

## The Schistosome and Snail Resource (SSR) - supporting global schistosomiasis research

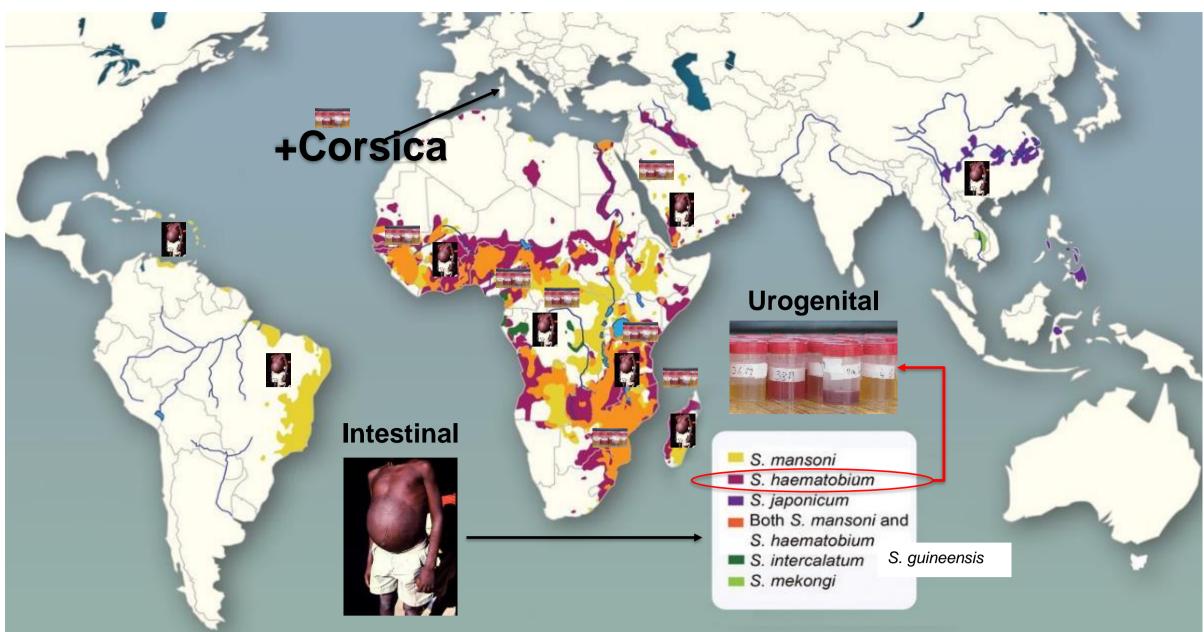


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## Background

Schistosomiasis is a chronic and debilitating tropical parasitic disease caused by schistosomes (*Schistosoma* spp.), transmitted by freshwater snails. It is a Neglected Tropical Disease (NTD) of both humans and animals, with considerable health and economic impacts. Endemicity is associated with low/middle-income countries with considerable disease burden within impoverished communities despite widespread control efforts. Whilst substantial advances have been made in the control of schistosomiasis, the diversity and complexity of *Schistosoma* species and their specific fresh-water snail hosts warrants fundamental research requiring lifecycles, live material and diverse collections.







SSR is a Wellcome Trust funded, open access biomedical resource that aims to generate and make freely available live schistosome life-cycle stages, snail intermediate hosts and related material for schistosomiasis research. SSR will be the largest UK biomedical resource providing live schistosome life-cycle stages and their intermediate snail hosts to advance schistosomiasis research worldwide.

## Figure 1: Distribution of Schistosomiasis

(Kosala G. A. D. Weerakoon *et al.* Clin. Microbiol. Rev. 2015; doi:10.1128/CMR.00137-14)

