

Heavy Metal: The role of iron storage in *Toxoplasma gondii*

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Iron is an essential element which plays central roles in eukaryotic metabolism. However, in the wrong place it poses a danger to cells, forming dangerous reactive oxygen species. For parasites, iron uptake and storage presents different challenges, as it must subvert host pathways to acquire the iron needed for multiplication. The ubiquitous pathogen *Toxoplasma gondii* is able to infect and replicate within almost all tissues, in very different nutritional environments. Recently, the role of iron in *Toxoplasma* biology has come under renewed scrutiny, however the basis of iron handling of these parasites remains largely unknown. Our recent work focusing on iron storage revealed that iron compartmentalization and storage is important to the parasite in a number of ways. We also find that iron storage has an important role in mediating virulence in vivo, possibly linked to survival in immune cells. The importance of uptake and trafficking of iron in apicomplexan parasites suggests iron as an attractive target for therapeutic interventions.