

G.H.R. ERANGA KARUNARATNE
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ACADEMIC RECORDS

UNIVERSITY EDUCATION

- **B.Sc. (Special Degree in Chemistry, Second class upper division pass),** 2004-2008, University of Colombo, Sri Lanka.
Overall GPA : **3.26/4**
- Major subject : Chemistry
(The Program included Molecular Biology, Biochemistry, Recombinant DNA Technology, Pharmaceutical Chemistry, Advanced Practical Chemistry, Laboratory and Quality Management as well)
- Minor subjects (in 1st and 2nd years): Biochemistry, Botany, Computer Science
(Microbial Life, Principles of Microbiology, Cell Biology also have done under Botany stream)

SCHOOL EDUCATION

- School Attended : Visakha Vidyalaya, Colombo 05, Sri Lanka.(1993-2002)
- **G. C. E. (A/L) – April 2003**

Biology	A
Chemistry	B
Physics	B
Z-score	1.9694
- **G. C. E. (O/L) – December 1998**
Distinctions for all the subjects (8 D's)

RESEARCH EXPERIENCE

Postgraduate Research: (Currently engaged)

- **Research Title: Molecular characterization of katG, inhA and ahpC genes of isoniazid resistant *Mycobacterium tuberculosis* isolates**
Scope: Early detection of MDR TB strains is essential for the implementation of a successful TB control strategies as early detection can lead to infection control and treatment which curtails spread. This is a research to screen mutations in katG,

inhA and ahpC genes which are responsible for the INAH resistance in Mycobacterium tuberculosis isolates to develop an efficient method to detect MDR tuberculosis.

Supervisor: Prof.Jennifer Perera, Dean and Chair Professor of Microbiology, Faculty of Medicine, University of Colombo (jennifer_perera55@yahoo.com)

Co-supervisor: Prof.Sulochana Wijesundera, Professor, Department of Molecular Biology and Biochemistry, Faculty of Medicine, University of Colombo (sulochanawijesundera@gmail.com)

Undergraduate Research:

- **Research Title: Identification of microorganisms to use in bioremediation.**

Scope: Project to analyze industrial effluent samples to isolate microorganisms which can tolerate different metal ions and find out the genetic elements of those microorganisms which are responsible for the metal ion tolerance activity and use these genetic elements to produce genetically modified microorganism to use in bioremediation.

Work carried out during the Undergraduate Research Project:

- ✓ The effluents were biologically analyzed for the microorganisms that can be survived in those extreme conditions
- ✓ The genetic elements (plasmids) of those microorganisms were sought out using standard procedures.
- ✓ The microorganisms were preliminary classified using gram staining procedure and microscopic observations.
- ✓ The effluents were screened for the possible metal contaminants using Atomic Absorption Spectrometer.
- ✓ Then the metal ion tolerance limits of the microorganisms were determined. Finally, metal ion remediation efficiency of the microorganisms was confirmed.
- ✓ Nine bacterial strains which can be survived in the presence of metal ions were successfully identified from the effluents and all of them contained plasmids.
- ✓ An efficient bioremediation ability of G and P strains for Cu²⁺ and Zn²⁺ ions were successfully determined.

Supervisor:

Dr. C.D. Wijayarathna, Department of Chemistry, Faculty of Science, University of Colombo, Colombo 3, Sri Lanka.

Grade Obtained: A+

PUBLICATIONS AND PRESENTATIONS

- ✓ Karunaratne E.R., Wijesundera W.S.S., Perera A.J., Vidanagama D., Adikaram C.P., 2015, Novel point mutation in the promoter region of the inhA gene causing isoniazid (INAH) resistance in clinical Mycobacterium tuberculosis (MTb) isolates in Sri Lanka, Annual Research symposium University of Colombo, 2015 (oral presentation-second place)
- ✓ Karunaratne R.E., Wijesundera W.S.S., Perera A.J., Vidanagama D., Adikaram C.P., 2015, Mutations in the katG gene of isoniazid (INAH) resistant Mycobacterium tuberculosis (MTb) isolates in Sri Lanka, Annual sessions and Symposium, Sri Lanka College of Pulmonologists, 2015 (poster presentation-first place)
- ✓ Karunaratne E., Perera J., Wijesundera S., Vidanagama D., Adikaram C., Gamage S., 2015, Correlation between minimum inhibitory concentration (MIC) of isoniazid (INAH) and the katG gene mutations of Mycobacterium tuberculosis (MTb) isolates, 128th anniversary international medical Congress-Sri Lanka Medical Association (oral presentation)
- ✓ Karunaratne G.H.R.E., Wijayarathna C.D., 2008, Isolation of microorganisms from an effluent sample having tolerance to different metal ions, *SLAAS abstracts*.
- ✓ Karunaratne G.H.R.E., Wijayarathna C.D., 2008, Identification of microorganisms to use in bioremediation, *Books of Abstract 2007/2008*
- ✓ Successfully conducted a seminar presentation and literature survey on 'Second Generation Ruthenium olefin metathesis catalysts' as a requirement of the special degree program to the academic staff of Department of Chemistry.

PROFESSIONAL TRAINING

Worked as a Trainee (as required by Chemistry Special Degree Program) in the Quality Assurance Department of GlaxoSmithKline_Ltd - Sri Lanka and thorough with the chemical and physical testing and validating techniques.

