

Rinku Dhungana

Email: rid62@pitt.edu • (909) 671-2969

EDUCATION

- 2023 **Western University of Health Sciences, Pomona, California**
Master of Science in biotechnology and pharmaceutical sciences
GPA: 4.0
- 2018 **Maharajgunj Medical Campus, Institute of Medicine, Kathmandu, Nepal**
Bachelor of Pharmacy
GPA: 3.59

HONOR AND AWARDS

- Teaching Assistantship, Western University of Health Sciences
- Dean's list

RESEARCH INTEREST

• Molecular Biology • Genetics and genomics • Gene therapy • RNA stability • Antibiotics • Personalized medicine

RELEVANT COURSEWORK

• Pharmacogenomic • Microbiology • Immunology • Biochemistry • Lab experiment in bacterial mutation
• Sequence analysis

RESEARCH EXPERIENCE

- 2021- 2023 **Thesis research: Impact of synonymous mutations on TEM-3 beta-lactamase, PI: Dr. Peter Oelschlaeger**
Western University of Health Sciences, Pomona, CA
- Designed the competition growth experiment.
 - Long-time course competition experiment to study growth kinetics.
 - Sequence analysis
 - Operation of CD spectrometry to visualize RNA secondary structure
 - In vitro transcription/translation, Agarose gel electrophoresis, SDS-PAGE, western blot
 - Troubleshooting
- 2021-2022 **Research Assistant: Automated Class B Beta-Lactamase (BBL) Renumbering of NDM Enzymes, PI: Dr. Peter Oelschlaeger**
Western University of Health Science, Pomona, CA
- Collected the data about NDM enzymes present in the protein data bank
- 2021- 2022 **Research Assistant: Role of Synonymous Mutations in the Evolution of TEM beta-Lactamase Genes, PI: Dr. Peter Oelschlaeger**
- Evolutionary pathway from bla_{TEM-1} to bla_{TEM-3} .
 - Creation of a mutational network.
 - Development of the Python program to automate all possible combinations of sequences from bla_{TEM-1} to bla_{TEM-3} .

2018

Undergraduate thesis: Assessment of medication adherence in patients with chronic complications of type 2 Diabetes mellitus. Advisor: Nayan Manandhar

Maharajgunj Medical Campus, Institute of Medicine, Nepal

- Conducted structured interviews with over 100 patients with complications of diabetes mellitus
- Collected, managed, and analyzed data using SPSS

CONFERENCE

Oelschlaeger P, Dhungana R. Automated Class B Beta-Lactamase (BBL) Renumbering of NDM Enzymes. ASM Microbe 2022 In-Depth Symposium AAR07 Where do We Stand Now? The Continued Evolution of Beta-lactamases. 2022 June 9 – June 13; Washington DC.

Dhungana R, Guevara A, Oelschlaeger P. Role of synonymous mutations in the evolution of TEM β -lactamases. (Platform Presentation). *5th International Caparica Conference in Antibiotic Resistance, September 5-8, 2022, Caparica, Portugal*

TEACHING AND MENTORING EXPERIENCE

2021- 2023

Teaching Assistant

Western University of Health Science, Pomona, CA

- Proctored the examinations of PharmD students
- Lead TA for the compounding lab of PharmD students. Duties included: inventory management, assisting students with laboratory procedures, Grading the lab reports

2022

Summer-intern Mentor, Oelschlaeger lab, Western University of Health Sciences

- Provided training on the laboratory procedures
- Taught the basics of sequence analysis

ADDITIONAL COURSE

2022 spring

Bioinformatics: Fundamentals of Sequence Analysis

Harvard Extension School

Full-term, Noncredit

PROFESSIONAL EXPERIENCE

Jan 2020-Oct 2020

Pharmacist

One-stop pharmacy, Bhaktapur, Nepal

Nov 2020-

July 2021

Hospital pharmacist

National Trauma Centre, Kathmandu, Nepal

- Drug dispensing, Patient counseling, ADR monitoring
- Inventory management

PROFESSIONAL AFFILIATION

Member, American Society for Microbiology (ASM)