AHI's President and Chief Executive Officer.

The Scientific Advisory Council includes some of the world's leading experts in the areas of veterinary science, food safety, public health, nutrition, education and research. By fostering greater awareness and understanding that animal health is essential to human health, the Scientific Advisory Council seeks to build successful partnerships with both the public health and animal health communities, and promote science-based research that demonstrates the need to contribute to a safer food supply that will benefit both humans and animals. As part of this initiative, the Advisory Council will help AHI identify and shape education and communication programs. The advisors will also provide counsel to AHI in the area of research currently available, as well as research needed to further characterize the connection between animal health and human health and highlight the role of the animal health community in preventing disease transmission from pets and food animals to people.

Adapted by Louise Taylor from a press release from AHI. For more information about the Healthy People. Healthy Animals. Healthy Planet. program, visit <http://healthyanimals.org/about.html>

NERAL, A SUBURB OF MUMBAI, ENDANGERED BY RABIES

Neral is a beautiful suburb of Mumbai located at the foot of the eco-sensitive Matheran region. It is a weekend holiday place for Mumbai residents and is now becoming a modern village where celebrities have bought farm houses.

As the veterinarian newly posted here in Neral, I found this beautiful place threatened in many ways. There is no proper management of garbage, waste water, roads, or development. As a result, the problem of stray dogs has been increasing at an alarming rate. Some surprising data I collected include: a stray dog population of 3,500 – 4,000; 436 dog bite cases between April and September 2009; fewer than 100 pet dogs, no registration of pet dogs; and no vaccination of any dogs. A general rabies awareness survey indicated that very few people were aware of the risks of rabies (Percentage of different groups aware of the risks were primary students: 0%, secondary students: 2%, youths: 10-15%, seniors: 5%, public representatives: 20%). None of the population knew about the prophylactic & curative measure for rabies, and the majority did not understand the terms “vaccine” and “immunoglobulin”. Additionally, they did not understand the primary measures that should be undertaken in a case of an exposure to rabies.

This frustrating scenario has motivated me over the last six months to collaborate with the district veterinary services to take action against the menace of rabies. Our primary objective was to lower the number of dog bite cases and several measures have been taken to improve the situation in Neral. First, a committee was formed that included the village head, different Non-Governmental Organizations, medical doctors, veterinarians, educated women, teachers, students and youths. Next, an awareness campaign was initiated in schools, colleges, mahila mandals, and council offices. To date, 500 primary and 500 secondary school students have been educated using a powerpoint presentation, and a quiz was used to assess their involvement. All the leaders of the village were educated about the rabies menace and were made aware of their role and duties. A notification was issued at the village level regarding registration & vaccination of pet dogs.

A plan is now being prepared for the control of the stray dog population, and will include the identification of dogs, vaccination, adoption of stray dogs, and neutering.

Contributed by Dr Yeshwant Waghmare, livestock development officer at the Veterinary Dispensary, Matheran, Maharashtra, India.



School children receiving the rabies education presentation

RAISING FUNDS FOR RABIES CONTROL

Three dedicated people have set themselves challenges to raise funds for the Alliance this year.

Trevor Drew, a specialist in exotic viral diseases, travels a lot through his work at the Veterinary Laboratories Agency in the UK and has often seen first hand the misery that rabies causes to families and communities. Trevor is also Captain of the Civil Service Offshore Racing Club. To help the Alliance fund its fight against rabies, Trevor and his team mate Richard Palmer will be competing in the Shetland two-handed Round Britain & Ireland yacht race on the 35.5ft racing yacht, Jangada Too. The race is a 2,000 mile challenge clockwise around all of Great Britain & Ireland, including Shetland. The relatively shallow coastal waters, frequently changing weather and high tides all add to the difficulty. It will take about a month for the more than 50 registered entrants to sail around Britain. The race will start at Plymouth on June 6th and closer to that date you will be able to follow the team's progress on [Trevor's blog](#).

Harriet Brown, a veterinarian working in Worksop, UK has set herself the challenge of walking the Coast to Coast route across Northern England passing through the Lake District, Yorkshire Dales, and the North York Moors. The distance is 200 miles, and Harriet will walk it over a number of weekends during the coming months, with the aim of finishing by World Rabies Day in September. So far she has completed the first leg of 30 miles, discovering that the path is not always clearly marked, that some of the path has been lost in recent floods and that heavy snow on the mountaintops makes navigation very tricky. Unperturbed, she plans to continue with the next leg later this month.

Last, but not least, 8 year old Ellie Burr recently completed a 3 mile run in the Sports Relief Race in Glasgow, Scotland. Narrowly beating her Mum, she finished in a fantastic 29 minutes 56 seconds, and has so far raised almost 5 times her target amount of money. Well done Ellie!

