

Curriculum vitae

1. Name : **T. Durai Anand**
2. Father's Name : D. Thangarajan
3. Date of Birth : 04. 04. 1974.
4. Age : 48 Years
5. Sex : Male
6. Marital Status : Married
7. Address for communication : 46/2 -C, Sound Street,
Allampatti,
Virudhunagar– 626 001.
Tamil Nadu.
Mobile No: 9443381536.
8. Nationality : Indian
9. Religion : Hindu
10. Community : BC
11. **Academic Qualification** :



Degree	Institution	Year of Passing	Percentage	Class
B. Sc., Zoology	V.H.N.S.N. College, Virudhunagar. (Madurai Kamaraj University)	April – 1994	77.1 %	I Class.
M. Sc., Microbiology	V.H.N.S.N. College, Virudhunagar. (Madurai Kamaraj University)	April – 1996	69 %	I Class.
M. Phil., Biotechnology	Centre for Distance Education, Bharathidasan University, Trichy.	August-2005	78.8 %	I Class.
Ph. D Microbiology	Department of Genetics, Centre for Excellence in Genomic Sciences, School of Biological Sciences, Madurai Kamaraj University, Madurai.	Awarded in December, 2013.		

12. Educational Excellence: **Gold Medalist in B.Sc.**

First rank among the students of college in the Madurai Kamaraj University Examinations held in April, 1994.

University III Rank in Post Graduation**13. M. Phil. Dissertation** :

"Antibacterial activity of heteropolyanions singly and in synergistic combinations with some β -lactam antibiotics, against methicillin - resistant *Staphylococcus aureus* (MRSA)"

14. Ph. D Thesis:

"Molecular Diversity of Pharyngeal Streptococci with special reference to their Virulence Factors"

Ph. D. Guide:**Prof. P. Gunasekaran,**

Pro Vice Chancellor

VIT University, Chennai Campus

Vandalur-Kelamabakkam Road

Chennai - 600 127

15. Current position: Assistant Professor, Department of Zoology,

VHNSN College, Virudhunagar.

Teaching Experience : **26 years of teaching experience .**

Name of the college	Level	Duration
Muthayammal College of Arts & Science (Madras University)	U.G. & P.G.	1 year and 8 months 28.08.1996 to 30.04.1998
V.H.N.S.N. College (Madurai Kamaraj University)	P.G.	2 years and 7 months 22.06.1998 to 18.01.2001
NMS SVN College (Madurai Kamaraj University)	P.G.	4 years and 11 months. 09.07.2001 to 30.06.2006
V.H.N.S.N. College (Madurai Kamaraj University)	P.G.	06.07.2006 to till date

16. Research Projects sanctioned:

Title	Funding agency	Amount sanctioned	Period
"Infectivity of <i>Serratia marcescens</i> to the silkworm <i>Bombyx mori</i> and its effect on certain biochemical constituents in the haemolymph and gut".	Tamil Nadu State Council for Science and Technology, Chennai.	Rs. 5000/-	1999 - 2000
"Effect of Oil pulling on Dental Caries Causing Bacteria."	IDHAYAM V.V.V & SONS, VIRUDHUNAGAR.	Rs. 43,800/-	2006-2007
"Bioremediation of nickel and iron by non-pathogenic microorganisms."	Tamil Nadu State Council for Science and Technology, Chennai.	Rs. 5000/-	2007-2008
Removal of Nitrogen and Phosphorus from Combined Sewage Components by Microbial Activity	Tamil Nadu State Council for Science and Technology, Chennai	Rs.6000/-	2009-2010
Purification and partial characterization of an antibacterial protein in the silkworm, <i>Bombyx mori</i> .	Tamil Nadu State Council for Science and Technology, Chennai	Rs.6000/-	2009-2010
Removal of polycyclic aromatic hydrocarbons (PAHs) from sewage sludge by microbial activity	Tamil Nadu State Council for Science and Technology, Chennai	Rs. 7500/-	2013-2014
Removal of Sulphur from Natural Sources using Bacterial Populations	Tamil Nadu State Council for Science and Technology, Chennai	Rs. 10,000/-	2016-17

17. Co-investigator:

Title	Funding agency	Amount sanctioned	Period
<p>'Development of functionalized nanoparticles-based biosensor for cytochrome c using cytochrome c reductase: Biomarker of Apoptosis'</p> <p>Principal Investigator: Dr. C. Karunakaran, Associate Professor in Chemistry, VHNSN College, Virudhunagar.</p> <p>Co-investigators:</p> <ol style="list-style-type: none"> 1. Dr. A. Rajendhran, Associate Professor and Head, Dept. of Botany, VHNSN College, Virudhunagar. 2. Dr. T. Durai Anand, Associate Professor & Head, Department of Microbiology, VHNSN College, Virudhunagar. 	<p>Department of Biotechnology (DBT)</p>	<p>Rs. 32,95,000/-</p>	<p>2010-2013</p>

