

## CV



Dr. W. D. S. J. Wickramasinghe  
Senior Lecturer

### Address

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### **Educational/Professional Qualification**

B.V.Sc. (Sri Lanka), M.Sc. (Japan), Ph.D (Japan)

### **Research Interests**

- Evolution, Molecular Taxonomy and Systematic of parasites
- Mitochondrial genomics of helminthes
- Phosphagen kinase system of helminthes
- Molecular epidemiological studies on cutaneous leishmaniasis in Sri Lanka
- Molecular markers for invasive species
- Molecular epidemiological studies and Biological control of vector born diseases
- Immunology

### **Teaching Experience**

Senior Lecturer, Department of Parasitology, Faculty of Medicine, University of Peradeniya, Sri Lanka, since 2012.

Resource Person for the MSc Course in Medical Microbiology, Postgraduate Institute of Science, University of Peradeniya.

Senior Lecturer, Department of Veterinary Pathobiology, Faculty of Veterinary Medicine and Animal Science, University of Peradeniya, Sri Lanka (2010-2011).  
Teaching Assistant, Kochi Medical School, Japan (2005 to 2010).  
Research Assistant, Kochi Medical School, Japan (2008-2010).

### **Technical/Research-related skills**

DNA extraction, PCR, RTPCR, RFLP, cDNA synthesis, ELISA, DNA sequencing, DNA cloning, Western blot, Gel electrophoresis, SDS-PAGE, Phylogenetic analysis, Primer design, Mutation studies, Enzyme kinetics, Scanning electron microscopy, Transmission electron microscopy, DNA sequence annotation, In vitro and in vivo culturing techniques, Immuno-histochemistry, Animal experiments, Parasite morphology, Maintaining of life cycle of some parasites, Recombinant protein production and purification.

### **Awards and Scholarship**

LSU WAAP Travel Grant Committee award to attend the 2009 WAAVP conference in Calgary, Canada.

Honors Scholarship for Privately Financed International Students (JASSO).

### **Other professional affiliations**

Registered Veterinary Practitioner in Sri Lanka  
Member of the Sri Lanka Veterinary Council  
Member of the Sri Lanka Veterinary Association

### **Other interests**

Cooking  
Wild Life Photography

### **Publications**

1. Rajapakse, R.P.V.J., Iwagami, M., **Wickramasinghe, S.**, Walker, S.M., Agatsuma, T., 2012. Morphology and surface topography of the schistosome, *Bivitellobilharzia nairi* from the Asian elephant (*Elephas maximus maximus*) in Sri Lanka. *Journal of Helminthology*. 19:1-8.
2. Nanayakkara, D.M., Rajapakse, R.P.V.J., **Wickramasinghe, S.**, Kularathene, S.A.M., 2012. Serological Evidence for Exposure of Dogs to *Rickettsia conorii*, *Rickettsia typhi* and *Orientia tsutsugamushi* in Sri Lanka. *Vector-borne and Zoonotic Diseases*.
3. Ubeyratne, J.K.H., Jayaweera, M.D.N., Dangolla, A., **Wickramasinghe, S.**, 2012. Molecular

approach based investigations on Black Quarter (BQ) outbreaks in provinces of Sri Lanka during 2005 – 2010. Journal of Commonwealth Veterinary Association. 28:17-20.

