



Editorial

## Neglected and Emerging Tropical Diseases in South and Southeast Asia and Northern Australia

Peter A. Leggat <sup>1,2,\*</sup>, Patricia Graves <sup>1</sup>, Thewarach Laha <sup>3</sup> and Khin Saw Aye <sup>4</sup>

- World Health Organization Collaborating Centre for Vectorborne and Neglected Tropical Diseases, College of Public Health, Medical and Veterinary Sciences, James Cook University, Townsville, QLD 4811, Australia; patricia.graves@jcu.edu.au
- Faculty of Science, University of Nottingham Malaysia Campus, Jalan Broga, Semenyih 43500, Selangor Darul Ehsan, Malaysia
- Department of Parasitology, Faculty of Medicine, Khon Kaen University, Khon Kaen 40002, Thailand; thewa\_la@kku.ac.th
- Department of Medical Research, Ministry of Health and Sports, Yangon 11191, Myanmar; ksadmr@gmail.com
- \* Correspondence: Peter.Leggat@jcu.edu.au; Tel.: +61-7-4781-6108

Received: 19 June 2018; Accepted: 20 June 2018; Published: 22 June 2018



This Special Issue focuses on recent research on the important emerging and neglected tropical diseases (NTDs) in South and South East Asia and Northern Australia. This region stretches from Pakistan in the west to the Philippines in the east, and includes Afghanistan and countries to the east, the Indian subcontinent, mainland South-East Asia, and the tropical regions of Australia. Many of these areas are highly endemic for important NTDs and other tropical diseases, including lymphatic filariasis (LF), soil-transmitted helminthiases (STH) such as hookworm infection, trichuriasis, ascariasis, and strongyloidiasis, rickettsial diseases and arboviral diseases. Several of these diseases are targeted for elimination or enhanced control by the World Health Organization (WHO) in the next 5 to 10 years, although some have chronic lasting sequelae and disability needing lifelong management. Control methods used include preventive chemotherapy, enhanced screening and treatment, intensified disease management, vector control, interruption of human to animal transmission, environmental/sanitation improvements and disability prevention/mitigation. A current list of WHO NTDs is given in Table 1.

**Table 1.** Neglected Tropical Diseases [1].

## Neglected Tropical Diseases

Buruli ulcer Chagas disease Dengue and Chikungunya Dracunculiasis (guinea-worm disease) Echinococcosis Foodborne trematodiases Human African trypanosomiasis (sleeping sickness) Leishmaniasis Leprosy (Hansen's disease) Lymphatic filariasis Mycetoma, chromoblastomycosis and other deep mycoses Onchocerciasis (river blindness) Scabies and other ectoparasites Schistosomiasis Soil-transmitted helminthiases Snakebite envenoming Trachoma Yaws (Endemic treponematoses)

Taeniasis/Cysticercosis

At the time of publication, there have been 11 papers published upon peer review acceptance in this Special Issue, including eight original papers, two review papers and one perspectives piece. They each contribute to a much better understanding of Neglected and Emerging Tropical Diseases in South and Southeast Asia and Northern Australia. The contributions to these topics can be summarized as follows: four submissions on LFs [2-5], four submissions on STHs [6-9], two submissions on rickettsial diseases [10,11], and one submission on arboviral diseases [12]. A systematic review and meta-analysis leads the opening section on LF [2], which reviews prevalence and disease burden of LF in southeast Asia [2]. Two studies in Myanmar review the utility of dried blood spots on filter paper for sampling for detection Bm14 antibody and Og4C3 antigen in cases of LF [3,4], with the latter indicating need for reconciliation between different sampling methods. A further study in Myanmar examined the usefulness of low-cost devices for measuring tissue compressibility and extracellular fluid, used and accepted in other clinical settings, for objective assessment of lymphedema [5]. A review paper leads the other major section on STH, which focuses on the prevalence of STHs in different groups, including immigrants, travellers, military personnel and veterans in Australia and Asia [6]. This is followed by studies examining an extended period of surveillance data on Strongyloides stercoralis [7]; and a study examining the prevalence of STHs in remote Aboriginal communities, both in the Northern Territory, Australia [8]; and a study examining the links between dietary intake, nutritional status, and intestinal parasites, such as Schistosoma japonicum, Ascaris lumbricoides, Trichuris trichiura, and hookworm, in the Philippines [9]. The two rickettsial papers examine hospital admissions for Queensland tick typhus in north Brisbane, Australia [10], and the other study based in Thailand looks at the influence of land use on scrub typhus in rodents [11]. Lastly, a perspective piece reminds us that Australia is home to more than 75 arboviral diseases-, which pose a public health threat to the Australian population [12].

