

## CURRICULUM VITAE



**NAME** : Dr. L. Dhanurekha

**DATE & PLACE OF BIRTH** : 10.10.1986, Chennai, Tamil Nadu, India.

**DESIGNATION** : Senior Scientist  
SNSC Clinical Microbiology Laboratory  
Molecular Diagnostics Laboratory  
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### **EDUCATIONAL QUALIFICATIONS:**

S No	Institution	Degree and Awarded by	Year
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1	Medical Research Foundation, Sankara Nethralaya, Chennai, India.	Ph.D degree , Birla Institute of Technology and Science, Pilani	2015
2	Medical Research Foundation, Sankara Nethralaya, Chennai, India	Master of Science in Medical Laboratory Technology Birla Institute of Technology and Science, Pilani	2010
3	Valliammal college for women, India	B.Sc., Microbiology University of Madras	2004

**POSTS HELD :**

<b>S No</b>	<b>Position</b>	<b>Institution</b>	<b>Year</b>
1	Senior Scientist	SNSC Clinical Microbiology Laboratory, Molecular Diagnostics Laboratory Sankara Nethralaya, Medical Research Foundation	11 <sup>th</sup> July 2022 till date
2	Senior Scientist/Quality manager, NABL authorized signatory	Sankara Nethralaya Referral Laboratory, Medical Research Foundation, Chennai, India	10 <sup>th</sup> August 2019- 12 <sup>th</sup> March 2022
3	Senior Scientist/Deputy technical manager, NABL	Sankara Nethralaya Referral Laboratory, Medical Research Foundation, Chennai, India	7 <sup>th</sup> November 2018-9 <sup>th</sup> August 2019
4	Senior Scientist	Sankara Nethralaya Referral Laboratory, Medical Research Foundation, Chennai, India	21 <sup>st</sup> August 2015- 6 <sup>th</sup> November 2018
5	Junior scientist	L&T Microbiology Research Centre, Vision Research Foundation, Chennai, India.	April 2014-20 <sup>th</sup> August 2015
6	Senior Research Fellow	L&T Microbiology Research Centre, Vision Research Foundation, Chennai, India.	July 2012- March 2014
6	Junior Research Fellow	L&T Microbiology Research Centre, Vision Research Foundation, Chennai, India.	June 2010-June 2012

**AWARDS AND HONOURS:**

S.No	Name of Award	Awarding Agency	Year
1.	Bangalore Genei Pvt. Ltd. Endowment award for the Best performance in Clinical Genetics	Sankara Nethralaya	2010
2.	The Young women scientist award	Smt. Sreerangamma N. Narayan and Smt. Radhamani N. Anantha	2013

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### TEACHING EXPERIENCE :

- Theory and practical classes on General Microbiology, Clinical Immunology, Medical Microbiology and Diagnostic Microbiology for Post Graduates - MSMLT (Master of Science in Medical Laboratory Technology) students, Under Graduates (Elite School of Optometry, Ophthalmic assistants, BSMLT students).
- Mentored 10 students from various colleges for 3-4 months short term research projects and 2 students from BITS, Pilani for Practice School I
- Trained more than 30 candidates (National and International) in Molecular Microbiology Techniques (PCR, Real Time PCR, DNA sequencing, etc) in the summer training programme organized by Vidyasagar Institute of Bio-Medical Sciences (VIBS), a unit of Medical Research Foundation.
- Involved in conducting and training Antimicrobial surveillance program conducted by WHO-WHONET 2011& 2013 at L&T Microbiology research center, Vision Research Foundation.

### RESEARCH PROJECTS:

#### Principal Investigator- 2 projects

##### 1. DST-SERB- Core research Grant (2021-2024):

Project title: Proteomic approach to understand the pathophysiology and *invitro* evaluation of Macrolides and Oxazolidinones against *Pythium insidiosum*

##### 2. DST-SERB- Core research Grant (2023-2026):

Project title: Genotypic analysis and invitro evaluation of antimicrobials against *Acanthamoeba keratitis*

## **Co-Investigator -1(Tiara Haemophilia and Cancer Fund)**

Project title: Respiratory Viral Infections in Children with Febrile Neutropenia in Haemato-Oncology Unit.

### **DIAGNOSTIC MICROBIOLOGY EXPERIENCE - 12 years:**

- **Microbiology and Serology:** Authorized signatory, Both supervision and reporting of clinical specimens for routine microbiological investigations: Direct smears (Grams stain, KOH Calcofluor stain, Acid fast stain, Giemsa stain), Aerobic culture and Anaerobic culture identification by biochemicals and drug susceptibility testing- both Manual and Vitek 2 compact system, Fungal culture, Serological investigations
- **Molecular Diagnostics:** Authorized signatory, Takes care of overall department activities.