- Prior to the manufacturing process, raw materials and Packing materials of pharmaceutical products were tested using standard procedures.
- Prior to the distribution to the market final pharmaceutical products were tested.
- Experience in operation of the laboratory instruments such as,
 - Kjeidhal titrator
 - Drug dissolution apparatus
 - Drug disintegration time determining apparatus
 - UV/Vis Spectrophotometer
 - HPLC

WORK EXPERIENCES

- **Lecturer in Chemistry and Biochemistry** in the Department of Biochemistry & Chemistry, Faculty of Medicine, Nizhny Novgorod State Medical Academy (NNSMA) - Sri Lanka Campus, SAITM, Millennium Drive, Malabe, Sri Lanka (**From 01st September 2009 to July 2013, July 2013 up to date on study leave for PhD**).
 - ✓ Coordinating and conducting General Chemistry and Bioorganic Chemistry practical classes
 - ✓ Delivering detailed introduction for each practical class, preparation of questions for assessments, marking of assessments and practical reports.
 - ✓ Conducting Biochemistry practical classes
 - ✓ Person in charge of General and Bioorganic Chemistry Laboratories
 - ✓ Preparing necessary solutions and mixtures for practical sessions, Checking out all the experiments before commencing the laboratory sessions, maintaining all the inventories (Chemicals, Glass wares, Instruments and Furniture), preparation of monthly updates of students depending on their performance in lectures and practical classes.
 - ✓ Subject coordinator of the Department of Biochemistry and Chemistry for the first year students
- **Teaching Assistant** in the Department of Chemistry, Faculty of Science, University of Colombo, Colombo, Sri Lanka (**From 16th September 2008 to 31st August 2009**).
 - ✓ Conducted practical sessions in Biochemistry for 1st year Molecular Biology students.(Under supervision of Dr. C.D.Wijayarathna)
 - ✓ Conducted practical sessions in Inorganic Chemistry for 2nd year students.(Under supervision of Dr. W. Rohini M. de Silva)
 - ✓ Conducted practical sessions in Analytical Chemistry for 3rd year students.(Under supervision of Dr. S.A. Fernando)
 - ✓ Conducted practical sessions in Biostatistics for 2nd year Molecular Biology students.(Under supervision of Dr.C.Hettiarachchi and Department of Botany)
 - ✓ Conducted practical sessions in Botany for 1st year Molecular Biology students.(Under supervision of Dr.C.Hettiarachchi and Department of Botany)
 - ✓ Conducted tutorials **for 2nd year students** in following subjects.
 - Organic Chemistry , Spectroscopy**
 - Electrochemistry , Analytical Chemistry**
 - ✓ Examinations invigilation.

COMPUTER LITERACY AND OTHER TECHNICAL SKILLS

- Certificate in course in Nanotechnology at SLINTEC-successfully completed
- Certificate course in Computer Studies at NIBM - Successfully completed
- Fluent in Chemical Drawing software such as **CHEMSKETCH**
- Experience in MINITAB

EXTRA CURRICULAR ACTIVITIES

WORKSHOPS:

- Participated workshops organized by HETC, Faculty of Medicine, University of Colombo for the postgraduate trainees on research methods, writing publication, Statistics, etc..
- Participated the SAIMT Staff Development Program which is organized by the SAIMT Internal Quality Assurance Committee under the supervision of UGC.
- Participated in the workshops organized by the SAIMT Internal Quality Assurance Committee.
 - Leadership & Time Management By Dr. Jayalath Edirisinghe, December 16, 2011
 - Student Counseling By Prof. D A Nimal Dharmasena February 23, 2012
 - Sexual Harassment at workplace By Dr. Ananda Samarasekera October 02, 2012
 - Career Development By Dr. B. M. K. Perera February 28, 2013
- Participated in the workshop on Higher Education Research - Scholarship of Teaching and Learning (SoTL) on 20th February 2013 organized by the SAIMT Medical Education Unit.

MEMBERSHIPS:

- Student member, Sri Lanka Association for the Advancement of Science (SLAAS), 2008/2009
- Active member of the Rotaract Club of University of Colombo (2004-2006)
- Active member of Chemical Society (2004-2008) and Botanical Society (2004-2006) of University of Colombo.

OTHER:

- Vice secretary of Junior Commerce Society of Visakha Vidyalaya.
- Committee member of the Sinhala Literary Association, astronomical Society and UNO (United Nations Organization) of Visakha Vidyalaya.
- Chief Organizer of "INDU DORA ABIYASA-Kala Ulela-2000" of Visakha Vidyalaya.
- Member of the organizing committee of Education Exhibition at Visakha Vidyalaya (1997)
- Took part in "International competition for schools science" which was conducted by the University of New South Wales in 1999.

SPECIAL ACHIEVEMENTS

- Took part in Australian National Chemistry Quiz and gained High Distinction in 1998.
- Won subject prize for Sinhala Language and Literature at the Ordinary Level examination.
- Won class prize and subject prizes at the annual prize giving of Visakha Vidyalaya in 1993, 1994, 1996 and 1998

PERSONAL PROFILE

Name in Full : Galbokka Hewage Roshanthi Eranga Karunaratne
Date of Birth : 28 July 1982
Gender : Female
Religion : Buddhist
Nationality : Sri Lankan

NON-RELATED REFEREES

Prof. Jennifer Perera
Dean and Chair Professor of Microbiology
Faculty of Medicine
University of Colombo
P O Box 271, Colombo
Telephone : 011 2698449
Mobile : 077 6096002
Email : jennifer_perera55@yahoo.com

Prof. W.S.S. Wijesundera
Department of Biochemistry and Molecular
Biology
Faculty of Medicine
University of Colombo
Mobile: 0714406274
Email: sulochanawijesundera@gmail.com

I hereby certified that the above details are true and correct to the best of my knowledge.

G.H.R. Eranga Karunaratne

Date: 7th June 2016