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## Parasitic Zoonoses in Livestock and Domestic Animals: Re-emerging Threat to Public Health

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## EDITORIAL

Most parasitic zoonoses are neglected diseases despite causing a substantial global burden of illness in humans. Zoonotic diseases are communicated to humans through direct or indirect exposure to live vertebrate animals, their by-products or contaminated environments (Grace and Jones, 2011; Magwedere *et al.*, 2012). Parasitic infestation is of economic and public health importance (Iqbal *et al.*, 2014; Iqbal and Ashraf, 2017).

Livestock species are reservoirs of many infectious diseases and evidence of transmission between domestic and such species exists (Ali *et al.*, 2017). There is a growing market for more ready-to-eat fresh and healthy food, which may have created new situations where pathogens may be introduced into food and then to populations (Murphy, 1999). Changes in dietary practice have been considered as a reason for the emergence of several helminth zoonoses (Slifko *et al.*, 2000).

The impact of zoonoses on human and animal health and welfare cannot be highlighted enough. Around 60% of all human pathogens are zoonoses that are equally harboured by domestic and wild animals (Molyneux *et al.*, 2011). Traditionally, most meat-borne disease outbreaks arise from improper food handling practices and consumption of undercooked meat. In many cases, the majority of pathogens contaminating carcasses at slaughter have been traced back to the farm of origin (Soon *et al.*, 2011; Muhammad *et al.*, 2015a).

In addition, the increasing worldwide threat of antimicrobial-resistant bacterial strains of animal origin requires utmost attention. Although there are efficient products against parasites, in some cases they are losing their effectiveness as a result of resistance development. Resistance is the ability of some parasites to tolerate toxic doses of a drug that would be lethal to most of their congeners (Muhammad *et al.*, 2015b). It is important to alternate drugs with different action mechanisms

and to check periodically the efficacy of drugs to avoid resistances. In that context, the researchers and Pharmaceutical companies are focused on finding drugs through new molecules or natural products. Thus, a multifaceted approach to the control of each disease is required across all domestic and wild animals to curb the transmission of such diseases to humans.

In this issue, Dyab *et al.* (2019) report the prevalence of meat borne parasitic infection in cattle (35%) and buffaloes (52%) slaughtered in El-Minia Governorate abattoirs. The study revealed the incidence of *Fasciola* spp., *Cysticercus bovis*, *Sarcocyst* spp. and hydatid cyst. Older cattle and buffaloes were more susceptible than young ( $P \leq 0.05$ ). The seasonal prevalence rate of infection with *Fasciola* spp. and hydatid cyst was highest in autumn at ( $P \leq 0.05$ ). It can be concluded that parasitic infection among beef production livestock has its hazardous zoonotic significance causing serious economic losses.

Control and prevention of emerging parasitic zoonoses are multifaceted tasks that need an integrative and multidisciplinary approach. Moreover, financial resources specifically allocated to prevention and control of zoonotic parasitic diseases need to be contributed by local and national authorities as well as through international cooperation in order to successfully control and prevent these infections (Chomel, 2008). In addition, further studies relevant to the genetic identification of these parasites and risk factors associated with human infection from public health aspects are also necessary to conduct.

## CONFLICT OF INTEREST

The author has declared that no conflict of interest exists.

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