### **NABL EXPERIENCE:**

1. 21<sup>st</sup> June 2012 to 20<sup>th</sup> August 2015 - worked as Junior scientist in NABL accredited Laboratory (L&T Microbiology Research centre, Sankara Nethralaya). Acquired experience in updating the NABL related records
2. 7<sup>th</sup> November 2018 to 9<sup>th</sup> August 2019- Appointed as Deputy Technical manager at Sankara Nethralaya Referral Laboratory. Creation and maintenance of NABL related documents and records related to both Management and technical requirement and faced 3 internal audits
3. 10<sup>th</sup> August 2019 – 12<sup>th</sup> March 2022- appointed as Quality manager at Sankara Nethralaya Referral Laboratory- successfully undergone 2 external NABL audit.
  - Experienced on establishment, implementation and maintenance of Quality management system
  - Reporting to Laboratory Management
  - Ensuring the promotion of awareness of user's needs and requirements throughout the laboratory organization

### **TRAINING ATTENDED:**

1. Training attended during the period of 15.4.2013 to 26.4.2013 on Culture and Drug susceptibility testing of *Mycobacterium tuberculosis* in Revised National Tuberculosis control

programme organized by Department of Bacteriology, National Institute for Research in tuberculosis

2. Successfully completed training program in Quality Management system and Internal audit in medical Labs as per ISO 15189:2012 held at Neuberg erlich Laboratory from 15<sup>th</sup> November to 18<sup>th</sup> November 2018.

3. virtual workshop on Laboratory techniques in molecular techniques and clinical virology organized by Sri Ramachandra Institute of higher education- ACCENDO- 2020 from 26.8.20 to 29.8.20.

4. Online CME on “Quality Conscious Molecular Testing” conducted by Department of Microbiology, Kovai medical centre and Research Institute and Academy of Clinical Microbiologist on 3rd September 2022.

5. Workshop on “Immunofluorescence technique in detection of autoantibodies” organized by Apollo Hospital, Bhubaneswar as a part of Microcon-22.

6. Hands on workshop on Digital PCR organised by Adyar Cancer Institute in collaboration with Qiagen from 4th to 5th January 2023.

7. Successfully completed International Lead Auditors Certificate Program and Laboratory Management System Requirements: 2 days Transition Certificate Course as per ISO15189:2022 Standard, Conducted by Foundation for Quality India (FQI) on 16.08.2023 and 17.08.2023

#### **LIST OF PUBLICATIONS.**

1. **Dhanurekha Lakshmipathy**, Anand Appakudal Ramaswamy, Hema Raja Pushpam Maharajan , Revathy Menon Anand, Aishwariya Thangam, Ranjith Kumar Santharaj. Molecular detection and identification of fungal pathogens infections occurring in COVID-19 recovered patients. *Virus disease*. 2023 Feb 4; 1-4.
2. Janani Madhuravasal Krishnan, Rama Rajagopal, **Dhanurekha Lakshmipathy**, Shweta Agarwal, Anand AR, Lily Therese, Aishwarya Thangam, Hajib Narahari Rao Madhavan. Role of polymerase chain reaction–based viral detection in pterygia. *Indian J Ophthalmol*. 2023 Feb; 71(2):458-463.
3. Mani Vimalin Jeyalatha, Umashankar Vetrivel, Rajagopalan Harinee, **Dhanurekha Lakshmipathy**, Suganeswari Ganesan, Jyotirmay Biswas, Appakkudal R. Anand. Draft Genome Sequence of Mycobacterium tuberculosis Strain SNMICRO 2047-20,

