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## VETERINARY LAW GETTING APPROVED BY THE NATIONAL ASSEMBLY

At the 9<sup>th</sup> session on 19 June 2015, the National Assembly XIII of the Socialist Republic of Vietnam has finalized decision on the Veterinary Law through voting, with a dominant approval rating by 98.6% of total participating Members of Parliament. This event is considered to be a successful development with critical historical meaning to the animal health sector in Vietnam.

The Veterinary Law includes 7 Chapters, 116 Articles regulating animal diseases prevention and treatment, animals and animal products quarantine; control and management of slaughtering, preparation and processing activities; veterinary medicine and practice management. National and international organizations and individuals with involvement in veterinary activities in Vietnam are subject to this Law. The Veterinary Law shall come into force from 1 July 2016.

The Veterinary Law is developed through review and assessment on the enforcement of Veterinary Ordinance since 2004, with an update on new international veterinary regulations and in consultation with different Veterinary Laws within ASEAN region and other developed countries. During the development of the law, the project "Strengthening Capacity for the Implementation of One Health Approach in Vietnam" implemented by the PAHI Secretariat has provided strong support for the National Assembly Office and Department of Animal Health in the organization of serial consultation meetings in various areas all over the country. ■



*Minister Cao Duc Phat presenting in the NA meeting (Photo: nongnghiep.vn)*

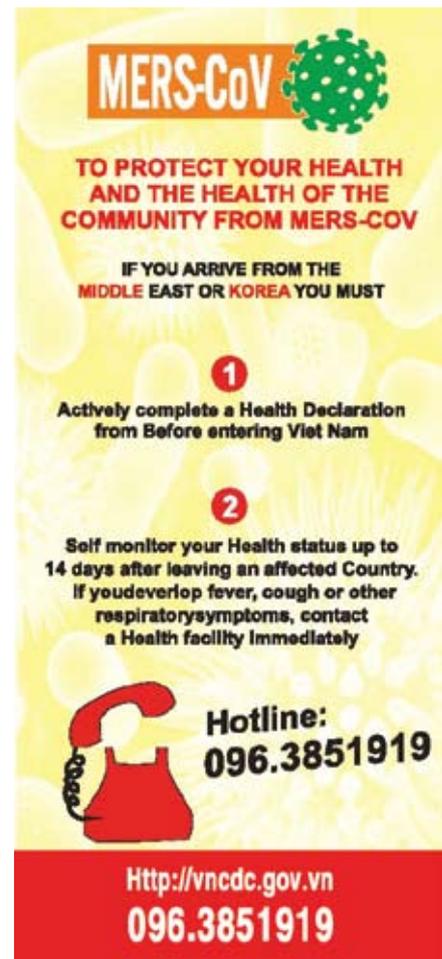
## VIET NAM'S PREPAREDNESS FOR MIDDLE EAST RESPIRATORY SYNDROME CORONA VIRUS (MERS-COV)

MERS-CoV is a viral respiratory illness that is caused by a novel coronavirus first identified in Saudi Arabia in 2012. As of 22 June 2015, a total of 1345 MERS-CoV infected cases, including 427 deaths, have been reported in 27 countries all over the world. In Asia, Korea has been the most impacted country by MERS-CoV, with 172 infected cases and 27 deaths.

To date, Viet Nam has not recorded any case of MERS-CoV, but we are facing the high risk of MERS-CoV entering Viet Nam due to the high volume of travel and trade exchange with South Korea and the Middle East countries. On 03 June 2015, an Official Telegraph number 790/CD-TTg issued by the Prime Minister requested Provincial and

City People's Committee, and related Ministries and agencies to operate MERS-CoV prevention and control activities.

