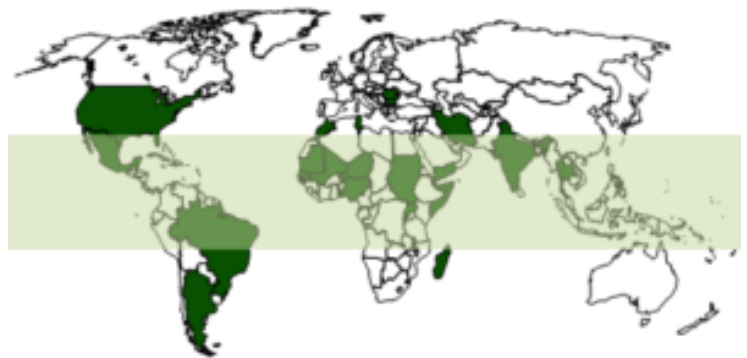
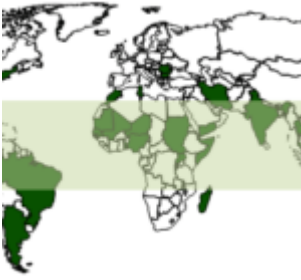


# Have you heard of Mycetoma ?



Mycetoma Belt (Source: [CDC](#))

Mycetoma characterised by chronic granulomatous inflammatory disease, is one of the most neglected diseases. It is so neglected that estimates of incidence and prevalence are not accurate ([WHO](#)). Mycetoma caused by bacteria and fungi are termed actinomycetoma and eumycetoma, respectively. Clinically, mycetoma presents as a slow growing tumour-like structure with grains that contain the causative agent.

Evidence from a murine model of mycetoma suggests that IL-17 producing T cells, termed Th17 cells may play a role in mycetoma pathogenesis. IL-17 is a pro-inflammatory cytokine which can play a role in tissue inflammation and can indirectly contribute to neutrophil infiltration. IL-17 can also activate neutrophils to produce reactive oxygen species, which can contribute to tissue damage. IL-17 has also been shown to up-regulate matrix metalloproteases (MMPs), which play a role in tissue remodelling. MMPs but not IL-17 responses have studied in mycetoma lesions, thus Siddig et

*al.*, aimed to determine if IL-17 is also detected in mycetoma lesions.

Siddig *et al.*, measured IL-17 and MMP-9 using immunohistochemistry in 3 different forms of mycetoma, caused by fungus (*M.mycetoma*, 80%) and bacteria (*S.somaliensis*, *A.pellertierri* 20%). They showed that IL-17A was detected in all 3 forms of mycetoma. The highest levels of IL-17 were detected in large lesions compared with smaller lesions. As expected MMP-9 was also detected in all biopsies, with higher levels of MMP-9 detected in actinomycetoma compared to eumycetoma lesions. Researchers observed a high correlation between IL-17 and MMP-9 detection in mycetoma lesions.

In summary, Siddig *et al.*, demonstrate that IL-17 and MMP-9 may contribute to mycetoma immunopathogenesis. Further studies will be required to determine the exact role of IL-17 in mycetoma pathogenesis, and whether immuno modulation of this pathway can be utilised for immunotherapy.

Journal Article: Siddig *et al.*, 2019. [Interleukin-17 and matrix metalloprotease-9 expression in the mycetoma granuloma.](#) Plos Pathogens.