- Isolated from Intraocular Infection. *Microbiology Resource Announcements*.  
10.1128/mra.00791-22
4. Mohan Sashwanthi, **Dhanurekha L**, Janani, M K, Biswas Jyotirmay. Correlation of quantitative polymerase chain reaction with clinical characteristics of patients with viral retinitis. *Indian Journal of Ophthalmology* 70(6):p 2090-2093, June 2022. | DOI: 10.4103/ijo.IJO\_3000\_21.
  5. Richa Dhiman , Meena Lakshmipathy, **Dhanurekha Lakshmipathy**, Therese K.Lily. Clinico-microbiological Profile of Nontuberculous Mycobacterial Keratitis. *J Ophthalmic Vis Res* 2022; 17 (2): 160–169
  6. Richa Dhaman, Shweta Agarwal, Appakkudal R. Anand, **Dhanurekha Lakshmipathy**. Bhaskar Srinivasan, Geetha Iyer. Coexistence of Fungal Keratitis in Bilateral Sequential Microsporidial Keratitis – A Rare Case Presentation. *Ocular Immunology and Inflammation*. 2021; 1-3. <https://doi.org/10.1080/09273948.2021.1969412>.
  7. Arkaprava Pradhan, **Dhanu Rekha Lakshmipathy**, Jyotirmay Biswas. Polymerase Chain Reaction in Ocular and Adnexal Inflammation: Our Experience with Review of Literature. *TNOA J Ophthalmic Sci Res* 2021; 59:331-7.
  8. **Lakshmipathy Dhanurekha**, Madhuravasal Krishnan Janani, Hajib Narahari Rao Madhavan. Genotypic identification of Non Tuberculous Mycobacteria from culture proven isolates. A 7 years retrospective study from a Referral laboratory, Chennai. *International Journal of Medical Science and Current Research*. 2021;4(3):238-242
  9. Madhuravasal Krishnan Janani , **Dhanurekha L** , Sudhir R R , Veenashree P M , Revathy M , Kathiravan V, Santhanalakshmi Kamalakannan and Hajib Narahari Rao Madhavan. Molecular epidemiology of circulating Human Adenovirus type in acute conjunctivitis epidemic cases in Chennai, India -First report in 2019. *International Journal of Medical Science and Current Research*. 2021; 4 (2):1-3
  10. Ram Rammohan, Madhavan Hajib Naraharirao, Saravanan Veerappan, Prabhu Vijayaraghavan, Revathi Rajaraman, George J. Manayath, Palmeera Dsouza, Shanthi Radhakrishnan, Narendran Venkatapathy, **Dhanurekha Lakshmipathy**, Janani Madhuravasal Krishnan, and Anita Raghavan. Cluster Postoperative Endophthalmitis Caused by Acanthamoeba T10 Genotype—A First Report. *Cornea*. 2021; 40 ( 2 ): 232-241

11. Kulandai Lily Therese, Meena Lakshmipathy , **Dhanurekha Lakshmipathy**. First report of *Mortierella wolfii* causing fungal keratitis from a tertiary eye hospital in India . Indian Journal of Ophthalmology. 2020;68(10):2272- 2274.
12. M.K. Janani, K. Santhanalakshmi, **L. Dhanurekha**, B. Aarthy, H.N. Madhavan. Genotypic detection of vancomycin resistant *Neisseria polysaccharae* in acute febrile illness – First report from South India. BMC Infectious Diseases 2020, 20(Suppl 1):ISSHID.
13. Anita Raghavan, Saravanan Veerappan Viji Rangarajan, Revathi Rajaraman, Romit Salian, Janani MK, **Dhanurekha L**, Ram Ganesh VR, Narendran Venkatapathy, and Ram Rammohan. Fulminant *Acanthamoeba* endophthalmitis after cataract surgery- Case report. Cornea. 2020; 39(8):1055-1058
14. Lily Therese Kulandai, **Dhanurekha Lakshmipathy**, and Janaki Sargunam. Novel Duplex Polymerase Chain Reaction for the Rapid Detection of *Pythium insidiosum* Directly From Corneal Specimens of Patients With Ocular Pythiosis. Cornea. 2020; 39(6):775-778.
15. Niveditha Narayanan, D Vaidehi, **L Dhanurekha**, K Lily Therese, Rama Rajagopal, Radhika Natarajan, Meena Lakshmipathy. Unusual ulcerative keratitis caused by *Prototheca wickerhamii* in a diabetic patient. *Indian Journal of Ophthalmology*. 2018;66:311-314.
16. **Dhanurekha L**, Lily Therese K., Madhavan H.N. GeneXpert System for Rapid Detection of *Mycobacterium tuberculosis* and Multidrug-Resistant Tuberculosis Directly from Sputum Specimens, Sci J Med & Vis Res Foun 2016;XXXIV:35.
17. Murugan N., **Dhanurekha L.**, Malathi J., Lily Therese K., Madhavan H.N. Whole Genome Sequencing of MDR Strains of *Pseudomonas aeruginosa* and *Mycobacterium tuberculosis* Using the “Ion Torrent Personal Genome Machine”, Sci J Med & Vis Res Foun 2016;XXXIV:45–47.
18. **Dhanurekha Lakshmipathy**, Lily Therese Kulandai , Gayathri Ramasubban , Madhavan Hajib Narahari Rao , Sridhar Rathinam, Meenakshi Narasimhan. Nested Reverse transcriptase PCRs targeting mRNA of *icl2*, *hspx* and *rRNAPI* genes to detect viable *M. tuberculosis* directly from clinical specimens. *Int J Mycobacteriol* 2015 Dec 1;4(4):312-7.