The Ministry of Health, in close collaboration with WHO and related national and international partners, keeps track of MERS-CoV situation and timely informs the dangerousness, causes and methods of disease transmission and prevention measures to community. MES-CoV situation in Korea and other countries has been updated regularly on the website of the General Department of Preventive Medicine at [www.vncdc.gov.vn](http://www.vncdc.gov.vn). The suspected cases were quickly informed, isolated and tested for MERS-CoV disease. ■



Poster for MERS-CoV (Photo: GDPM)

## INFLUENZA VACCINE MANUFACTURING IN VIET NAM: REPORT ON THE APACI SATELLITE SESSION

As an adjunct to the two-day 2015 APACI Influenza Summit, a focus group discussion explored issues and challenges of human and veterinary influenza vaccine production in Vietnam. Approximately 25 people attended from Vietnamese government agencies (NIHE, NCVD, DAH, IBT), private sector vaccine companies (Vabiotech, IVAC, Navetco, RTD), academia and NGOs (PATH, Oxford University, Cambridge University), international agencies (WHO, FAO), and representatives of APACI.

Dr. Do Tuan Dat, Director of Vabiotech, provided an historical overview of government-supported programs in Vietnam to develop in-country capacity for pandemic and seasonal human influenza vaccines. International partners (WHO, BARDA/HHS, CDC) have recently increased their support to these efforts, focused on two principle manufacturers: IVAC and Vabiotech. IVAC is currently preparing for the second of three phases of trails on its egg-based inactivated A/H5N1 pandemic vaccine to determine immunogenicity and dosing regimens in healthy adults, and is also preparing a Phase 1 clinical trial of a seasonal TIV formulation. Vabiotech completed the third phase of trials on their cell-based inactivated A/H5N1 vaccine in 2012, and the licensing application was submitted in 2013. The lack of ongoing market demand for pandemic vaccines remains a hurdle for private sector investment. However, research is continuing on improved downstream processing, cell-adapted vaccine virus strains (with adequate yields and stability, for multiple subtypes), and streamlining scale-up procedures and quality control testing methods.

**Dr. Le Quynh Mai**, Director of the National Influenza Center (NIC) at NIHE, presented data on genetic diversity of human seasonal influenza variants circulating in Viet Nam, and discussed how the NIC contributes to global surveillance networks. She highlighted the differences between influenza epidemiology in the tropics versus temperate regions, with the presence of 2 annual peaks in transmission, suggesting the need for further research on optimal timing of vaccination. She also discussed divergence between circulating human seasonal strains and WHO recommended vaccines, in particular for the H3 and influenza B components.

**Dr. Than Xuan Hanh from Navetco and Dr. Le Thanh Hoa** from IBT presented on poultry vaccines for highly pathogenic H5 subtype viruses. Navetco's egg-based inactivated NIBRG-14 vaccine ("Navet-vifluvac") uses a master seed originally prepared at the National Institute for Biological Standards and Control (NIBSC) in the UK. Animal challenge experiments conducted at NCVI indicate that Navet-Vifluvac protects against H5 HA viruses of Clades 1; 1.1; 2.3.2.1a; 2.3.2.1c; and 2.3.4.4 (H5N6). Navet-Vifluvac was first licensed in 2012, and to date over 200 million doses have been used in Vietnam (in chickens, ducks, and quails). Dr Hoa reviewed the principle of genetic manipulation of viral genomes using the 8-plasmid system, and government initiatives for the development of biotechnology capacity. To date, however, no licensed human or veterinary vaccine products in Vietnam have used master seeds generated in country.

**Dr. Jan Hendriks** presented the WHO Global Action Plan (GAP), with a specific focus on efforts to promote pandemic vaccine production in low- and middle-income countries through capacity building and technology transfer. Establishing and maintaining a sustainable influenza vaccine manufacturing facility is a huge challenge, requiring both stable market demand and 'policy coherence' from government to promote appropriate regulatory oversight and industrial development. Dr Hendriks discussed previous WHO/OIE/FAO consultations on the feasibility of cross-sectoral One Health collaboration on vaccine production, however this faces significant regulatory and economic obstacles (i.e. an insufficient business case, price differentials), and major differences in downstream processing requirements. Dr Hendriks noted Vietnam's significant strides in strengthening the National Regulatory Authority (NRA) that oversees commercial licensing of human biologicals, with a recent WHO assessment certifying the NRA as being close to fully competent to evaluate novel formulations. This will open the door for Vietnamese vaccine producers to apply for WHO pre-qualification of their products for potential supply to UN procurement agencies.

