

KAMAL SHRESTHA

Updated-14/11/2019 AD

Maharajgunj Road, Kathmandu, Nepal/Bardhaghat -9, Nawal Parasi, Nepal

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Nationality: Nepali

Male

PERSONAL STATEMENT

A Medical Laboratory Technology graduated from the Institute of Medicine, Nepal, and a registered Medical Laboratory Technologist. Currently, a student of Master of Science in Clinical Microbiology at Maharajgunj Medical Campus, Institute of Medicine, Tribhuvan University. An enthusiast for working in medical Laboratory to impact in the patient treatment and with an experience of working in medical and research-based laboratories. Proven to work well as a team as well as on individual assignments.

EDUCATION

Master of Science in Clinical Microbiology, expected completion in 2020 AD – Institute of Medicine, Tribhuvan University

-Department of Microbiology, Maharajgunj Medical Campus, Kathmandu, Nepal

Bachelor of Science in Medical Laboratory Technology, completed in 2016 AD – Institute of Medicine, Tribhuvan University

-Maharajgunj Medical Campus, Institute of Medicine, Kathmandu, Nepal

10+2, completed in 2011 AD – Higher Secondary Education Board

-Tilottama higher Secondary School, Shankar Nagar, Rupandehi School

Leaving Certificate, completed in 2008 AD - Government of Nepal

-Salbas Sun Rise secondary English school, Bradhaghat, Nawal parasi, Nepal

LABORATORY EXPERIENCE

Worked as Medical Laboratory Technologist [Full-time] at Department of Microbiology of Tribhuvan University Teaching Hospital, Nepal (2016 May to 2018 May)

- Bacterial isolation, and identification using morphological, biochemical and serological tests.

- Detection of *Mycobacterium tuberculosis* from different clinical samples using conventional routine microscopy and mycobacterium culture and well as using automated real-time PCR.
- Antibiotic sensitivity testing of bacterial isolates and identification of different types of drug-resistant bacteria, like ESBL, AMPc, and carbapenemase-producing bacteria.
- Data entry, analysis and monthly and annual reports preparation of bacteriology/mycology lab.
- Involvement in different research/projects of the Department of Microbiology.
- Assist bachelor students in getting accustomed to different tools and techniques of bacteriology/mycology.
- Providing technical guidance to graduate/undergraduate students in their project/research work.
- Representing microbiology laboratory in many workshops, seminars, and many talk programs as well as training programs related to bacteriology and mycobacteriology.

Worked as students/trainee in different medical/research-based laboratories and health services providers (2011 AD to 2016 AD)

Medical and Pathological laboratories of Tribhuvan University Teaching hospital, Kathmandu, Nepal.

- Sample collection, processing, analysis and report dispatching in different laboratories (histopathology, hematology, biochemistry, and microbiology);
- Different routine and special analysis of biochemistry using automated and semi-automated analyzers and different tests and procedures of histopathology and cytology (e.g. tissue processing, section cutting, routine, and special stains, etc.).
- Sterile microbiological techniques allowing for the maintenance and growth of bacterial and fungal cultures and their antibiotic sensitivity testing.
- DNA/RNA/Protein extraction, PCR (conventional, real-time), western blot analysis, agarose gel electrophoresis, PCR, sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), and spectrophotometry.
- Conventional and electron microscopy, human leucocyte antigen (HLA) typing and matching

Medical and Pathological laboratories of B. P. Koirala Institute of Health Science, Dharan, Nepal.

- Routine and special tests using conventional and automated analyzers
- The culture of *Leishmania donovani* in biphasic medium (Novy-McNeal Nicolle medium)

National Public Health Laboratory, Teku, Kathmandu, Nepal

- RNA extraction, Reverse Transcriptase Real-Time PCR and its result analysis for detection of HIV, HIV genome sequencing
- Nucleic acid extraction, Real-time PCR and its data interpretation for detection of Influenza virus, the Cell-line culture of influenza virus and its strain identification

Medical and Pathological Laboratories of B. P. Koirala Memorial Cancer Hospital, Narayanghat, Chitwan, Nepal

- Study of the morphology of different cells and tissue using conventional and advanced microscopy for the diagnosis of Cancer
- Sample preparation, processing, and result analysis – Flow cytometry
- Different types/techniques of in-situ hybridization and karyotyping of human chromosomes for the detection of different types of chromosomal abnormalities

Vector-borne Disease Research and Training Center, Hetauda, Nepal

- Conventional and advanced techniques in the diagnosis of malaria and vector-borne diseases
- Mosquito breeding program and study of their feeding habit

District Public Health Office of Makwanpur, Hetauda, Nepal

- The district-level health system of Nepal
- District level laboratories set-ups in Nepal

National Tuberculosis Centre, Sanothimi, Bhaktapur, Nepal

- Microscopic examination for the diagnosis of Tuberculosis in different samples e.g. sputum, pleural fluids, CSF, etc.
- The culture of *Mycobacterium tuberculosis* and its antibiotic testing
- Molecular techniques for detection of *M tuberculosis* and resistance gene detection.
- Seminars about the burden of *M. tuberculosis* in Nepal and future plans.

