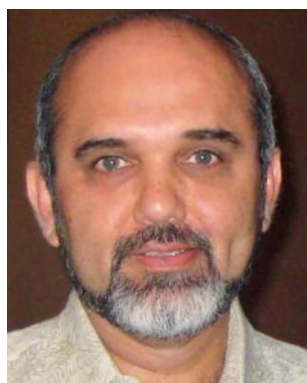


# Parasitic infections: overlooked, under-diagnosed and under-researched



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Professor George Nelson (1924–2009) once stated that, ‘Parasitology is the preserve of the diagnostically destitute’. Little has changed to this day, with potentially relevant parasitic causes of illnesses often not being considered early in the differential diagnoses of clinical presentations. Parasitic infections are sometimes overlooked as causes of morbidity and (in some cases) mortality in both the medical and veterinary fields. In Australia there remain significant problems associated with giardiasis, cryptosporidiosis, strongyloidiasis and other parasitic diseases, particularly in remote, underserved and tropical regions of the country and also in the immuno-compromised individuals (HIV, immunosuppressive drugs etc.). The burden of many parasitic diseases is greater in tropical and sub-tropical areas of non-industrialised countries. With increasingly adventurous travel and dining, increasing numbers of Australians returning from travel overseas with added souvenirs of common or exotic parasitoses every year and refugees and migrants arriving in Australia, these infections are becoming increasingly important.

Recent advances in diagnostic techniques for the detection of parasitic infections have revolutionised how we undertake such diagnostic investigations. These methodologies often provide greater sensitivity as well as in some cases providing additional epidemiological data. As we increasingly move towards the use of molecular methodologies and away from traditional morphological diagnosis, new challenges have emerged for clinicians, veterinarians and laboratory staff. A focus of several articles in this edition is consideration of the advantages and disadvantages of these new methods, in what circumstances they are best applied and how the results of such investigations should be best interpreted. Molecular methods are not without potential sources of error, hence in some

situations, morphological and serological techniques still remain relevant.

This edition also considers zoonotic parasitic infections, the treatment of parasitic infections, both from the current WHO recommendations for mass drug administration in highly endemic settings to the rise of resistance to anti-parasitic agents in protozoa such as malarial parasites and *Giardia intestinalis*. Whilst antimicrobial resistance is greatly investigated in bacterial infections, its emergence and prevalence in parasitic infections of human and veterinary importance will require further investigation and attention in the future.

We hope that this edition of *Microbiology Australia* will update knowledge and serve to inform all our readers of the importance and relevance of parasitic disease. Whether one is involved in medical, veterinary, food, environmental or other microbiological work, it is likely that aspects of your work will at some stage involve this important and sometimes neglected field of our scientific discipline. As guest editors, we are grateful and excited to be involved in the planning and execution of this edition. We would like to thank the editorial staff and all of the authors and reviewers who have kindly contributed their time and expertise into the preparation of this edition. We hope that all members of the society will find it helpful, interesting and that it may spark the interest of many into this most fascinating and under-researched area.

## Biographies

The biography for **Dr Harsha Sheorey** is on page 49.

The biography for **Dr Richard Bradbury** is on page 9.