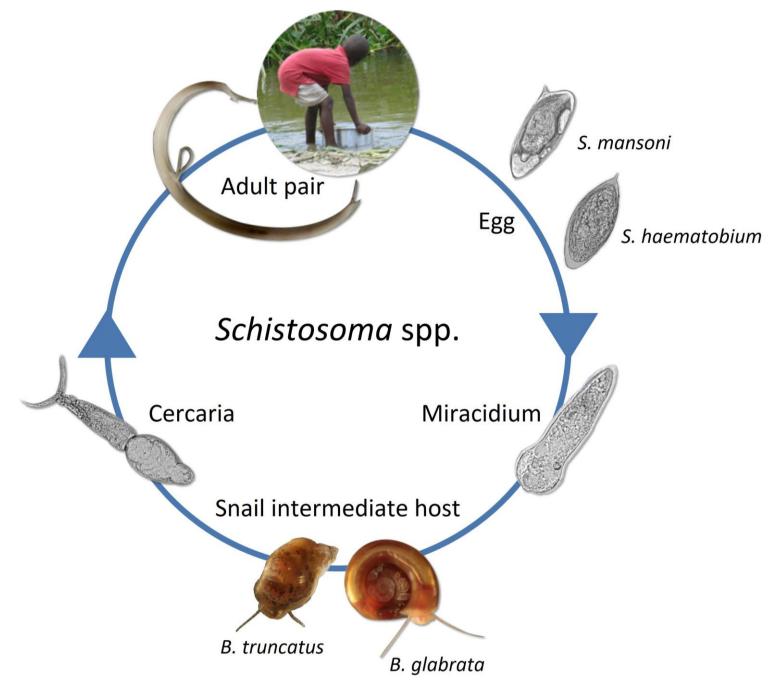
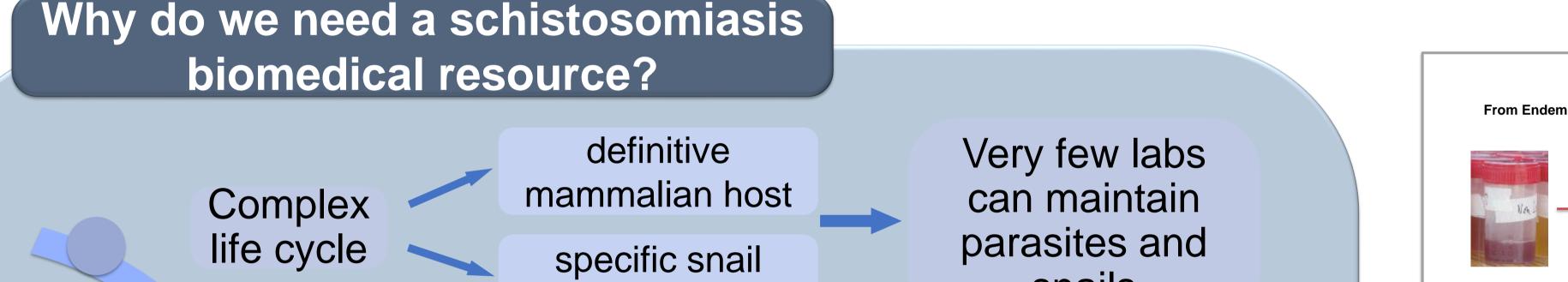