4. Kulathunga, D.G.R.S., **Wickramasinghe, S.**, Rajapakse, R.P.V.J., Yatawara L., Jayaweera, W.R., Agatsuma, T., 2012. Immunolocalization of arginine kinase (AK) in *Toxocara canis*, *Toxocara vitulorum*, and *Ascaris lumbricoides*. Parasitology Research. 111:663-671.
5. Gunasekera, U.C., **Wickramasinghe, S.**, Wijesinghe, G., Rajapakse, R.P.V.J., 2012. Gastrointestinal parasites of captive primates in the national zoological gardens of Sri Lanka. The Journal of Asian Biodiversity (TAPROBANICA). 4:1-59.
6. **Wickramasinghe, S.**, Yatawara, L., Rajapakse, R.P.V.J., Agatsuma, T., 2009. *Toxocara vitulorum* (Ascaridida: Nematoda): Mitochondrial gene content, arrangement and composition compared with other *Toxocara* species. Molecular & Biochemical Parasitology. 166:89–92.
7. **Wickramasinghe, S.**, Yatawara, L., Rajapakse, R.P.V.J., Agatsuma T., 2009. *Toxocara canis* and *Toxocara vitulorum*: molecular characterization, discrimination, and phylogenetic analysis based on mitochondrial (ATP synthase subunit 6 and 12S) and nuclear ribosomal (ITS-2 and 28S) genes. Parasitology Research. 104(6): 1425-30.
8. Yatawara, L., **Wickramasinghe, S.**, Nagataki, M., Takamoto, M., Nomura, H., Watanabe, Y., Agatsuma, T., 2009. *Aureobasidium* derived soluble branched (1,3-1,6)  $\beta$ -glucan (*Sophy*  $\beta$ -glucan) enhances natural killer activity in *Leishmania amazonensis* infection. Korean Journal of Parasitology. 47(4):345-351.
9. **Wickramasinghe, S.**, Yatawara, L., Nagataki, M., Takamoto, M., Watanabe, Y., Rajapakse, R.P.V.J., Uda, K., Suzuki, T., Agatsuma, T., 2008. Development of a highly sensitive IgG-ELISA based on recombinant arginine kinase of *Toxocara canis* for serodiagnosis of visceral larva migrans in the murine model. Parasitology Research. 103(4):853-8.
10. Yatawara, L., Le, T.H., **Wickramasinghe, S.**, Agatsuma, T., 2008 Maxicircle (mitochondrial) genome sequence (partial) of *Leishmania major*: gene content, arrangement and composition compared with *Leishmania tarentolae*. Gene. 15; 424(1-2):80-6.
11. Yatawara, L., **Wickramasinghe, S.**, Rajapakse, R.P.V.J., Siyambalagoda, R.R.M. L.R., Le, T.H., Watanabe, Y., Agatsuma, T., 2008. Morphological and Molecular studies on Sri Lankan *Leishmania*. Tropical Medicine and Health. 36(4): 171-179.
12. **Wickramasinghe, S.**, Uda, K., Nagataki, M., Yatawara, L., Rajapakse, R.P.V.J., Watanabe, Y., Suzuki, T., Agatsuma, T., 2007. *Toxocara canis*: molecular cloning, characterization, expression and comparison of the kinetics of cDNA-derived arginine kinase. Experimental Parasitology. 117(2):124-32.
13. Yatawara, L., **Wickramasinghe, S.**, Nagataki, M., Rajapakse, R.P.V.J., Agatsuma, T., 2007. Molecular characterization and phylogenetic analysis of *Setaria digitata* of Sri Lanka based on CO1 and 12S rDNA genes. Veterinary Parasitology. 1;148(2):161-5.

14. Devi, K.R., Narain, K., Bhattacharya, S., Negmu, K., Agatsuma, T., Blair D., **Wickramasinghe, S.**, Mahanta, J., 2007. Pleuropulmonary paragonimiasis due to *Paragonimus heterotremus*: molecular diagnosis, prevalence of infection and clinicoradiological features in an endemic area of northeastern India. Transactions of the Royal Society of Tropical Medicine Hygiene. 101(8):786-92.
15. Yatawara, L., **Wickramasinghe, S.**, R.P.V.J., Agatsuma, T., 2010. The complete mitochondrial genome of *Setaria digitata* (Nematoda: Filarioidea): Mitochondrial gene content, arrangement and composition compared with other nematodes. Molecular & Biochemical Parasitology. 173(1):32-8.
16. Devi, K.R., Narain, K., Agatsuma, T., Blair D., Nagataki, M., **Wickramasinghe, S.**, Yatawara L., Mahanta, J., 2010. Morphological and molecular characterization of *Paragonimus westermani* in northeastern India. Acta Tropica. 116 (31-38).
17. Nagataki M., Uda K., Jarilla B.R., Tokuhiro S., **Wickramasinghe, S.**, Suzuki, T., Blair, D., Agatsuma, T., 2011. Molecular and catalytic properties of an arginine kinase from the nematode *Ascaris suum*. Journal of Helminthology. 86:276-86
18. Agatsuma, Y., Devi K.R., Narain, K., Nagataki, M., Fukunaga, S., Tokuhiro, S., **Wickramasinghe, S.**, Yatawara, L., Agatsuma, T., 2009. Pathological study of pulmonary lesions of experimental paragonimiasis in wistar rat model infected with *Paragonimus westermani*. Bulletin of Kochi Gakuen College. 39:1-7.
19. Agatsuma, Y., Fukunaga, S., Rajapakse, R.P.V.J., **Wickramasinghe, S.**, Lalani, Y., Nagataki, M., Watanabe, Y., Agatsuma, T., 2007. Immunohistological effects of oral administration of the *Sophy beta-glucan* on lung toxocariasis in a mouse model. Bulletin of Kochi Gakuen College. 37:19-34.
20. Agatsuma, Y., Kumazawa, A., Kira, K., Rajapakse, R.P.V.J., **Wickramasinghe, S.**, Watanabe, Y., Agatsuma, T., 2005. The pathological study of pulmonary lesions of experimental toxocariasis in mouse model. Bulletin of Kochi Gakuen College, 36:75-85.
21. Nanayakkara, D.M., Rajapakse, R.P.V.J., Kularathne, S.A.M., **Wickramasinghe, S.**, Bandara, A., Weerakoon, K.G.A.D., Medagedara, S.C., Dasch, G. A., 2010. Serodiagnosis, epidemiology and molecular characterization of clinically suspected cases of rickettsioses reported to Teaching Hospital Peradeniya (THP) over two year period. Proceedings of the Peradeniya University Research Sessions, Sri Lanka. 15:110-112.
22. Kulatunga, D.G.R.S., **Wickramasinghe, S.**, Agatsuma, T., Perera, N.A.N.D., Bandara, K.B.A.T., Rajapakse, R.P.V.J., 2010. Application of recombinant arginine kinase of *Toxocara canis* for serodiagnosis of visceral larva migrans in humans. Proceedings of the Peradeniya University Research Sessions, Sri Lanka. 15:199-201.