**Dr. DoHuuDung** from DAH moderated a lively discussion on issues such as: Is there sufficient justification for Vietnam to produce human seasonal flu vaccines (i.e. will it ever be cost-effective or competitive)? Are Vietnamese viruses sufficiently well represented within WHO vaccine strain selection procedures? Have vaccine manufacturers within Vietnam filed for patent use of reverse genetics methodology, and have intellectual property rights been adequately transferred? Is there evidence that Rg vaccines for poultry provide comparable efficacy to classical whole virus vaccines? Are there any bivalent formulations for AIV vaccines in the pipeline, and if not, what are the obstacles? In addition, participants commented on the importance and complexity of matching vaccine strains to contemporary field variants, a common challenge for both human and veterinary vaccines.



APACI Influenza Summit in Hanoi 2015 (Photo: APACI)

Participants agreed that two hours was not enough! Follow-up discussions were suggested, including a future meeting focused exclusively on veterinary vaccine issues, in order to better define technical gaps, and identify methods to streamline and accelerate the licensure of updated formulations.

*Prepared by Juliet Bryant, Oxford University Clinical Research Unit, with thanks to APACI organizers for supporting and coordinating this satellite session ■*

## FAO-WHO'S JOINT ASSESSMENT ON THE PREPAREDNESS OF AVIAN INFLUENZA A (H7N9) IN VIET NAM

Viet Nam is one of the eight UN Delivering as One (DaO) pilot countries which supports a close working relationship among UN partners. And within the UN Viet Nam One Plan and specifically the Health Joint Planning Group (JPG), the Emergency Centre for Transboundary Animal Diseases (ECTAD) of the Food and Agriculture Organization (FAO) Viet Nam and World Health Organization (WHO) have been key players in the Communicable Diseases sub-group leading to development of a joint work plan and activities such as addressing H7N9 collaboratively through One Health.



(Photo: FAO Viet Nam)

With the financial support from the United States Agency of International Development (USAID), FAO ECTAD Viet Nam and WHO Viet Nam are actively supporting MARD and MOH on H7N9 prevention and control in the country. H7N9 risk assessment meetings are held based on the need, and H7N9 updates from both the animal and human health sectors are shared and discussed regularly. Also FAO, WHO, MOH and MARD are preparing to implement two H7N9 table top exercises, and Standard Operation Procedures (SOPs) to prepare the H7N9 incursion.

In order to have a deeper insight in the field level from both animal and human health sectors, recently FAO ECTAD Viet Nam and WHO Viet Nam conducted a joint mission to Lao Cai Province, Viet Nam to assess and promote preparedness for possible introduction of the avian influenza A (H7N9), together with the General Department of Preventive Medicine (GDPM), Ministry of Health (MOH) and Department of Animal Health (DAH) within the Ministry of Agriculture and Development (MARD). With DAH and FAO representing animal health and GDPM and WHO representing human health, experts from both sectors gathered under the One Health concept to assess and analyze the current preparedness situation of H7N9 in Viet Nam's bordering area with China. As H7N9 virus is not yet found in Viet Nam, effective coordination for preparedness planning is important.

