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Academic Qualification

- Doctor of Philosophy in Faculty of Bio-Medical Science, Field - Virology & Viral Diagnosis, work carried out in Department of Virology, King Institute of Preventive Medicine under Tamil Nadu Dr.M.G.R.Medical University, Chennai - September , 2003 – Highly commended.
- M.Sc Bio-Chemistry, J.J College of Arts and Science, Bharadhidasan University, Trichy (July-1997) – Secured First class (69%).
- B.Sc Chemistry , T.U.K. Arts College, Baradhidasan University, Trichy (July-1994) – secured First class (67%).

Title of Research work for Ph.D

- Seroepidemology of Dengue in Tamil Nadu and Immunological And Molecular approach for rapid diagnosis.

Fellowship Awarded

1. **Junior Research fellowship** from Lady Tata Memorial Trust from (1999 – 2001).
   Title of the project: Development and standardization of Dipstick ELISA for rapid Diagnosis of Dengue infection.

2. **Senior Research fellowship** from Indian Council of Medical Research from (2001 to 2003 December).
   Title of the project: Rapid detection and identification of Dengue virus by molecular methods.

Working Experience:

- From June 1998 to April 1999 – Project Scientist (National Polio Surveillance Project) in the National Polio Laboratory, Department of Virology, King Institute of Preventive Medicine. Guindy.

  The Nature of Job Includes virus Isolation, Typing of Virus isolates, Tissue culture Maintenance, diagnosis of Entero viral infections by Neutralization tests (NT), ELISA, RT-PCR and Molecular typing of Poliovirus by Intra typic differentiation of viruses (ITD). Other routine works included vaccine Potency testing for Polio and Measles. Serological diagnosis of Dengue, JE, Measles, HSV, Influenza and Coxackie B virus.

- From December 2003 to December 2004 – Project Scientist, Arboviral Diagnsotic centre, Department of Virology, King Institute of preventive medicine. Guindy, Chennai-32.

  The Nature of Job Includes virus Isolation, Typing of Virus isolates, Maintenance & preservation of mammalian Tissue culture & Mosquito cell culture (C6/36) and

Production of Dengue, JE & WN antigen. Animal handling (Goose, Mice) for antigen & virus stock preparation. Evaluation of molecular diagnostic tool for JE & Dengue.

- From January 2005 to May 2005 – Project Scientist, (Hindustan Lever Limited - To evaluate the efficacy of Water filter system For virus, Bacteria and oocysts (Lever - Pure It), Department of Virology, King Institute of preventive medicine. Guindy, Chennai-32.
- From June 2005 to till date – Research officer,International AIDS Vaccine Initiative, Tuberculosis Research Centre, Chet put , Chennai-31.
- Apart from working as Molecular Virologist, I have worked and designed various investigations on
  a) Screening in – vitro antiviral properties form marine plants and herbs against to HSVI& II and Coxackie B virus I.
  b) Standardization of indirect and IgM Capture ELISA for Dengue, JE and Coxackie B virus.

Member of Professional Bodies

Member of Indian Association of Medical Microbiologist – LM 1438/ 04

Publications

1. **Elevation of liver-enzyme and possible use of ceruloplasmin as marker in alcoholic liver disease. M.jayashri,** Kaliselvi, Harish, Malarvili and Mahesh. - Journal of "Trends in life sciences". Vol: 19;No: 122,2004.

2. **Comparative evaluation of DNA & RNA extraction from clinical samples rapid nucleic acid extraction and classical extraction methods.** Harish CC, Saffiuahla. A, Shenbagaraman R, **Jayashri. M** and Kalifethulah Sheriff.A
   Communicated to journal of "Trends in Life Sciences" – Vol 19, 2004.

3. **Antiviral activity of ocimum santum, Sphraenthius indicus, Tridex Procu mben and Helanthus annus against Coxsackie B and Hep –1 &2 Viruses** – Nalini Ramamurty, Harish C C, Illiyas M.D, **Jayashri M** and Gunasekaran P
   Communicated to Journal of Planta Medica – 2004.

Technical Expertise:

1. Well versed in tissue culture methods, handled 7 different types of cell lines.

2. Basic virological techniques like virus isolation from various clinical samples, micro neutralization assay, Haemagglutination, haemagglutination Inhibition, animal handling (including birds), trained in good laboratory procedures and laboratory containment's BSL II, IIIA, IIIC.