## Proceedings, Abstracts and Presentations at International conferences

1. **Wickramasinghe, S.**, Nagataki, M., Yatawara, L., Uda K., Suzuki, T., Agatsuma, T. Determination of the guanidine kinase systems of the *Ascaris suum* and *Toxocara canis* (Ascaridida: nematoda) of human and animal health significance and it's application for serodiagnosis of VLM. 43<sup>rd</sup> Annual U.S.-Japan joint conference on parasitic diseases. International Medical Center of Japan. January 7-8, 2009, Tokyo.
2. **Wickramasinghe, S.**, Yatawara, L., Nagataki, M., Watanabe, Y., Rajapakse R.P.V.J., Uda K., Suzuki T., Agatsuma, T. Development of a highly sensitive IgG-ELISA based on recombinant arginine kinase of *Toxocara canis* for serodiagnosis of VLM in the murine model. Kochi Medical School Research Session. Kochi Medical School, Oko, Nankoku city, Kochi, Japan. February 2-7, 2008.
3. **Wickramasinghe, S.**, Nagataki, M., Yatawara, M., Uda, K., Rajapakse, R.P.V.J., Watanabe, Y., Suzuki, T., Agatsuma, T. Molecular characterization and comparison of enzyme kinetics of *Ascaris suum* and *Toxocara canis* arginine kinase. Kochi Medical School Research Session, February, 2007. Kochi Medical School, Oko, Nankoku city, Kochi, Japan.
4. **Wickramasinghe, S.**, Uda, K., Nagataki, M., Yatawara, L., Rajapakse, R.P.V.J., Suzuki, T., Agatsuma, T. Molecular cloning, characterization and expression of cDNA derived phosphagen kinase (PK) of *T. canis*, *A. suum*, *F. hepatica* and *S. japonicum*. American Society of Tropical Medicine and Hygiene, 55<sup>th</sup> Annual Meeting, November 12 – 16, 2006, Atlanta Marriott Marquis, Atlanta, Georgia, USA.
5. **Wickramasinghe, S.**, Uda, K., Nagataki, M., Yatawara, L., Rajapakse, R.P.V.J., Suzuki T., Agatsuma, T. Identification and evaluation of phosphagen kinases of *Ascaris suum* and *Toxocara canis* as a novel antigen for the diagnosis of VLM syndrome in humans, 1<sup>st</sup> International Symposium on infectious diseases and health sciences, November 23, 2006, Kochi Medical School, Oko, Nankoku city, Kochi, Japan.
6. **Wickramasinghe, S.**, Uda, K., Nagataki, M., Yatawara, L., Rajapakse, R.P.V.J., Suzuki T., Agatsuma T. Cloning and expression of *Toxocara canis* arginine kinase, Southern Japan Parasitology Congress, November 12, 2006, Nagoya, Japan.
7. Yatawara, L., **Wickramasinghe, S.**, Rajapakse, R.P.V.J., Siyambalagoda, R.R.M.LR., Le, T.H., Watanabe, Y., Matsumoto, Y., Agatsuma, T. Molecular characterization and identification of Sri Lankan *Leishmania sp.* based on kinetoplast minicircle DNA and cytochrome b gene from human isolates, 20<sup>th</sup> IUBMB International Congress of Biochemistry and Molecular Biology and 11<sup>th</sup> FAOBMB Congress, June 18-23, 2006, Kyoto, Japan.
8. Yatawara, L., **Wickramasinghe, S.**, Rajapakse, R.P.V.J., Siyambalagoda, R.R.M.LR., Le, T.H., Watanabe, Y., Matsumoto, Y., Agatsuma, T. Morphological and Molecular identification of Sri Lankan *Leishmania* species based on kinetoplast minicircle DNA and cytochrome b gene from human isolates, XI<sup>th</sup> International Congress of Parasitology, August 6-11, 2006, Glasgow, United Kingdom.
9. Yatawara, L., **Wickramasinghe, S.**, Nagataki, M., Takamoto, M., Y., Watanabe, Y., Mizonuchi, S., Sasaguri, S., Agatsuma, T. Immunomodulatory effects of *Sophy*  $\beta$ -glucan in *Leishmania amazonensis* infection, 1<sup>st</sup> International symposium on infectious diseases and health sciences, November 23, 2006, Kochi Medical School, Oko, Nankoku city, Kochi, Japan.