Mission participants visited and conducted meetings with counterparts

### News in brief

Acting as leading countries on the Zoonotic diseases action package of the Global Health Security Agenda (GHS), **Viet Nam and Indonesia will co-organize an international conference on zoonotic disease prevention and control in Viet Nam on 25-26 August 2015 with participants from various countries in the world.** The conference will accelerate regional and international collaboration in support of the Prevent-2 Zoonotic Disease Action Package through sharing experiences, best practices, and challenges in addressing Zoonotic Disease in both the animal and human sectors, and identify regional and international collaboration in support of zoonotic disease prevention and control. It will provide an opportunity to, and development of milestones and activities that countries could adapt and adopt to tangibly foster behaviors, policies and/or practices that minimize disease risk and the spillover of zoonotic diseases from lower animals into human populations. ■

**The 6<sup>th</sup> Steering Committee Meeting of ASEAN Plus Three Field Epidemiology Training Network (FETN) was taking place on 21-22 May 2015 in Ha Long,** organized by the General Department of Preventive Medicine, Ministry of Health. The ASEAN+3 FETN was established in 2011, with the participation of Field Epidemiology Training Programs of ASEAN members and China, Japan, Korea, aiming to promote and facilitate training cooperation among members of ASEAN Plus Three FETN and support the enhancement of national capacity for the advancement of the epidemiology training capacity in the region. The meeting brought together more than 70 participants from ASEAN+3 member countries and international organizations which are the development partners of ASEAN+3 FETN ((ADB, MBDS, USAID, USCDC, SAFETYNET, SEAHOON, WHO). ■

## News in brief

**O**n 15 April 2015, the annual REVASIA research program workshop was organized by CIRAD (French Agricultural Research Center for International Development), in collaboration with the Vietnam National Institute of Veterinary Research (NIVR). The workshop theme is "moving from Research to Policy Decision". The main objective of REVASIA research program was to develop innovative tools and methodologies for the evaluation and design of efficient animal health surveillance (and control) systems. REVASIA activities in Vietnam were implemented in collaboration between NIVR, the Vietnam National University of Hanoi (VNUA), The National Institute for Animal Sciences (NIAS), the Department of Animal Health (DAH) and CIRAD. The main results of REVASIA activities in Vietnam were presented along with proposal for recommendations towards improvement of the systems. Working group discussion was performed after the presentations to review and discuss feasibility of the recommendations and to develop action plan to ensure uptake and implementation. ■

**A**s part of the development process of the One Health roadmap, PAHI Secretariat organized a consultation workshop on the draft National One Health Roadmap and Matrix of One Health Projects and Programmes in Hanoi on 3 June 2015. The draft Roadmap identifies key activity areas, outcomes, activities and indicators for taking forward progress on One Health in Viet Nam during the period through mid-2016, covering the period of transition from the existing Integrated National Operational Program on Avian Influenza, Pandemic Preparedness and Emerging Infectious Diseases (AIPED), 2011-2015 to the following period 2016-2020, with the expectation that the Roadmap will include key steps for the development of a longer-term national action plan on One Health that would be developed during 2015 and would follow on from the existing AIPED. Together with the Roadmap, an updated Matrix providing an overview of One Health projects, programmes and related activities that are already ongoing in Viet Nam were also prepared and presented. ■

from animal and human health institutions and departments, and two live bird markets. By visiting both animal and human health institutions ranging from commune to provincial level, the mission group was able to have a better understanding on the coordination mechanisms for possible AI outbreak and the difficulties in the field. As Lao Cai was the first province to conduct market closure for the recent avian influenza H5N1 and H5N6 outbreak among the poultry population, participants were able to assess their outbreak response plan results and provide feedback.

At the end of the mission, all stakeholders gathered and had a debriefing session for the situation assessment and recommendations were provided by FAO and WHO. Mission participants were generally impressed on the coordination by the steering committees on AI prevention and control in both commune and provincial level and their fast response in case of outbreak. However, difficulties in controlling both the cross border and inter-provincial poultry movement still existed. Also it was suggested that both animal and human health sectors had to meet and coordinate more frequently, especially for post-outbreak reviews simulation practice, and to conduct joint outbreak investigations. For risk communication, it was recommended that high risk groups such as poultry vendors, transporters and slaughters be targeted to maximize their awareness and preventative measures they could take. ■

FAO Viet Nam

## ONE HEALTH COMMUNICATION NETWORK QUARTER 2 /2015: A FIELDTRIP TO NINH BINH

**F**ollowing up the suggestion of the National Extension Agricultural Center (NAEC) as co-chair of the One Health Communication Network (OHCN), the second quarterly workshop and a fieldtrip were conducted in Ninh Binh province on 11 and 12 June, 2015. Besides regular meeting to update member's communication activities and plans, main objective of the fieldtrip was to visit 2 model pig farms supported by the National Agricultural Extension Center in Ninh Binh province, in order to learn about and discuss livestock production and communication at the local level from a One Health perspective.