You can sponsor all 3 online via their secure JustGiving webpages: [Trevor Drew](#), [Harriet Brown](#), [Ellie Burr](#). The Alliance is very grateful to all three adventurers and those who sponsored them. Their funds will help us to reach more people in need to lifesaving information and vaccines to combat the threat of rabies in their communities.



Trevor Drew in a quieter moment at sea



Harriet Brown by the Irish Sea at the start of the Coast to Coast walk



Ellie Burr hydrating after a long run

WORLD RABIES DAY IN NIGERIA

Rabies is endemic in Nigeria and is exhibited by frequent outbreaks. It causes acute, progressive encephalitis, and all published reports have established dogs as the predominant vector of rabies. The Annual Reports of the Veterinary Division of the Northern Nigeria reported dog rabies outbreaks as early as 1942 from Kano, Zaria, Borno and Ilorin and in 1946 from Plateau, Markurdi and Enugu.



Information banner on a vehicle in the carnival procession

On the 25th, veterinarians from the National Veterinary Research Institute, Vom drove in a convoy of vehicles through Vom township and Bukuru town, passing by each market and then into Jos City. The group converged at the Plateau State Veterinary Hospital (PSVH) where other veterinarians were waiting to join the group from Vom and the carnival continued round other parts of Jos city. An informative radio programme was also featured on a local radio station, the Plateau Radio and Television Corporation featuring three veterinarians, Drs. Pam, Idachaba and Ola. Jingles and paid adverts were similarly aired to sensitise the public and to keep them informed about the upcoming free vaccination clinic. The day's activities were a full day event which ended at the PSVH with refreshment as arranged by the National Veterinary Medical Association (Plateau State chapter). On the 26th a similar set of events were carried out, with further areas of Jos City being visited by the carnival procession.

On WRD itself, the 28th September, pet owners started filing into the vaccination point at PSVH as early as 7.00am. The day's event started with a brief talk about the WRD and rabies by the Chairman, Plateau State Chapter of the Nigerian Veterinary Medical Association, Dr. E. Pam. The Director of Veterinary Services, Plateau State Ministry of Agriculture, Dr S. Apka launched the vaccination by vaccinating one of the pet dogs brought in by the owner and issued a certificate of vaccination for the year 2009 to the owner. Annual canine rabies vaccination is recommended in Nigeria since rabies is endemic. Vaccination of other dogs followed in an orderly manner along with certification of vaccination for record purposes. Over one thousand pet, guard and hunting dogs were brought in for vaccination and the event came to an end at 3.48pm.



The vaccination site

The success of this event was achieved through the collaboration and hard work of many local veterinary associations and institutions, both public and private, with a substantial donation of vaccine from the National Veterinary Research Institute, Vom and support from private industry. Both the veterinarians and other collaborators showed great enthusiasm as all were working together to make rabies history in Plateau State and Nigeria as a whole.

*Contribution by Dr. S.E Idachaba, Dr. F.O. Fasina, Dr D. Lazarus, and Dr. D.O. Ehizibolo of the National Veterinary Research Institute, Vom.
Contact, aromeoma@yahoo.com.*

NUMBER OF PEP DOSES REDUCED TO FOUR IN THE US

A full report of the new recommendation for Post Exposure Prophylaxis (PEP) for rabies in the US has been published in [Morbidity and Mortality Weekly Report, March 19, 2010; Vol. 59, No. RR-2](#).

The Advisory Committee on Immunization Practices (ACIP) has reviewed the scientific evidence from rabies virus pathogenesis data, research from experimental animal studies, clinical trial data, and epidemiological surveillance. These data indicated that 4 doses of rabies vaccine (administered on days 0,3,7 and 14) in combination with rabies immune globulin (RIG) elicited adequate immune responses and that a fifth dose of vaccine (administered on day 28) did not contribute to more favorable immunogenic outcomes.

For persons in the US previously unvaccinated with rabies vaccine, a reduced regimen of four doses of those rabies vaccines registered in the US (human diploid cell vaccine or purified chick embryo cell vaccine) should be administered intramuscularly. The first dose of the 4-dose PEP course should be administered as soon as possible after exposure (day 0). Three additional doses should then be administered on days 3, 7, and 14. ACIP recommendations for the administration of Human Rabies Immunoglobulin (HRIG) on day 0, remain unchanged. Patients with altered immunocompetency, should continue to receive the 5 dose PEP regimen.