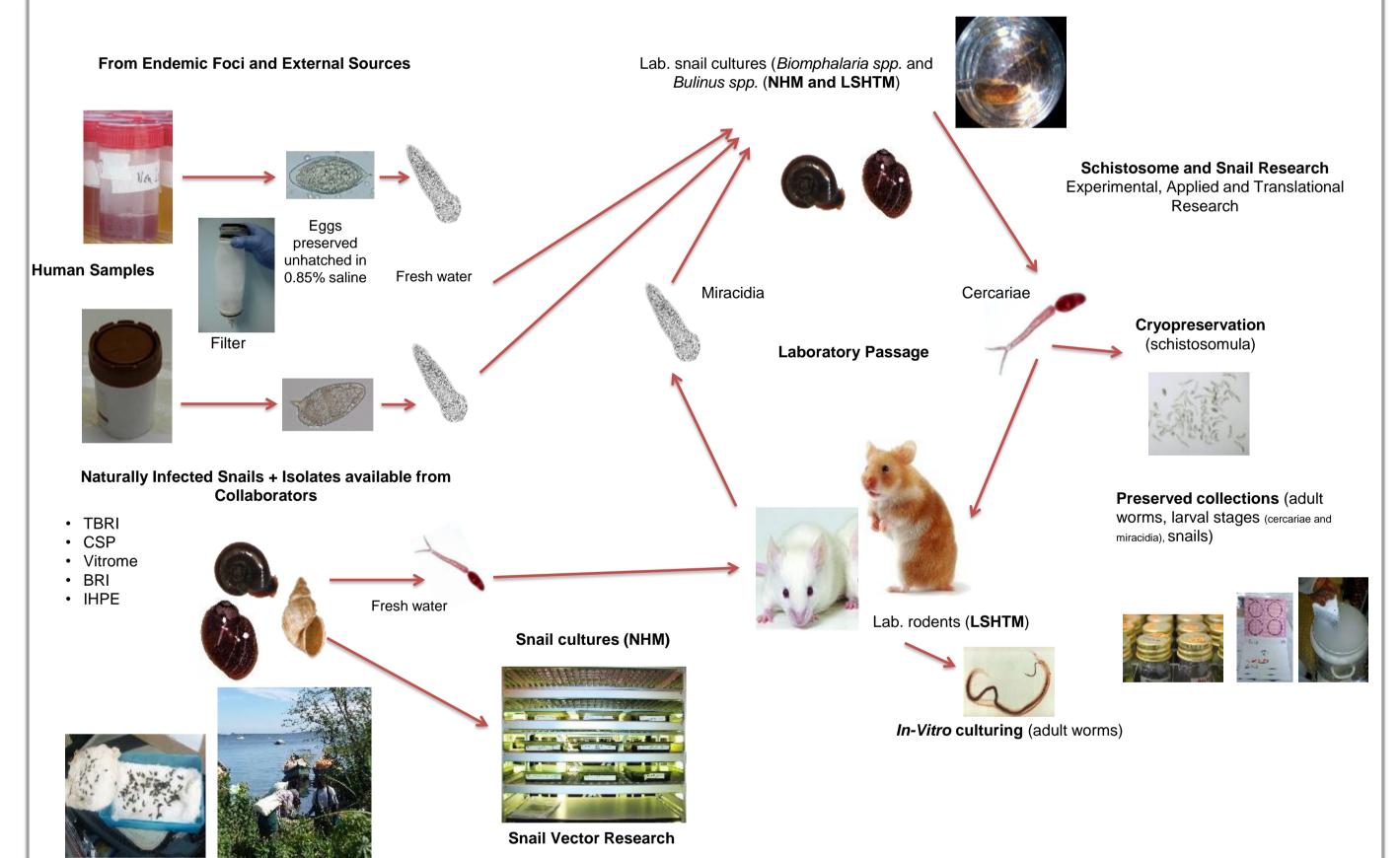
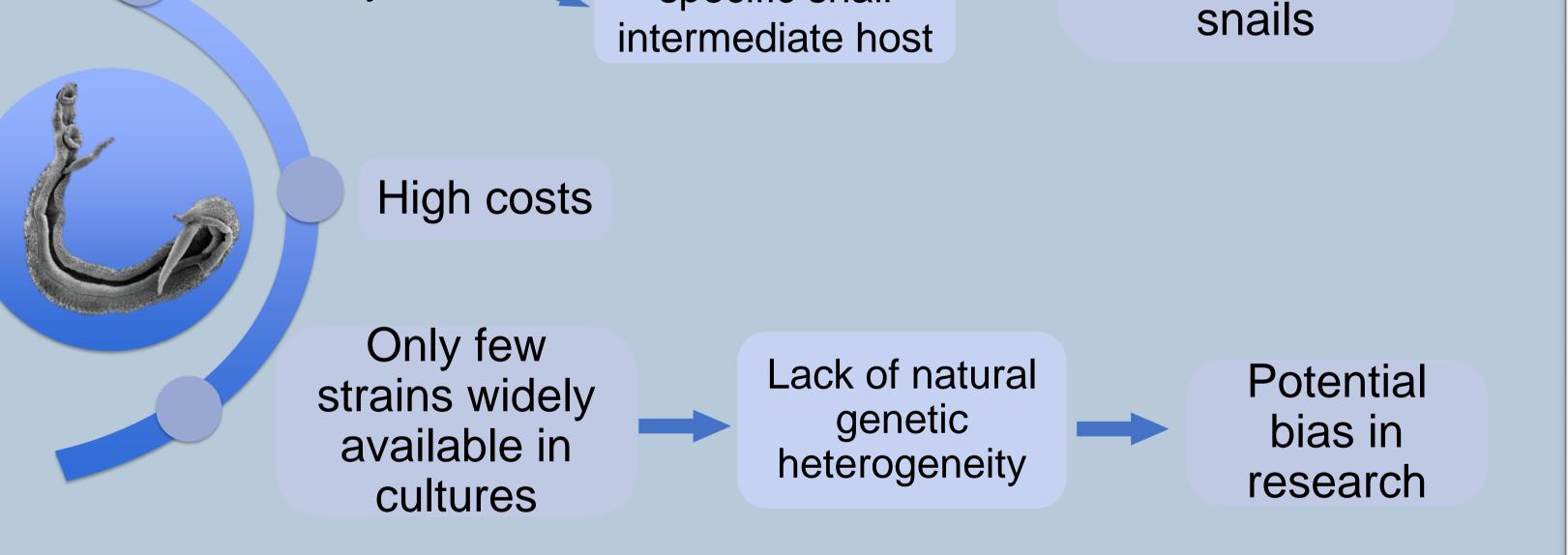


