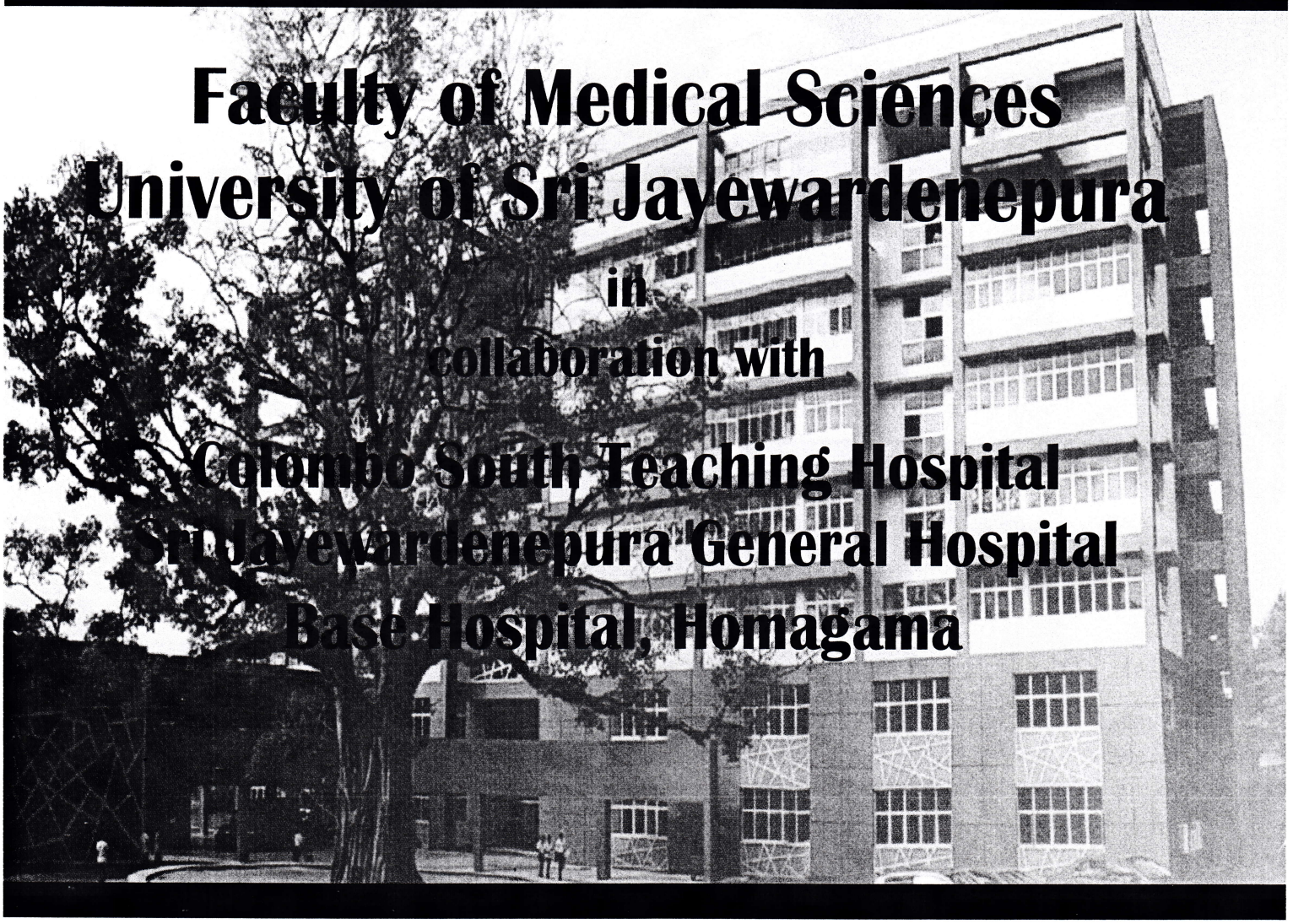
International Conference on Health Sciences 2018



Faculty of Medical Sciences
University of Sri Jayewardenepura

in

collaboration with

Colombo South Teaching Hospital
Sri Jayewardenepura General Hospital
Base Hospital, Homagama

"Beyond Borders Towards Excellence"

Book of Proceedings

7th to 9th October 2018

Waters Edge, Colombo

Ministry of Science, Technology & Research

NATIONAL SCIENCE FOUNDATION

Ministry of Health, Nutrition & Indigenous Medicine

24.1μm] ($p<0.001$), size of antennal segment iii [215.5 ± 15.7 μm] ($p<0.001$), palp length [414.5 ± 30.2 μm] ($p<0.001$), hind femur [727.5 ± 15.5 μm] ($p<0.001$) hind tibia [1199.5 ± 36.6] ($p<0.05$) and wing width [540.0 ± 18.1] ($p<0.05$).

Conclusions: The colonization of *P. argentipes* at laboratory setting is feasible and the present study provided the first ever successful attempt in Sri Lanka.

Acknowledgement: This work was supported by the research grant funded by the National Research Council (Research Grant No: NRC 16-142)

OP 6

Comparison of ATL buffer and RNAlater as transport and storage medium for molecular diagnosis of cutaneous leishmaniasis using skin punch biopsy specimens

Gunaratna GPS[1], Ranasinghe PHKIS[2], Manamperi A[3], Pathirana N[4], Pathirana H[4], Wickremasinghe R[2], de Silva NR[1], Sooriyarachchi MW[2], Ahmed Abd El Wahed[5]

[1]Department of Parasitology, Faculty of Medicine, University of Kelaniya, Sri Lanka, [2]Department of Parasitology, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka, [3]Molecular Medicine Unit, Faculty of Medicine, University of Kelaniya, Sri Lanka, [4]Army Hospital, Narahenpita, Sri Lanka, [5]Division of Microbiology and Animal Hygiene, University of Goettingen, Germany

Background: Detection of parasite DNA by Polymerase Chain Reaction (PCR) is considered as the gold standard for diagnosis of cutaneous leishmaniasis (CL). Specimens for molecular assays may be transported and stored in either ATL buffer or RNAlater depending on the downstream applications such as DNA based diagnostics or gene expression studies.

Objective: To compare ATL buffer and RNAlater as transport and storage media for skin biopsy specimens under local settings, for subsequent detection of parasite DNA by PCR amplification

Method: Two punch biopsy specimens were obtained under sterile conditions from each of 80 patients with clinically suspected CL. One biopsy specimen was collected into 180 μl of ATL buffer, transported and stored at room temperature. The second specimen was transported in ice after collection into 180μl of RNAlater and stored at -20^0C. DNA extraction from both specimens was performed using Qiagen DNeasy Blood and Tissue kit followed by PCR. Statistical evaluation was by χ^2 test of proportions in R statistical software, at 5% significant level.

Result: All 80 punch biopsy specimens that were collected into ATL buffer gave positive results with PCR after storage at room temperature, but only 47 specimens collected into RNAlater gave a positive band with PCR. The difference was statistically significant (χ^2 =41.575, df=1, $p<0.05$).

Conclusion: Specimens collected into RNAlater are not suitable for DNA based diagnostics such as PCR. Specimens should be collected separately into both ATL buffer and RNAlater when both DNAbased diagnostics and expressions studies are to be carried out.

Acknowledgement: This work was supported by the research grant funded by the University of Sri Jayewardenepura (Research Grant No: ASP/01/RE/MED/2016/70).