OHCN team visiting wild pig farm (Photo: PAHI)

During the meeting, representatives from Provincial Extension Agricultural Center in Ninh Binh introduced to participants a project of “Model of applying artificial insemination technique and community veterinary to promote pig husbandry in households following VietGAP standard”, hosted by National Agriculture Extension Center and implemented by Ninh Binh Provincial Extension Agricultural Center. The project has been implemented since May 2014 in two communes in Ninh Binh. The preliminary economic assessment of the model revealed that the household gained a profit of 30 millions VND per boar per year. Besides, artificial insemination has brought several advantages and benefits in breed improvement. Community veterinary network has been operating effectively, working closely with each commune and understanding thoroughly its specific situation, timely responding as well as effectively implementing necessary tasks. Another presentation from a representative of the Centre for Health Education and

Communications also gave the outcomes of a pilot project on Control of Zoonotic Diseases at the Pig-Human Interface in Lang Son and Nam Dinh provinces.

The fieldtrip provided OHCN members an opportunity to visit a pig farm which applies artificial insemination technique introduced in Yen Khanh district, Ninh Binh. The large scale pig farm had 12 high quality boars, each provides semen for 250 sows in farm and also for sows at surrounded household farms. The farm has been the NAEC’s pilot model since 2014 and highly appreciated with strict disease prevention and hygiene quality, visitors were not allowed to see the pigsty directly but via camera system. Vaccination for pigs was implemented strictly with the support of community veterinary network and district’s veterinary clinic. The team also visited another integrated farm in Nho Quan district which grows different fruit trees and raises wild pigs in smaller scale. ■

## FOLLOWING UP ON THE RESULTS OF THE 3RD GLOBAL ONE HEALTH CONGRESS



*Prof. Dr. Anton Pijpers, chair of the IOHC2015 (Photo: IOHC 2015)*

The 3<sup>rd</sup> International One Health Congress (IOHC-3) was organized in Amsterdam, the Netherlands, from 15-18 March 2015, with the overall theme of “Prevention at Source”. The IOHC-3 was one of the largest gatherings in this field, showing the growing interest for One Health and related topics. More than 800 participants including scientists, public health official, policy makers and private sector representatives from all over the world gathered to share high-level knowledge and expertise in One Health.

Viet Nam’s commitment to applying a One Health approach, building on the successful responses to SARS, highly pathogenic avian influenza H5N1 and other zoonotic emerging diseases, is in line with global directions. In order to provide an opportunity to share information, discuss on the key orientations for Vietnam to follow up on this Congress, an IOHC-3 follow-up workshop was conducted in Hanoi on Tuesday, 26 May 2015.

**The objectives of the IOHC-3 follow-up workshop in Viet Nam include:**

- Share information on the recent 3rd Global One Health Congress, organized in Amsterdam in March 2015
- Discuss key themes and questions raised at the Congress, and possible areas for application in Viet Nam
- Provide information on the plans and support orientation for Viet Nam’s participation in the next Global One Health Congress (December 2016), the new international One Health journal linked to the Congress, and other regional and international networks and events.