19. Aditya Verma, Jyotirmay Biswas, **L. Dhanurekha**, R. Gayathri & K. Lily Therese. Detection of Mycobacterium tuberculosis with nested polymerase chain reaction analysis in enucleated eye ball in Eales' Disease. *Int Ophthalmol*. 2015; DOI 10.1007/s10792-015-0144-9.
20. Gayathri R, Lily Therese K, **Dhanurekha L**, Sridhar R, Meenakshi N, Madhavan HN. A Pilot Study on the Detection of Multidrug Resistant Tuberculosis in Hospital Based Population of Chennai, India. *J Med Microb Diagn* 2014, 3:4: 1000153.
21. Gayathri Ramasubban, Kulandai Lily Therese , **Dhanurekha Lakshmipathy**, R. Sridhar, N. Meenakshi, Hajib N. Madhavan. Detection of novel and reported mutations in the *rpoB*, *katG* and *inhA* genes in multidrug-resistant tuberculosis isolates: A hospital-based study. *Journal of Global antimicrobial resistance*. doi:10.1016/j.jgar.2014.10.002
22. Lily Therese Irudayam, Dhanurekha Lakshmipathy, Gayathri Ramasubban, Umashankar Vetrivel, H. N. Madhavan, R. Sridhar, N. Meenakshi. Whole-Genome Sequencing and Mutation Analysis of Two Extensively Drug-Resistant Sputum Isolates of *Mycobacterium tuberculosis* (VRFCWCF XDRTB 232 and VRFCWCF XDRTB 1028) from Chennai, India. *Genome announc*. 2014; 2(6): e01173-14.
23. Gayathri Ramasubban, **Dhanurekha Lakshmipathy**, Umashankar Vetrivel, Lily Therese Irudayam, H. N. Madhavan, R. Sridhar, N. Meenakshi. Draft Genome Sequence of Streptomycin resistant resistant *Mycobacterium tuberculosis* CWCFVRF MRTB 180 strain from Chennai. *Genome announc* .2014;2(5): e00919-14.
24. **Dhanurekha Lakshmipathy**, Umashankar Vetrivel, Lily Therese Irudayam, Gayathri Ramasubban, H. N. Madhavan, R. Sridhar, N. Meenakshi. Draft Genome Sequence of Polyresistant resistant sputum isolate of *Mycobacterium tuberculosis* CWCFVRF PRTB 19 strain from Chennai, India closely clustering with East African India 5 Genogroup.- Genome announcement. 2014;2 (4) e00702-14.
25. **Dhanurekha Lakshmipathy**, Umashankar Vetrivel, Lily Therese Irudayam, Gayathri Ramasubban, H. N. Madhavan, R. Sridhar, N. Meenakshi. Draft Genome Sequence of Multidrug-Resistant *Mycobacterium tuberculosis* Strain CWCFVRF MDRTB 670, Isolated from the Sputum of a Patient from Chennai, India, with Clinically Suspected Tuberculosis. *Genome announc*. 2014; 2(3): e00475-14.



26. Lily Therese kulandai, **Dhanurekha Lakshmipathy**, Gayathri Ramasubban, and Madhavan Hajib Narahari Rao. "First report on isolation of *Mycobacterium massiliense* from corneal biopsy in India". JMM Case Reports. 2014; doi: 10.1099:1-3.
27. **Dhanurekha Lakshmipathy**, Gayathri Ramasubban, Lily Therese, Umashankar Vetrivel, Muthukumaran Sivashanmugam, Sunitha Rajendiran, Sridhar R, Madhavan HN, and Meenakshi N. In silico Analysis of Novel Mutation ala102pro Targeting pncA Gene of M. Tuberculosis .*J Comput Sci Syst Biol* 2013; 6: 083-087.
28. **Dhanurekha Lakshmipathy**, Gayathri Ramasubban, Lily Therese Kulandai, R.Sridhar, Madhavan Hajib Narahari, N.Meenakshi. Extensively Drug Resistant Tuberculosis (XDR-TB) by Phenotypic Drug Susceptibility Using BACTEC Micro MGIT Culture System A Pilot study in Hospital Based Population in Chennai, India. *Int.J.Curr.Microbiol.App.Sci* .2014; 3(5): 129-135.
29. Therese KL, Gayathri R, **Dhanurekha L**, Sridhar R, Meenakshi N, Madhavan, HN " Diagnostic appraisal of simultaneous application of two nested PCRs targeting MPB64 gene and IS6110 region for rapid detection of M. tuberculosis genome in culture proven clinical specimens" *Indian Journal of Medical Microbiology*, (2013) 31(4), 366-369.
30. Therese KL, Gayathri R, **Dhanurekha L**, Sridhar R, Meenakshi N, Madhavan HN, Edwin Manoj S, Kamala Vinayagam A. Detection of viable *Mycobacterium tuberculosis* directly from sputum specimens of suspected tuberculosis patients and drug resistance pattern by phenotypic methods using BACTEC MicroMGIT culture system - a pilot study in Chennai. *Indian Journal of Medical Research*. 2012. 135: 778-782.