PEP recommendations for people who previously received complete rabies vaccination (either PreP or PEP) or who have had laboratory proven adequate neutralizing antibody levels have not changed and those patients should receive two booster doses of vaccine administered on day 0 and 3. Pre-exposure vaccination recommendations remain unchanged and should be administered as a 3 dose vaccination series with one dose administered on each of days 0,7 and 21 or day 28. Prompt rabies PEP combining wound care, infiltration of RIG into and around the wound, and administration of appropriate rabies cell-culture vaccine continue to be highly effective in preventing human rabies.

MAURITANIA'S ONE HEALTH CHAMPION

The rise in the number of animal and human cases of rabies in several African countries is cause for serious concern. Mauritania is one country with an increasing incidence of rabies, but one man is doing much to stop its spread. We have arranged to meet the enigmatic Mr. Mady for lunch. He arrives promptly, a slight man, dressed in a white overcoat and carrying a small brown bag. He begins to talk about the time his life changed - when in 1994, he witnessed the agonising deaths of two children, suffering from rabies and tied to their beds in the hospital of Noukchott, the capital.



Mr Mady (seated) and one of his assistants in his office

From that moment, Mady, a health technician, decided to devote all his efforts to fighting rabies. He established the Mauritanian Association for Rabies Control in the late 90s, and received limited funding from time-to-time, from some "intellectuals" as he indicated, from WHO (for human post-exposure prophylaxis) and UNICEF (for developing public awareness materials). Mady shows us some faded photographs of a child whose lip had been bitten off by a dog and other dog-bite victims. During the meal he takes out the sharp knife that he uses to cut out the brains of suspected rabid dogs, to take for laboratory testing. He assures us that the knife has been properly disinfected, so we do not need to worry and can continue our lunch.

Later in the afternoon we set off for the outskirts of Noukchott to visit the office of the Association. Five of us, including his daughter Zeina, cram ourselves into the small car that he bought many years ago, which now serves to transport patients with bite wounds to hospitals, and animal carcasses for laboratory examination. We rattle along increasingly narrow dusty roads, negotiating potholes and the chaotic traffic. We arrive at the one room building, with "Association Mauritanienne pour la lutte contre la rage" written on the roof and Mady introduces his two assistants, who proudly direct us into the building. Inside, displays of posters with rabies information in French and Arabic adorn the walls, together with more faded photographs of bite-wound victims.

Mady shows us his meticulous patient records: their histories, treatments received and test results on the animals that had bitten them. His mobile phone rings: possibly another animal bite being reported. This phone has become the rabies and dog-bite hotline for Mauritania. Although the main transmission route for rabies is through infected dogs, Mady's records reveal an additional burden for victims: "Donkeys are more and more affected by rabies in Mauritania. They are the motor of life for so many persons here", according to Zeina. Thus, not only are people's lives endangered through contact with infected animals, their livelihoods are threatened by the loss of their animals.

Mady passionately pursues his quest to limit the impact of rabies, driving long distances across this vast country. He follows up animal bite incidents, provides wound treatment, submits samples to the veterinary laboratory, and provides education on rabies. "If you kill the dog that bit you, you will be killing yourself" Mady tells us. He makes sure that people tie-up the dog involved in the biting incident and observe it for 14 days. He also tries to explain to people that dogs should be treated well, something not generally considered in a country where religious beliefs characterise dogs as haram (or unclean).

We return to the car. He has a mission and it is saving lives, however, he cannot do it unaided: "The two things I presently need most are a better car and more rabies vaccine" he says. In addition, what is urgently required in countries such as Mauritania are political commitment, animal vaccines, surveillance, improved delivery of post-exposure prophylaxis to bite victims, education on rabies prevention and coordinated strategies to control the disease. Veterinarians and animal health services are vital in protecting domestic animals and people from rabies. I wish there were many more Mr. Madys in this world!

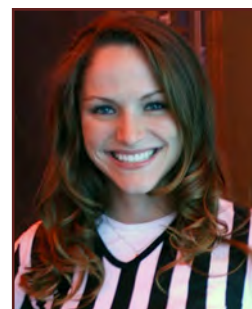
Contributed by Katinka de Balogh, Senior Officer, Veterinary Public Health, Food and Agricultural Organization of the United Nations (FAO) describing when she met Mr. Mady in March 2010 during an animal disease simulation exercise at the Veterinary Services and the Ministry of Public Health in Nouakchott, Mauritania. e-mail: Katinka.debalogh@fao.org

SCAVMA ESSAY COMPETITION WINNER ANNOUNCED

Paige Mackey, a veterinary student at Oklahoma State University has won the Essay competition organized by the Student Chapter of the American Veterinary Medical Association (SCAVMA) for World Rabies Day 2009. She will receive a two week internship at the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia. Whilst there she will have the opportunity to take part in the varied activities of the Rabies Laboratory and the Division of Global Migration and Quarantine groups, including rabies research, diagnosis, epidemiological analysis and public health policy.