The diversity of papers, the depth of the topics and the relative geographical reach of the authors (including authors from several countries across Asia, as well as authors from Australia and Europe) in this Special Issue confirm the continued collective major interest in this area. This wide-ranging open access collection contributes to a much better understanding on the epidemiology, presentation, diagnosis, treatment, prevention and control of neglected and emerging tropical diseases in South and Southeast Asia and Northern Australia. As the editors of this Special Issue, we trust that you find the content useful, as the authors are pleased to share their knowledge with an international audience. We look forward to future opportunities to update advances in this field and encourage you or publish your work in or propose a Special Issue for *Tropical Medicine and Infectious Disease*.

Funding: This research received no external funding.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

- World Health Organization. Neglected Tropical Diseases. Available online: http://www.who.int/topics/ tropical\_diseases/factsheets/neglected/en/ (accessed on 17 June 2018).
- 2. Dickson, B.F.R.; Graves, P.M.; McBride, W.J. Lymphatic Filariasis in Mainland Southeast Asia: A Systematic Review and Meta-Analysis of Prevalence and Disease Burden. *Trop. Med. Inf. Dis.* **2017**, *2*, 32. [CrossRef]
- 3. Masson, J.; Douglass, J.; Roineau, M.; Aye, K.S.; Htwe, K.M.; Warner, J.; Graves, P.M. Concordance between Plasma and Filter Paper Sampling Techniques for the Lymphatic Filariasis Bm14 Antibody ELISA. *Trop. Med. Inf. Dis.* 2017, 2, 6. [CrossRef]
- 4. Masson, J.; Douglass, J.; Roineau, M.; Aye, K.S.; Htwe, K.M.; Warner, J.; Graves, P.M. Relative Performance and Predictive Values of Plasma and Dried Blood Spots with Filter Paper Sampling Techniques and Dilutions of the Lymphatic Filariasis Og<sub>4</sub>C<sub>3</sub> Antigen ELISA for Samples from Myanmar. *Trop. Med. Inf. Dis.* **2017**, *2*, 7. [CrossRef]
- 5. Douglass, J.; Graves, P.; Lindsay, D.; Becker, L.; Roineau, M.; Masson, J.; Aye, N.N.; Win, S.S.; Wai, T.; Win, Y.Y.; et al. Lymphatic Filariasis Increases Tissue Compressibility and Extracellular Fluid in Lower Limbs of Asymptomatic Young People in Central Myanmar. *Trop. Med. Inf. Dis.* **2017**, *2*, 50. [CrossRef]

- 6. Gordon, C.A.; Kurscheid, J.; Jones, M.K.; Gray, D.J.; McManus, D.P. Soil-Transmitted Helminths in Tropical Australia and Asia. *Trop. Med. Inf. Dis.* **2017**, 2, 56. [CrossRef]
- 7. Mayer-Coverdale, J.K.; Crowe, A.; Smith, P.; Baird, R.W. Trends in *Strongyloides stercoralis* Faecal Larvae Detections in the Northern Territory, Australia: 2002 to 2012. *Trop. Med. Inf. Dis.* **2017**, 2, 18. [CrossRef]
- 8. Holt, D.C.; Shield, J.; Harris, T.M.; Mounsey, K.E.; Aland, M.; McCarthy, J.S.; Currie, B.J.; Kearns, T.M. Soil-Transmitted Helminths in Children in a Remote Aboriginal Community in the Northern Territory: Hookworm is Rare but *Strongyloides stercoralis* and *Trichuris trichiura* Persist. *Trop. Med. Inf. Dis.* **2017**, 2, 51. [CrossRef]
- 9. Ross, A.G.; Papier, K.; Luceres-Catubig, R.; Chau, T.N.; Inobaya, M.T.; Ng, S.-K. Poverty, Dietary Intake, Intestinal Parasites, and Nutritional Status among School-Age Children in the Rural Philippines. *Trop. Med. Inf. Dis.* 2017, 2, 49. [CrossRef]
- 10. Stewart, A.; Armstrong, M.; Graves, S.; Hajkowicz, K. Epidemiology and Characteristics of Rickettsia australis (Queensland Tick Typhus) Infection in Hospitalized Patients in North Brisbane, Australia. *Trop. Med. Inf. Dis.* 2017, 2, 10. [CrossRef]
- 11. Chaisiri, K.; Cosson, J.-F.; Morand, S. Infection of Rodents by *Orientia tsutsugamushi*, the Agent of Scrub Typhus, in Relation to Land Use in Thailand. *Trop. Med. Inf. Dis.* **2017**, *2*, 53. [CrossRef]
- 12. Gyawali, N.; Taylor-Robinson, A.W. Confronting the Emerging Threat to Public Health in Northern Australia of Neglected Indigenous Arboviruses. *Trop. Med. Inf. Dis.* **2017**, 2, 55. [CrossRef]



© 2018 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).