Anandaban Leprosy Hospital, Chapagaun, Lele, Kathmandu, Nepal

- Clinical and laboratory-based diagnosis of Leprosy
- Study of complications of leprosy and its management (psychological and clinical)
- Animal handling, inoculum preparation, animal inoculation for the diagnosis of leprosy
- Advanced techniques for the diagnosis of leprosy like automated PCR, sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), tissue culture techniques

Central Red Cross Blood Transfusion Service Center (CBTSC), Kathmandu, Nepal

- Blood transfusion system in Nepal
- Different compatibility testing used in blood transfusion
- Preparation of different blood products like a packed cell, platelets rich plasma, fresh frozen plasma, Cryoprecipitate.

RESEARCH EXPERIENCE

Research/project works of undergraduate/graduate students that I have assisted/ guided:

- ‘Analysis of biofilm formation and antibiogram of uropathogens in renal disease patients attending Tribhuvan University Teaching Hospital’ – Mrs. Anuja Dahal [submitted to the Research Department, Institute of Medicine, Tribhuvan University February 2018]
- ‘Clinico-etiological characterization of infective vaginosis among reproductive-age women attending tertiary care hospital, Kathmandu’ – Mrs. Rajshree Bhujel [Submitted to Research Department, Institute of Medicine, Tribhuvan University, October 2017]
- ‘Non-fermentative Gram-Negative Bacilli infections and their antimicrobial susceptibility pattern among hospitalized patient in a tertiary care hospital, Kathmandu’ – Mr. Santosh Kumar Yadav [submitted to Research Department, Institute of Medicine, Tribhuvan University, October 2017]
- ‘Early detection of infection in an indwelling bladder catheter by using pH sensor’ – Pradeep Ghimire [submitted to Department of Biotechnology, Tribhuvan University, February 201

Research/project work conducted

-‘Biofilm formation by *Staphylococci* species on the exposure of sub-lethal concentration of vancomycin’ as a principal investigator. [submitted to Department of Microbiology, Institute of Medicine

PUBLICATIONS

K. Shrestha, S. K. Mishra, H. P. Kattel S. Sharma, K. Parajuli, J. B. Sherchand, B. M. Pokhrel, B. P. Rijal “Biofilm formation by *Staphylococcus* species on the exposure of sub-lethal concentration of vancomycin”. BMC microbiology [In- peer review]

R. Bhujel, S. K. Yadav, **K. Shrestha**, H. Kattel, S. K. Mishra, K. Parajuli, B. P. Rijal, J. Shrechand “A case report of *Strongyloides* hyperinfection syndrome in a patient with non-proliferative glomerulopathy. Journal of Institute of Medicine (JIOM), August 2017, 39:2

K. Shrestha, S. Mishra, S. Sharma, H. Kattel, N. Shah, K. Parajuli, J. Sherchand, B.M. Pokhrel, B.P. Rija Biofilm formation by *Staphylococcus* species on exposure of sub-lethal concentration of vancomycin’ abstract of poster-presentation at 17th ICID, Hyderabad, India; International Journal of Infectious Diseases 45S (2016) 1–477; <https://doi.org/10.1016/j.ijid.2016.02.287>

SCHOLARSHIPS/ACADEMIC HONORS

Academic excellence scholarships by Maharajgunj Medical Campus from 2012 – 2016

Entrance Examination based Merit scholarship for undergraduate study at Maharajgunj Medical Campus (MMC), Institute of Medicine (IOM) in 2011

Entrance Examination based Merit Full scholarship for Graduate study at Maharajgunj Medical Campus (MMC), Institute of Medicine (IOM).

MEMBERSHIPS

Member of European Society of Clinical Microbiology and Infectious Diseases (ESCMID) since 2016

Member of International Society of Infectious Diseases (ISID) since 2016

Member of Nepal Medical Laboratory Society (NMLS) since 2016

Member of Nepal Medical Laboratory Students' Society (NMLSS) from 2011 – 2016, 2018 – onwards

REFEREES

Prof. Dr. Keshab Parajuli

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Institute of Medicine, Tribhuvan University
Kathmandu, Nepal
Email: drkparajuli@iom.edu.np

Assistant Prof. Shyam Kumar Mishra, MSc.

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