19. Minor Research Project (Principal Investigator):

Title	Funding Agency	Amount Sanctioned	Period
<p>Synergistic effect of medicinal plant extracts and beta – lactam antibiotics in the reduction of resistance of methicillin-resistant <i>Staphylococcus aureus</i> to various antibiotics.</p>	<p>UGC</p>	<p>100000/-</p>	<p>2017-19</p>

18. Resource Person in UGC-Networking Resource Centre in Biological Sciences (NRCBS) Programme, School of Biological Sciences, Madurai Kamaraj University, Madurai.

S. No	Programme	Period
1	UGC- NRCBS Summer School on PCR Applications	March 17 to March 31, 2010
2	UGC- NRCBS Winter School on Gene Cloning and Expression in Bacteria	September 16 to October 1, 2010
3	UGC- NRCBS Winter School on Environmental Genomics	December 27, 2010 to January 10, 2011

- **Resource Person in State level Workshop on “Diagnosis of Infectious Diseases” at SVN College, Madurai, on 23.03.2017.**

19. Publications.

1. **Thangarajan Durai Anand**, Thangamani Rajesh, Jeyaprakash Rajendhran and Paramasamy Gunasekaran (2012). Superantigen profiles of emm and emm-like typeable and nontypeable pharyngeal streptococcal isolates of South India. *Annals of Clinical Microbiology and Antimicrobials*, 11:3.

(Impact Factor: 2.189)

2. U. S. Ezhil Arivudainambi, **Thangarajan Durai Anand**, Vellasamy Shanmugaiah, Chandran Karunakaran and Ayyappan Rajendran (2011). Novel bioactive metabolites producing endophytic fungus *Colletotrichum gloeosporioides* against multidrug-resistant *Staphylococcus aureus*. *FEMS Immunology and Medical Microbiology*, 61: 340-345.

(Impact Factor: 2.55)

3. Ponnusamy Sami, **Thangarajan Durai Anand**, Mariappan Premanathan (2010). Vanadium(V)-substituted Keggin-type heteropolyoxotungstophosphates as electron transfer and antimicrobial agents: oxidation of glutathione and sensitization of MRSA towards β -lactam antibiotics. *Transition Metal Chemistry*, 35: 1019-1025.

(Impact Factor: 1.4)

4. **Durai Anand T**, Pothiraj C, Gopinath RM and Kayalvizhi B (2008). Effect of oil-pulling on dental caries causing bacteria. *African Journal of Microbiology Research*, 2: 063-066.

(Impact Factor: 0.5)
5. V. Ramesh, K. Santosh, **T. D. Anand**, V. Shanmugaiah, S. Kotamraju, C. Karunakaran, and A. Rajendran, 2017. International Journal of Medicinal Mushrooms, 1005-1017, DOI:10.1615. Novel Bioactive Wild Medicinal Mushroom- *Xylaria* sp. R006 (Ascomycetes) against multidrug-resistant Human Bacterial Pathogens and Human Cancer Cell Lines. (Impact Factor: 1.357)
6. Bavithra Devi.K , Muthurani K , Dr.Sivasangari.R , **Dr. Durai Anand.T**, 2019, Cardiac Disease Analysis And Determination Using Discrete Wavelet-Based ANN, International Journal For Technological Research In Engineering,5129-5134.
7. **T.Durai Anand**, S.Muthuramkumar, and V.Ganesan, 2020. Synergistic effect assessment of punica granatum pericarp extract and beta lactum antibiotics against MRSA strains, International Journal of Creative Research Thoughts, 1991-1994.
8. R.Sivasangari, T.Durai Anand,” ECG Analysis and Cardiac disease Identification using Discrete Wavelet based ANN and ANFIS”,Vol 6,Num 6,June 2020,pp 141-146. Advanced Science Letters. E-ISSN:1936-7317
9. Dr. T. Duraianand, Dr. R. Sivasangari,2022. IOT BASED BANANA LEAF DISEASE IDENTIFICATION SYSTEM, International Research Journal of Modernization in Engineering Technology and Science, Volume:04/Issue:09/September-2022,1021-1026.

