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1 **Guest Editorial**

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4 **Emerging viruses of zoonotic and veterinary importance**

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6 To enable discussion of all aspects of emerging virus infections, we held an
7 Emerging Virus meeting at the University of Nottingham in 2015. Given the success of
8 this meeting, we held the second meeting, now called ‘Emerging Viruses of Zoonotic and
9 Veterinary Importance’, in Churchill College, Cambridge in July 2017 to encourage
10 discussion of emerging virus infections from a One Health perspective. Infectious disease
11 not only affects human health, but has an impact on the stability of food production and
12 the survival of wild species. This is formulated in the One Health approach to infectious
13 disease, where the possibility of infectious agent movement between species, including
14 humans, is key. Whilst a major driver of emerging virus disease research is public health
15 concern over zoonotic infections, there are also veterinary drivers for emerging viral
16 diseases; such diseases may have devastating effects on wildlife populations, affecting
17 the ability of these populations to withstand the global environmental changes we are
18 causing; they may be diseases of production animals, affecting food production efficiency
19 and the ability to trade; and finally they may affect domestic pet animals, causing welfare
20 issues and increased costs to owners. The articles in this special issue of *The Veterinary*
21 *Journal* reflect some of the content of the meeting (<http://emerging-viruses.uk/>).

22

23 There is an increasing focus on emerging diseases fuelled by the human Ebola
24 virus epidemic and Zika virus emergence. These reflect a more public face of disease
25 spread than is seen in the veterinary world; here, recent intrusions of notifiable viral
26 diseases into Europe and Russia alone include lumpy skin disease, peste des petits

27 ruminants, bluetongue, avian influenza and Newcastle disease. In this issue, we have
28 papers focussing on the emergence and re-emergence of Schmallenberg virus (McGowan
29 et al., 2018; Stavrou et al., 2017) and African Swine fever virus (Sanchez-Cordon et al.,
30 2018). The continued surveillance of both wildlife (Bodewes, 2018) and domestic
31 animals, including both livestock (Bourret, 2018) and companion animals (Caddy, 2018),
32 to identify novel viruses is particularly important in understanding the sources and risks
33 of viruses affecting the health of animals and humans. A greater understanding of virus
34 replication and pathogenesis and transmission of the viruses allows intervention strategies
35 to be formulated including development of vaccines and antiviral treatments.
36 Understanding of replication of Zika virus is exemplified by the paper by Royle et al.
37 (2017), whilst the review by Pusterla et al. (2018) summarises what is known about a
38 novel coronavirus of horses.

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40 With globalisation of human movement, increased density of human populations,
41 climate change and loss of natural habitats, there is increased risk of interaction between
42 species, and within species. This allows the emergence of infectious diseases by
43 increased contact and cross-species transmission, as well as movement of infectious
44 agents into geographic regions where they have not been found before. These types of
45 drivers are discussed in the review by Heffernan (2018), whilst the potential for spill-over
46 between different hosts is highlighted in the systematic literature search by Glennon et al.
47 (2018).

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49 We would like to thank the authors and reviewers of the papers in this special
50 issue. We are also grateful to Dr Adrian Philbey, co-editor in chief, for his support during
51 the compilation of the issue. With the accelerating changes in our world, emerging viral
52 infections will continue to be an important issue for human and veterinary health. We
53 look forward to further meetings and discussions on this topic at the next meeting, which
54 is planned to take place at the University of Surrey in 2019.

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