At the meeting, presentations on the overview, results and some key themes of the Congress have been made by Viet Nam representatives attending the global event. Presentations at the workshop can be downloaded at the website [www.onehealth.org.vn](http://www.onehealth.org.vn). ■

## RELEVANT LEGAL DOCUMENTS

### DOCUMENTS ISSUED BY PRIME MINISTER

Directive No. 10/CT-TTg dated 29/05/2015 issued by the Prime Minister on enhancement of environment pollution control and remedy in agriculture, forestry and aquaculture production and processing

Official Telegraph No. 790/CĐ-TTg dated 03/06/2015 issued by the Prime Minister on Middle East respiratory syndrome coronavirus (MERS-CoV) prevention and control

### DOCUMENTS ISSUED BY MARD

Official Letter No. 753/TY-DT dated 27/04/2015 by the Department of Animal Health requiring relevant units to report on swine foot and mouth disease prevention results within 2011-2015 period

Directive No. 4211/CT-BNN-TY dated 29/05/2015 issued by MARD on strengthening management over food safety and sanitation at slaughterhouses and means of animal products transportation

Official Letter No. 4310/TB-BNN-VP dated 02/06/2015 by MARD informing conclusions by MARD Vice-Minister Vu Van Tam at Conference on Implementing the Proposal on Building Pilot Disease-free Zones and Facilities

Official Letter No. 4414/BNN-CN issued by MARD on 05/06/2015 sent to People Committees of provinces and centrally-administered cities on enhancing management over cattle and poultry slaughtering

Official Letter No. 1003/TY-DT dated 08/06/2015 by the Department of Animal Health on Middle East respiratory syndrome coronavirus (MERS-CoV) prevention and control

Official Letter No. 4660/BNN-TY issued by MARD on 12/06/2015 sent to People Committees of provinces and centrally-administered cities on the 1st phase implementation of the Month of Action on Hygiene, Disinfection and Sterilization 2015

### DOCUMENTS ISSUED BY MOH

Official Telegraph No. 254/CĐ-DP dated 09/04/2015 by the General Department of Preventive Medicine sent to Can Tho Provincial Department of Health on avian influenza A(H5N1) prevention.

Official Telegraph No. 300/CĐ-BYT dated 17/04/2015 by Ministry of Health sent to People Committees Chairman of provinces and centrally-administered cities on strengthening malaria prevention

Official Telegraph No. 432/CĐ-DP dated 27/04/2015 by Ministry of Health sent to Ha Nam Provincial Department of Health on strengthening communicable avian influenza prevention

Official Telegraph No. 156/CĐ-BYT dated 21/05/2015 by Ministry of Health on strengthening Middle East respiratory syndrome coronavirus (MERS-CoV) prevention and control

Official Telegraph No. 507/CĐ-DP dated 21/05/2015 by General Department of Preventive Medicine sent to Ninh Thuan Provincial Department of Preventive Medicine on strengthening communicable avian influenza prevention

Official Letter No. 3719/BYT-DP dated 03/06/2015 by Ministry of Health on application of medical declaration for MERS-CoV prevention

Official Letter No. 608/KCB-NV dated 03/06/2015 by Agency of Medical Services Administration on early detection and good preparation for Middle East respiratory syndrome coronavirus (MERS-CoV) prevention and control

Decision No. 2174/QĐ-BYT dated 08/06/2015 by Ministry of Health on issuing supplementary guidance on Middle East respiratory syndrome coronavirus (MERS-CoV) surveillance and prevention

Official Letter No. 4058/BYT-DP dated 12/06/2015 by Ministry of Health sent to People Committees of provinces and centrally-administered cities on strengthening communication on Middle East respiratory syndrome coronavirus (MERS-CoV) prevention and control within international residents and temporary visitors in Vietnam

## UPCOMING ONE HEALTH EVENTS

### July 2015

#### Consultative meeting on the Roadmap for Global Health Security Agenda implementation in Vietnam

USCDC  
9-10 July 2015 (or 14-15 July 2015)

#### Develop a training package for the One Health & Eco-health elective module

NCO, HSPH  
Hanoi, 28 -31 July 2015

### August 2015

**The 25th World Association for the Advancement of Veterinary Parasitology (WAAVP) Conference** Liverpool, August 16-20/2015