20. Gene Sequences Submitted in the National Center for Biotechnology Information (NCBI) GenBank

1. [HM449043.1](#) Streptococcus pyogenes strain MKU17 M protein (emm) gene, emm12.0 type, partial cds
2. [HM449042.1](#) Streptococcus sp. 'group G' M protein (emm) gene, emm-stG643.0 type, partial cds
3. [HM449041.1](#) Streptococcus pyogenes strain MKU12 M protein (emm) gene, emm30.11 type, partial cds
4. [HM449040.1](#) Streptococcus pyogenes strain MKU11 M protein (emm) gene, emm3.0 type, partial cds
5. [HM125081.1](#) Streptococcus pyogenes strain MKU16 M protein (emm) gene, emm30.11 type, partial cds
6. [HM125080.1](#) Streptococcus pyogenes strain MKU15 M protein (emm) gene, emm48.0 type, partial cds
7. [HM125079.1](#) Streptococcus sp. 'group G' strain MKU14 M protein (emm) gene, stG643.0 type, partial cds
8. [HM125078.1](#) Streptococcus sp. 'group C' strain MKU10 M protein (emm) gene, stC46.0 type, partial cds
9. [HM125077.1](#) Streptococcus sp. 'group G' strain MKU9 M protein (emm) gene, stG643.0 type, partial cds
10. [HM125076.1](#) Streptococcus sp. 'group G' strain MKU8 M protein (emm) gene, stS104.2 type, partial cds
11. [HM125075.1](#) Streptococcus pyogenes strain MKU7 M protein (emm) gene, emm107.0 type, partial cds
12. [HM125074.1](#) Streptococcus sp. 'group C' strain MKU6 M protein (emm) gene, stC46.0 type, partial cds
13. [HM125073.1](#) Streptococcus sp. 'group C' strain MKU5 M protein (emm) gene, stC46.0 type, partial cds
14. [HM125072.1](#) Streptococcus sp. 'group G' strain MKU4 M protein (emm) gene, st3343.0 type, partial cds
15. [HM125071.1](#) Streptococcus pyogenes strain MKU3 M protein (emm) gene, emm12.0 type, partial cds
16. [HM125070.1](#) Streptococcus pyogenes strain MKU2 M protein (emm) gene, emm48.0 type, partial cds
17. [HM125069.1](#) Streptococcus pyogenes strain MKU1 M protein (emm) gene, emm3.0 type, partial cds

21. Best poster award:

Best poster award for the poster entitled "Distribution of superantigen genes in *emm* and *emm*-like streptococcal clinical isolates of South India" in **International Conference on Genomic Sciences VII Convention of Biotech Research Society, India Indo-Italian Workshop on Industrial and Pharmaceutical Biotechnology** on 13.11. 2010.

22. Training Course participated :

Title of the Course	Institution	Period
Professional training in “ Clinical Methods in Microbiology ”	Bose Clinical Laboratory & X Rays, Madurai.	20 th July 1996 to 21 st August 1996

23. Paper presentation in International/National Level Conference:

Title of the paper	Programme	Organization	Period
“Antibacterial activity of heteropolyanions singly and in synergistic combinations with some β -lactam antibiotics, against methicillin – resistant <i>Staphylococcus aureus</i> (MRSA)”	UGC sponsored National Level Conference on Recent Trends in Chemistry of Biologically Interesting Compounds	VHNSN College, Virudhunagar.	22.07.2005 and 23.07.2005
“Antibacterial activity of heteropolyanions singly and in synergistic combinations with some β -lactam antibiotics, against MRSA and MSSA Strains”	48 th Annual Conference of Association of Microbiologists of India	Association of Microbiologists of India (AMI), Chennai and Department of Biotechnology, IIT Madras, Chennai.	18.12.2007 To 21.12.2007
Distribution of superantigen genes in <i>emm</i> and <i>emm</i> -like streptococcal clinical isolates of South India	International Conference on Genomic Sciences VII Convention of Biotech Research Society, India Indo-Italian Workshop on Industrial and Pharmaceutical Biotechnology	School of Biological Sciences, Madurai Kamaraj University, Madurai	12.11.2010 To 14.11.2010
Molecular Diversity of Virulence Factors of Pharyngeal Streptococcal Isolates of South India	National Science Day & 43 rd Aqua-Terr Annual Conference on Biological Sciences	School of Biological Sciences, Madurai Kamaraj University, Madurai	28.02.2012

Cardiac disease analysis and determination using Discrete wavelet-based ANN	International conference on Emerging trends in computing, communication & automation technology, ICETCCAT- 2019	Department of Computer Science & Engineering, Sri Vidya College of Engineering & Technology	09.03.2019
ECG Analysis and Cardiac disease Identification using Discrete Wavelet based ANN and ANFIS	TNSCST Sponsored Two day International Conference on Applications of Mathematics in Science and Technology	Department of Science & Humanities , AAA College of Engineering & Technology, Sivakasi	25.07.2019 26.07.2019

24. Conferences Attended:

- Medical Lab. Technologist Scientific Conference – 2000. Madurai Medical College, Madurai.
- Science Day & Aqua-Terr Annual Conference on Organismal & Functional Genomics organized by School of Biological Sciences, Madurai Kamaraj University, Madurai on 6.3.2010.

