

CHARU ARJYAL

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MAIN QUALIFICATION

2001

Masters of Science in Microbiology.

Tribhuvan University, Nepal.

FORMAL EDUCATION

1998-2001

Masters of Science (MSc) in Microbiology

Dissertation entitled: Bacteriology of Ear Discharges

Central Department of Microbiology, Tribhuvan University, Kirtipur, Kathmandu, Nepal.

1995-1997

Bachelors of Science (BSc) in Microbiology

Tri-Chandra Multiple Campus, Tribhuvan University, Kathmandu, Nepal.

1991-1994

Intermediate in Science (ISc)

Kathmandu Valley Campus, Tribhuvan University, Kathmandu, Nepal.

1991

School Leaving Certificate

St. Mary's High School, Kathmandu, Nepal.

PROFESSIONAL ACTIVITIES

1. November 2013 to present

Employed by Deerwalk Services Pvt. Ltd., Sifal, Kathmandu, Nepal.

Deerwalk is a healthcare analytics and "custom" software development company focused on delivering Big Data solutions to the healthcare industry.

November 2013 to January 2015

Sr. Variant Scientist- Genomics

This involves working in the Genomics Department, with duties including the curation and analysis of sequence variants and the validation of clinico-genetic content of genomics software. It also involves procuring information from published articles and online databases related to genetic variants, use of different computational tools and perform critical analysis of all evidences to score/classify a variant to determine its clinical significance.

November 2013 to January 2015

Sr. Product Manager- Products Department

This involves working in the Products Department, with duties including design, planning and delivery of a new software product from concept, implementation and release. It also involves coordination with different development teams responsible for software development.

2. February 2005 to September 2013

Employed by Verisk Information Technologies (earlier known as D2Hawkeye Services), Hattisar, Kathmandu, Nepal.

Verisk Information Technologies is a subsidiary under Verisk Health, Inc. Verisk Health is a leading provider of data analytics, risk assessment, payment accuracy and revenue integrity solutions to the healthcare industry.

A brief breakdown of the various tasks and responsibilities held are given here.

April 2012 to September 2013

Sr. Engineering Manager- R & D Department

This involves working in the Research and Development Department, with duties including managing a team of twenty two staffs to assure the development and release of a quality software product. It also involves coordination with the development teams responsible for software development.

February 2009 to April 2012

Business Manager- Quality Assurance Department

- This involves working in the Products Quality Assurance (Business) Department, with duties including managing a team of fourteen staffs to assure the delivery of a quality software product. It also involves coordination of the

products quality assurance department with the technical department responsible for software development.

August 2008 to February 2009

Business Manager- Genomics Department

- In August 2008 I was promoted to the post of business manager in the genomics department wherein I was additionally entrusted with overall responsibility of the project and management of the team, including recruitment of new employees. While undertaking this post I also continued my previous work as a Senior Analyst (please see below).

October 2006 to August 2008

Senior Analyst- Genomics Department

- The Genomics Department in D2Hawkeye is an outsourced project whose chief task is to build a mutational database based on a critical review of pertinent scientific literature on genetic diseases. It involves the following:
 - extracting biological information relevant to a given genetic sequence,
 - determining the nucleotide position of single nucleotide polymorphisms (SNPs) in the gene sequence with reference to National Center for Biotechnological Information (NCBI), Bethesda, Maryland, USA,
 - performing mutational analysis and review of human gene sequence using the Seqscape Software, Applied Biosystems Inc., Foster City, California, USA,
 - checking the quality of the electropherogram to determine the need for re-sequencing,
 - deriving the syntax for insertion/deletion within a sequence,
 - finding the correlation of mutation with the associated phenotype by predicted functional change, genotype-phenotype correlation and actual functional change scores, and
 - developing quality control, data analysis protocols, and novel analytical methods.
- As a senior analyst I was tasked with the above work after completing the certification exam conducted by Correlagen Diagnostics Inc., Waltham, MA, USA.
- This work also involved training new employees and preparing them for certification.

February 2005 to October 2006

Data Quality Engineer

- This involved working in the Data Quality Control (QC) Unit. I was involved in this unit since its beginning. My chief roles as a Data Quality Engineer were as follows:
 - filling in the QC workbooks (Data QC, Subjective QC and Financial QC) separately for each client and sending the workbooks to corresponding program managers and development engineers.

- logging in the issues into the defect tracking tool and following it up for resolution.
- reviewing the software application after each episode of data processing to ensure that there are no major data or application related errors/issues.
- working together with the team to update the process/workbook according to the areas of importance and potential errors.
- training new members in the team.

June 2006 to October 2006

Training Manager

- This work in addition to the responsibilities of Data Quality Engineer involved conducting training in different departments within the organization, preparation and maintenance of training materials and training reports.

3. Dec 2001 to present

December 2001 to April 2008

Lecturer of Microbiology (part time teacher) at the Microbiology Department, Tri-Chandra Multiple Campus, Tribhuvan University, Nepal.

April 2008 to present

Teaching Assistant (contract basis) in the microbiology department teaching microbiology to bachelor and master level students. Chief tasks included:

- taking regular lectures and teaching students laboratory procedures; the regular lectures included introductory microbiology, mycology, parasitology and virology for beginners and biochemistry, biotechnology and agricultural microbiology for senior students. Laboratory procedures included common microbial techniques suited to students of each level, and
- conduction of theory and practical examinations within the campus and preparation of questions and results.
- taking regular lectures in biochemistry and laboratory procedures of medical mycology to Master level students from 2011.