10. Yatawara, L., **Wickramasinghe, S.**, Nagataki, M., Takamoto, M., Yano, H., Watanabe, Y., Mizonuchi, S., Sasaguri, S., Agatsuma, T. *Sophy  $\beta$ -glucan* enhances natural killer activity and cytokine production in *Leishmania amazonensis* infection, 76<sup>th</sup> Japanese Parasitology Congress, 29-30 March, 2007, Osaka, Japan.
11. Yatawara, L., **Wickramasinghe, S.**, Nagataki, M., Rajapakse, R.P.V.J., Agatsuma, T. Phylogenetic analysis of filarial worm *Setaria digitata* of Sri Lanka based on CO1 and 12S r DNA genes. WAAVP proceedings 19<sup>th</sup>-23<sup>rd</sup> August, 2007, Gent, Belgium.
12. Rajapakse, R.P.V.J., Yatawara, L., **Wickramasinghe, S.**, Takamoto, M., Yano, H., Watanabe, Y., Agatsuma, T. *Sophy  $\beta$ -glucan*'s improved immunity and lower mortality rates for poultry, 1<sup>st</sup> International symposium on infectious diseases and health sciences, November 23, 2006, Kochi Medical School, Oko, Nankoku city, Kochi, Japan.
13. Kanwar, N., Devi, K.R., Agatsuma, T., Blair, D., **Wickramasinghe, S.**, Mahantha, J. *Paragonimus* and paragonimiasis in northeastern India; a molecular perspective and clinico-radiological features. 1<sup>st</sup> International symposium on infectious diseases and health sciences, November 23, 2006, Kochi Medical School, Oko, Nankoku city, Kochi, Japan.
14. Agatsuma, T., Takamoto, M., Yano, H., Yatawara, L., **Wickramasinghe, S.**, Rajapakse, R.P.V.J., Nagataki, M., Watanabe, W. Immunological effects of *Sophy beta glucan* on parasitic infection. 1<sup>st</sup> International symposium on infectious diseases and health sciences, November 23, 2006, Kochi Medical School, Oko, Nankoku city, Kochi, Japan.
15. Yano, H., Uda, K., **Wickramasinghe, S.**, Nagataki, M., Agatsuma, T. Cloning and characterization of cDNA derived Phosphagen kinase of *Schistosoma japonicum*, 75<sup>th</sup> Japanese Parasitology Congress, May 19<sup>th</sup>, 2006, Aomori, Japan.
16. Takamoto, M., Watanabe, Y., **Wickramasinghe, S.**, Agatsuma, T. Effect of beta glucan on *Leishmania amazonensis* and *L. major* infections in mouse model, 75<sup>th</sup> Japanese Parasitology Congress, May 19<sup>th</sup>–20<sup>th</sup>, 2006, Aomori, Japan.
17. Yatawara, T., Le, T.H., **Wickramasinghe, S.**, Nagataki, M., Agatsuma, T. Gene content and arrangement of *L. major* maxicircle compared with *L. tarantolae*. Kochi Medical School Research Session. Kochi Medical School, Oko, Nankoku city, Kochi, Japan. February 2-7, 2008.
18. **Wickramasinghe, S.**, Yatawara, L., Rajapakse, R.P.V.J., Agatsuma, T. *Seteria digitata*, *Toxocara vitulorum* and *Toxocara canis*: Molecular characterization of the mitochondrial genomes and comparative analysis of mitochondrial gene content, arrangement and composition. The 50<sup>th</sup> Annual Meeting of the Japanese Society of Tropical Medicine and Health, Okinawa convention center, Okinawa, Japan. October 22<sup>nd</sup> – 23<sup>rd</sup>, 2009.
19. **Wickramasinghe, S.**, Yatawara, L., Rajapakse, R.P.V.J., Agatsuma, T. *Toxocara vitulorum* (Ascaridida: Nematoda): Mitochondrial gene content, arrangement and composition compared with other *Toxocara* species. World Association for the advancement of Veterinary Parasitology (WAAVP) 22<sup>nd</sup> International Conference, August 8-13, 2009. Calgary, Alberta, Canada.