<http://www.waavp2015.com>

**International Conference on Zoonotic Disease Prevention and Control: Addressing Health Threats Posed by Zoonotic Diseases - Regional & Global Collaboration and Technical Exchange**

MOH, MARD, USCDC  
Hanoi, 25 – 26 August 2015

**September 2015**

**The first workshop on the development of curriculum for International Masters of Public Health (OH-oriented): meeting with MOH and MOET**

NCO, HMU  
Hanoi, 11-13 September, 2015

**32nd World Veterinary Congress**

Istanbul, 13-17 September, 2015  
<http://www.wvcistanbul2015.com>

**World Rabies Day**

September 28

**Workshop for Joint Circular 16 Implementation Demonstration Activity**

Time: TBC

**November 2015**

**First Conference on One Health in Japan**

Connecting knowledge and improving practice  
Nagasaki University School of Medicine, Sakamoto campus, 06-07 November 2015

**RECENT PUBLICATIONS IN ONE HEALTH**

**What factors might have led to the emergence of Ebola in West Africa?** Alexander KA, Sanderson CE, Marathe M, Lewis BL, Rivers CM, Shaman J, et al. *PLoS Negl Trop Dis* 9(6). June 2015. doi:10.1371/journal.pntd.0003652. <http://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0003652>

**The case for a 'one health' approach to combating vector-borne diseases.** Bonto Faburay. *Infection Ecology and Epidemiology*. 2015, 5: 28132 - <http://dx.doi.org/10.3402/iee.v5.28132>  
<http://www.infectionecologyandepidemiology.net/index.php/iee/article/view/28132>

**Uncovering zoonoses awareness in an emerging disease 'hotspot.'** S.B. Paige, C. Malavé, E. Mbabazi, J. Mayer, T.L. Goldberg. *Social Science & Medicine*. March 2015. 129:78-86.  
<http://www.sciencedirect.com/science/article/pii/S0277953614004985>

**The concept of health in One Health and some practical implications for research and education: what is One Health?** H. Lerner, C. Berg. *Infection Ecology & Epidemiology*. February 2015. 5:25300. doi: 10.3402/iee.v5.25300.  
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4320999/>

**Endemic zoonoses in the tropics: a public health problem hiding in plain sight.** J.E. Halliday, K.J. Allan, D. Ekwem, S. Cleaveland, R.R. Kazwala, et al. *Veterinary Record*. February 2015. 176(9):220-225.  
<http://veterinaryrecord.bmj.com/content/176/9/220.long>

**Structural One Health – are we there yet?** R. Kock. *Veterinary Record*. February 2015. 176(6):140-142. <http://veterinaryrecord.bmj.com/content/176/6/140.abstract?sid=564bc560-60d6-4981-a6c6-88d92a73465b>

**Starting from the bench – prevention and control of foodborne and zoonotic diseases.** K. Vongkamjan, M. Wiedmann. *Preventive Veterinary Medicine*. February 2015. 118(2-3):189-195.  
<http://www.sciencedirect.com/science/article/pii/S016758771400378X>

**Introducing One Health to the ethical debate about zoonotic diseases in southeast Asia.** B. Capps, M.M. Bailey, D. Bickford, R. Coker, Z. Lederman, et al. *Bioethics*. February 2015. doi: 10.1111/bioe.12145. <http://www.ncbi.nlm.nih.gov/pubmed/25675899>

**Emerging infectious diseases of wildlife: a critical perspective.** D.M. Tompkins, S. Carver, M.E. Jones, M. Krko-ek, L.F. Skerratt. *Trends in Parasitology*. February 2015. pii: S1471-4922(15)00019-7.  
<http://www.sciencedirect.com/science/article/pii/S1471492215000197>

**The role of one health in wildlife conservation: a challenge and opportunity.** D.E. Buttke, D.J. Decker, M.A. Wild. *Journal of Wildlife Diseases*. January 2015. 51(1):1-8.  
<http://www.jwildlifedis.org/doi/pdf/10.7589/2014-01-004>

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