4. September 2003 to February 2004

Assistant Professor of Microbiology at Himalayan College of Agricultural Sciences and Technology (HICAST), Purbanchal University, Nepal.

Worked as a part time teacher in the biochemistry department teaching biochemistry to the bachelor level students of Agriculture Science. Chief tasks included taking regular lectures, teaching students laboratory procedures and examining them.

5. May 2001 to April 2004

Science teacher for Junior High School at Don Bosco Higher Secondary School, Kathmandu, Nepal.

Worked as a full-time teacher teaching different subjects like Science, Mathematics, Health and Population Studies. Responsibilities included:

- taking daily classes, making students familiar to the science laboratory procedures, conducting internal examinations and preparing students for the board examinations,
- overall responsibility for a certain group of students as a grade-teacher, counsellor and guide, and
- helping the students of all levels as a house-teacher to prepare for different extra-curricular activities like games, elocution, and essay-writing.

6. August 1997 to August 1998

Secondary School Science Teacher at Maitidevi Boarding High School, Kathmandu, Nepal.

Worked as a full-time teacher teaching different subjects like Science, Health and Population Studies. Responsibilities included:

- taking daily classes, conducting internal examinations and preparing students for the board examinations, and
- overall responsibility of a certain group of students as a grade teacher, counsellor and guide.

INVOLVEMENT IN RESEARCH

1. Chief Investigator in the research study entitled **A study of the microbial quality of milk available in Kathmandu Valley** This study was jointly carried out by Integrated Bioscientific Research Group (BIOINT) and Himalayan College for Agricultural Science and Technology (HICAST). This study showed that the pasteurized and packaged milk available in Kathmandu was contaminated with various pathogenic bacteria and strongly highlighted the need for quality control in food processing and packaging and prevention of post-pasteurization contamination.

2. Chief Investigator in the research study entitled **Bacteriology of Ear Discharges**. This study was done in order to fulfil the Master's Degree dissertation requirement. It involved patients presenting to the Ear, Nose and Throat Department of Bir Hospital with an ear discharge. This study identified the pathogens responsible for ear infections and determined their antibiotic sensitivity patterns.

3. Supervision of the research works done by Masters and Bachelors students (Microbiology) for the project and dissertation works.

TRAININGS ATTENDED

- Teacher’s Training on Drug Preventive Education at Schools conducted by Drug Abuse Demand Reduction Project, Home Ministry; January 6-10, 2004.
- Intensive Training Workshop on Health Research Methodology conducted by Nepal Health Research Council; August 23-27, 2004.
- Training of Trainers on Drug Abuse Prevention Education conducted by Drug Abuse Demand Reduction Project, Home Ministry; January 14-18, 2005.
- Workshop on presentation and meeting skills conducted by the American Language Center; April, 2005.
- Certified scrum master class; conducted by Winnow Management; Sep 19-20, 2011; Member: 000153791; Valid till Sep 20, 2013.
- Introduction to CMMI for Development v1.3; earned 2.5 Continuing Education Units (CEUs); October 2011.
- “Unleashing Nepal – Unleashing You” thinkshop conducted by Beed Leadership Center; Aug 9-10, 2012.
- Skills Development Course (Communication skills, Telephone skills & Personality Development) conducted by English for All – Kathmandu; April 8-11, 2013.
- Training on US Healthcare, HIPAA regulations, CMMI process areas and Management related trainings by external and internal trainers during the tenure at Verisk Information Technologies and Deerwalk Services Pvt. Ltd.

PRESENTATIONS

- A scientific paper entitled “Microbiological Study of Ear Discharge” at the National Conference of Nepal Association for Medical Laboratory Sciences (NAMLS); March 17, 2001.
- A scientific paper entitled “Study of the microbial quality of milk available in Kathmandu Valley” at the Fourth National Conference on Science and Technology; organized by Nepal Academy of Science and Technology; March 23-26, 2004.
- Poster Presentation entitled “The threat of Ebola Virus” at the 5th National Conference organized by Nepalese Society of Microbiology (NESOM), Nov 15-16, 2014

- Poster Presentation entitled “In vitro biocontrol efficacy of Trichoderma species against soil borne fungal pathogens Sclerotium rolfsii and Sclerotinia sclerotiorum” at the One-Day Symposium on “Microbiology & One Health Concept in Nepal”, Sep 3, 2016
- Oral and Poster Presentations entitled “In vitro biocontrol efficacy of Trichoderma species against different soil borne fungal pathogens” at the International Conference on Emerging Trends in Biological, Chemical and Physical Sciences (ICET-2016), Dec 9-11, 21016

PUBLICATIONS

- *Arjyal C*, Adhikari S, Shrestha J. Bacteriological study of ear discharge in Bir Hospital. **J Nepal Med Assoc.** 2002; 41(142):318-22.
- *Arjyal C*, Dahal BN, Khadka B. Microbial quality of milk available in Kathmandu Valley. **J Nepal Med Assoc.** 2004; 43 (153): 137-40.