3. Designing and standardizing molecular methods such as RFLP, RT-PCR, RAPD. PCR and Probe Hybridization for the detection of virus and other infectious agents. Successfully worked on Polio, Coxsackie's group B viruses, ECHO, Rubella, Measles, HSV, Influenza, Dengue and JE.

4. Designed and standardized immunological tests like immuno fluorescence assay, ELISA, RT-PCR for rapid specific detection's of infectious agents.

5. Standardized working protocols to conduct screening of antiviral assays from herbs, indigenous preparations. Worked in co ordination with cancer research in designing and conducting invitro anti cancer screening and other bioactivity.

6. To conduct Surveillance studies for the prevalence of infectious agents among study population.

7. Preparation and evaluation of antigen for JE, Dengue (1 to 4) and WN viruses.

8. Labeling of antibodies with biotin, FITC for ELISA and Blotting.

9. Basic Bio chemical assays, Enzymological activity assay and Microbiological Techniques involving in isolation and identification of bacterial and viral pathogens.

Project Assisted:

Worked on 7 Research projects in various fields - Sero epidemiological, virological and immunological studies.

Fields of Interest:

Molecular and diagnostic virology, Vaccine / antiviral s research, molecular characterization by sequencing. Never said no to bio-chemical, immunological and anticancer studies if they are promising to cater my interest.

Conference and Training attended

1. Rapid identification of Dengue Virus isolates by using monoclonal antibodies in an indirect immunofluroscence assay and RNA finger printing method - By Dr. Nalini Ramamurty, M.Jayashri presented in National Conference on Recent Trends in Biotechnology & Microbial Research May 20-21, 1998 at J.J.College of Arts & Science, Pudukottai

2. Standardization and Evaluation of an In-house Enzyme Linked Immuno Sorbant Capture Assay for diagnosis of Dengue infection - By - Dr. Nalini Ramamurty, Dr. P. Gunasekar, M.Jayashri, Presented in Scientific papers in Centenary at King Institute of Preventive Medicine, Chennai on 11th October 1999.

3. Rapid detection of Dengue RNA by RT-PCR using 3' noncoding region By - Dr. Nalini Ramamurty, Dr. M.Jayashri, Dr. P. Gunasekar, Dr. Varalakshmi Elango Presented in Applications of RT-PCR and Micro array in Microbiology, IAMM chapter meet on 23rd August 2003 at Vision Research Foundation, Shankara Nenthralaya, Chennai

4. Laboratory Confirmation of Dengue Encephalitis in Chennai – By Dr. Nalini Ramamurty, Dr. M.Jayashri, C.C. Harish, A.K. Sherif, P.Padma priya , Dr. P. Gunasekar, Presented in International Conference on Recent Advances in Biomedical and Therapeutic Sciences, Bundelkhand University, Jhansi on 13th - 15th January 2004.

5. Laboratory confirmed Dengue cases with CNS involvement in Chennai by Dr. Nalini Ramamurty, Dr. M.Jayashri, P.Padma priya, S.Mohana , Dr. P. Gunasekar Presented in International symposium on " Emerging viral Infections – New frontiers & Challenges", National Institute of Virology, Pune on October 11th –13th ,2004.

6. Rapid detection of Dengue and JE viruses by RT-PCR with Universal primer set by Dr Dr. Nalini Ramamurty, Dr. M.Jayashri, A.K. Sherif, Dr. P. Gunasekar, Dr. Varalakshmi Elango presented in XXVIII – Annual Conference of Indian association of medical microbiologists, Lucknow on November 25 to 28,2004.

7. Hands on Training for Antigen preparation for Dengue at Department of Clinical Virology, Christian Medical College – Vellore (1998).

8. Workshop on Research Methodology and Biostatistics at Department of Epidemiology, T.N. Dr.M.G.R. Medical University, Guindy, Chennai (2000).

9. Hands on Training in ELISA, IFA and PCR at Institute of Vector Control and Zoonoses, Hosur, – Tamil Nadu – India (2001)

10. Hands on Training in ELISA, IFA and PCR at Centre for Research in Medical Entomology, Madurai, Tamil Nadu – India (2001).

11. Work shop on Good Clinical Practice conducted by John Hopkins University, USA on June 2005.

12. Hands on Training in ELISPOT Assay to determine the immunogenecity at National AIDS Research Institute, Pune, India on June 2005.

13. Work Shop on Gender sensitization pertains to HIV/AIDS vaccine trial In India conducted by NAZ on July 2005.

14. Hands on Training in Immunological assays at Core laboratory, International AIDS Vaccine Initiative, Imperial College, St.Stephen's Centre, London, UK on July 2005.

