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Sommario/riassunto	<p>Eukaryotic parasites (including parasitic protozoans, worms and arthropods) are more complex and heterogeneous organisms than pathogenic bacteria and viruses. This notion implies different evolutionary strategies of host exploitation. Typically, parasites establish long-term infections and induce relatively little mortality, as they often limit pathological changes by modulating host cells and downregulating adverse immune responses. Their pattern of distribution tends to be endemic rather than epidemic. Despite these seemingly benign traits, parasites usually cause substantial chronic morbidity, thus constituting an enormous socioeconomic burden in humans, particularly in resource poor countries, and in livestock worldwide. Parasite-induced fitness costs are an evolutionary force that can shape populations and contribute to species diversity. Therefore, a thorough understanding of parasites and parasitic diseases requires detailed knowledge of the respective biochemical, molecular and immunological aspects as well as of population genetics, epidemiology and ecology. This Research Topic (RT) bridges disciplines to connect molecular, immunological and wildlife aspects of parasitic infections. The RT puts emphases on four groups of parasites: Plasmodium, Toxoplasma, Giardia and intestinal helminths. Co-infections are also covered by the RT as they represent the most common form of parasite infections in wildlife and domestic animal populations. Within the four types of parasites the following topics are addressed: (1) Experimental</p>

models: hypothesis testing, translation and limits. (2) Critical appraisal of experimental models. (3) Natural systems: Technological advances for investigations in natural parasite-host systems and studies in natural systems. (4) The urgent need for better models and methods in natural parasite systems. Hence, the RT covers and illustrate by the means of four main parasitic infections the parasite-host system at the molecular, cellular and organismic level.

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