Paige focused [her essay](#) on an analysis of the recent outbreak of rabies in Angola, and her recognition of the vital role that veterinarians play in public health. At Oklahoma State University she is the SCAVMA President, and recently started a Public Health and Policy Club. She combines her passion for sports with her professional interests when working with human health specialists to organize the University's annual run for World Rabies Day.

The Alliance would like to congratulate Paige on an excellent essay and wish her an informative and enjoyable time at the CDC later this year.



A RECOVERY FROM RABIES WITHOUT INTENSIVE CARE

A case of recovery from rabies without intensive care (termed abortive human rabies) has been reported in Texas, USA. A 17 year old girl presented at a hospital emergency department in February 2009 with encephalitis. Her symptoms were severe frontal headache, photophobia, emesis, neck pain, dizziness, and paresthesia of face and forearms. She was treated for bacterial infection, but when culture tests came back negative this treatment was discontinued. After 3 days the symptoms resolved and she was sent back home. She presented at another hospital 2 weeks later with symptoms of photophobia, emesis, and myalgias, particularly of the neck and back. Subsequently she developed some transient weakness in her limbs and a new papular pruritic rash on her arms and back. She received a diagnosis of suspected infectious encephalitis and was treated during the hospitalization with intravenous acyclovir, ceftriaxone, ethambutol, isoniazid, pyrazinamide, and rifampin. Four days later, she suffered from weakness and a loss of sensation of the right extremities. Emesis increased, and she became agitated and combative. However, the symptoms resolved the next day.

At this stage, the medical team elicited a history of bat exposure, and rabies was considered in the differential diagnosis. The patient recalled that approximately 2 months before her headaches began she had entered a cave while on a camping trip in Texas and came into contact with flying bats. Although several bats hit her body, she did not notice any bites or scratches. The patient also reported owning pet ferrets and a dog, but all were in good health. She had not had rabies vaccination.

Serologic tests of serum and CSF for antirabies virus antibodies, polymerase chain reaction tests of saliva and nuchal skin biopsy for the presence of rabies virus RNA, and direct fluorescent antibody tests of the nuchal biopsy for rabies virus antigen were performed at CDC. No rabies virus antigens or RNA were detected. However, four serum and CSF samples tested positive for rabies virus antibodies by IFA. These findings were corroborated by a Western blot assay performed in blinded fashion by an independent investigator. After notification of positive rabies serology results, the girl received 1 dose of rabies vaccine and 1,500 IU of HRIG, and subsequent to this virus neutralizing antibodies were detected in serum, but not CSF.

The patient was managed supportively and never required intensive care. When symptoms resolved, she was discharged. She presented twice more with headaches, but was not admitted to hospital again did not return for follow-up. Questionnaires were administered to close friends and family members of the girl and to health-care workers to assess indications for postexposure prophylaxis (PEP). Only the girl's boyfriend met the criteria and he received PEP.

Rabies is preventable if rabies immune globulin and vaccine are administered soon after an exposure; however, this case also suggests the rare possibility that abortive rabies can occur in humans and might go unrecognized.

Summarized by Louise Taylor from a full case report by Dr G Holzmann-Pazgal et al. in MMWR Weekly February 26, 2010 / 59(07);185-190. The paper is also on the Alliance website [scientific literature page](#)

RIACON PROCEEDINGS PUBLISHED

The [conference proceedings](#) of the The Second International Conference of Rabies in ASIA (RIA) Foundation, held in Hanoi, Viet Nam on 9-11 September 2009 have now been published on the [RIA website](#). The document is beautifully presented and gives summaries of the opening remarks and all the talks and posters from the conference. With sessions entitled: Overview of Rabies in Asia; Update on Practices in Animal Rabies Surveillance; Prevention and Control and Fundamental; Epidemiological Research; and Scientific and advanced Research together with a panel discussion entitled "Gaps and strategy for rabies elimination within region", the conference provided an excellent overview of the current rabies situation and recent developments in rabies control in Asia.



Also presented at the conference was the recent release of the RIA Foundation video film entitled "[Rabies - A fatal but preventable disease](#)". This is a 45min documentary film aimed at veterinary and medical professionals and covers many aspects of rabies control from an Asian perspective. It too can be found on the RIA website.

UPCOMING CONFERENCES

The 10th SEARG meeting in Maputo, Mozambique has been postponed until January 25-28, 2011.

The annual Rabies in the Americas meeting will be held in Guadalajara, Mexico from October 17 to 22, 2010.

The OIE's "Global conference on rabies control: Towards sustainable prevention at the source" will be held 7-9 September 2011 in Seoul, Korea.

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.