15. Work shop on Good Clinical laboratory practice (GCLP) conducted by Qualogy, Uk on December 2006 (14th and 15th) at Kigali, Rwanda.

Knowledge On Computer

1. Basic System Management in NIIT

2. Oracle 8 and Visual Basic 6 (Orchid Soft systems).

Passport Details:

Passport No.	:	A4463180
Date of issue	:	17/12/1997
Place of issue	:	Trichirapalli
Validity	:	16/12/2007

Referees

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Appendix: a

Title: Seroepidemology of Dengue in Tamil Nadu and Immunological And Molecular approach for rapid diagnosis.

- Standardization of Baseline Ab titre for Dengue1, Dengue2, Dengue 3 & Dengue 4 in Normal population in Tamil Nadu.
- Development and standardization of IgM (Capture), IgG Ab ELISA and Dipstick EIA for the rapid diagnosis of dengue infection
- Standardization of RT-PCR for diagnosis of Dengue earlier infection

  (Serotype Specific).

Synopsis of the research work

Dengue is the most important mosquito borne viral disease, affecting humans, having assumed the status of an international health problem.

In Tamil Nadu dengue is endemic and constitutes a major public health problem in both urban and rural areas. Sero surveillance of dengue infection is essential for monitoring the disease trends and for early recognition of impending epidemics. Sero survey of dengue (1 – 4) antibodies was done in apparently healthy population from all the districts of Tamil Nadu. Baseline titre was calculated for all the four serotypes (Den-1 to Den-3 – 1:40HA titre, Den-4 1:20 HA titre). Sero survey of dengue (1-4) antibodies was done in animal reservoir in 2000. To detect Dengue antigen in *Ae.aegypti,* Mosquito samples were collected from various zones of Chennai city was found to be a good indicator for monitoring the circulation of virus.

Dengue cases were analyzed over a period of 4 years (1998 – 2001) in Chennai city. Children in the age group of 0 – 12 years in both the sexes were highly affected. On analysis of dengue cases, hepatomegaly, thrombocytopenia, bleeding and shock were significantly present in this region (South India). Encephalopathy was not seen even in a single case. Though Encephalopathy has been reported from cases in North India. ELISA and HAI detected primary and secondary antibody response. Primary antibody response predominantly present as DF. DHF and DSS are more often seen in secondary antibody response. Cases that were clinically diagnosed Dengue, but found to be negative serologically are probably due to diseases that mimic dengue. Therefore laboratory diagnosis is necessary for confirmation of dengue. Recently ELISA kits are commercially available but highly expensive. Therefore In-house IgM capture ELISA and IgG ELISA were developed and standardized and found to be cost effective. As sophisticated equipments are needed for performing ELISA, Dipstick Immuno binding Assay (for IgM and IgG antibody) was developed and standardized for use in peripheral laboratories.

Detection of dengue virus by PCR in clinical specimens clinches the diagnosis and should be Performed atleast in representative samples in any epidemic. It helps to incriminate the sero type of dengue responsible for the epidemic. Therefore Polymerase Chain Reaction was standardized for diagnosis of dengue. All the four serotypes were detected confirmed by RT-PCR. PCR is a rapid, sensitive tool for identification of virus than conventional viral isolation.

Appendix B:

Title of M.Sc Dissertation

- Title: Enzyme assay in alcoholic Liver disease.
  Duration: Dec-1996 to March-1997.
  Project done at Government Medical College, Thanjavur.
  Submitted to: Bharadhidasan University, Trichy.

Synopsis of the work

Alcoholism is the most common cause of chronic liver disease in developing countries, where alcoholic beverages are consumed extensively. Approximately 160-gms/ day is consumed on an average. Alcoholism is also responsible for a number of metabolic effects and is associated with serious disorder of all major organs. Up to 5 years no changes in the liver is found. After 15 years alcoholic hepatitis, fatty liver, and cirrhosis was detected. Aspartate amino transferase (AST), Alanine amino transferase (ALT), alkaline phosphatase (ALP), Acid phosphatase (ACP) and Ceruloplasmin (CP) were analyzed in the alcoholic liver disease cases. ALT level was increased in these cases than the AST level. ALP level is highly elevated in hepatitis cases. No change in ACP was found. Elevated level of CP (copper containing enzyme) is good marker for alcoholic hepatitis and cirrhosis.

Alcoholic hepatitis, Fatty liver followed by cirrhosis was observed in chronic alcoholic cases (>15 years).