Figure 2: Schistosoma life cycle







Without the availability of diverse *Schistosoma* lifecycles/live material, future research face substantial obstacles.

## Facilities



Natural History Museum, London



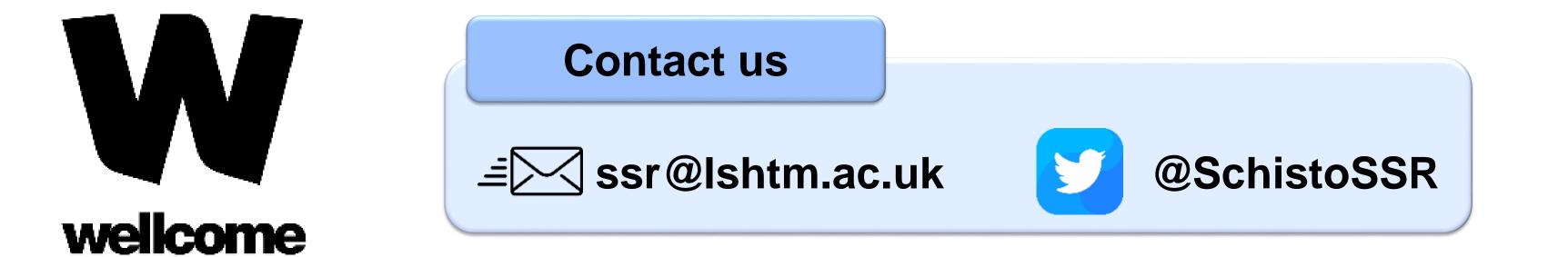
London School of Hygiene and Tropical Medicine, London Figure 3: Methods for bringing snail and schistosomes isolates into the SSR and the laboratory lifecycle system

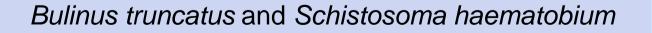




"standard/SSR model" *Schistosoma* and snail species

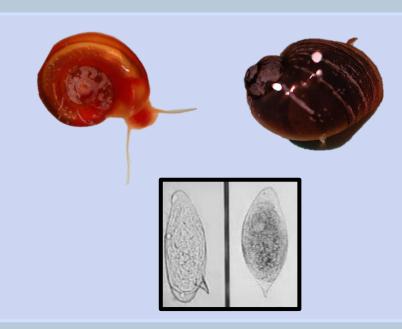








Non-standard African species/strains of schistosome and snails. Not available anywhere else in cultures.



Cultures of diverse snail vectors, enhancing current research and capacity. Enabling new research

Biomphalaria spp. and Schistosoma mansoni group species Bulinus spp. and Schistosoma haematobium group species