25. Workshop Participated:

Title	Organization	Period
<i>State Level Workshop on Immunological Techniques.</i>	The Postgraduate and Research Department of Zoology, The American College, Madurai.	01.05.2000 to 13.5.2000.
<i>One Day Workshop on Effective Thesis Writing</i>	Research Centre in English, VHNSN College, Virudhunagar.	05.10.2007.
Two Day Workshop on “Challenges and safety aspects in Environmental Protection”	Department of Mechanical Engineering, Mepco Schlenk Engineering College, Sivakasi.	22.09.16 and 23.09.16
FIVE DAYS HANDS ON WORKSHOP ON “PATENT SEARCHING, DRAFTING AND FILING”	PANIMALAR INSTITUTE OF TECHNOLOGY In Association with Turnip Innovations and Exilyze Intellectual Services ,IEEE COMPUTER SOCIETY & COMPUTER SOCIETY OF INDIA.	29-05-2020 to 02-06-2020

26. National Seminar Participated:

Title	Organization	Period
<i>Recent advances in Plant Biology sponsored by UGC-SERO, Hyderabad & Tamilnadu State Council for Science and Technology, Chennai.</i>	Research Department of Botany, VHNSN College, Virudhunagar.	August 10 th and 11 th 2006.
<i>Recent Advances in Modern Biology</i>	PG Department of Biochemistry, VHNSN College, Virudhunagar.	August 30 th and 31 st , 2007.
<i>Challenges and opportunities for migrant labourers in the age of COVID-19</i>	School of Economics, Madurai Kamaraj University	July 22 & 23, 2020

27. FDP ORIENTATION COURSE/REFRESHER COURSES PARTICIPATED

Title	Organization	Period
4-Week Induction/Orientation Programme for "Faculty in Universities/Colleges/Institutes of Higher Education"	Teaching Learning Centre, Ramanujan College University of Delhi under the aegis of MINISTRY OF HUMAN RESOURCE DEVELOPMENT PANDIT MADAN MOHAN MALVAIYA NATIONAL MISSION ON TEACHERS AND TEACHING	June 26 - July 24, 2020.
<i>UGC sponsored Faculty Induction program</i>	CPDHE, UGC-HRDC, University of Delhi, New Delhi	August 5 - Sep 8, 2021.
TWO - WEEK INTERDISCIPLINARY REFRESHER COURSE/FACULTY DEVELOPMENT PROGRAMME on "Advanced Research Methodology 2.0"	Teaching Learning Centre, Ramanujan College University of Delhi under the aegis of MINISTRY OF EDUCATION PANDIT MADAN MOHAN MALAVIYA NATIONAL MISSION ON TEACHERS AND TEACHING	17 June - 01 July, 2021
Four week course on "Human Molecular Genetics"	NPTEL ONLINE CERTIFICATION (Funded by ministry of HRD), Govt. of India	JAN-FEB 2021

Online courses Completed :

1. Professional writing conducted by Saylor Academy, USA.
2. Vaccination conducted by The Open University, UK.
3. Birth of a drug conducted by The Open University , UK
4. Infection and immunity conducted by The Open University, UK
5. Gene testing conducted by The Open University, UK
6. Understanding antibiotic resistance conducted by The Open University, UK

28. Other Academic Activities

- Member of board of studies for department of Microbiology and Biotechnology in S.V.N college (Autonomous), Madurai from the academic year 2015-2016 to till date .
- Animal Ethical committee member of Sri Kaliswari College, Sivakasi From the academic year 2014-2015 to till date.
- Board of studies member in Sri Kaliswari College,Sivakasi for extra credit course in Department of Biotechnology from 2017-2018 onwards.
- Board of studies member in Manonmaniam Sundaranar University, Tirunelveli for UG and PG of Microbiology from the academic year 2016-2017 onwards.
- Anna University (Kamaraj College of Engineering and Technology) Doctoral Committee Member for Ph.D Research Scholars.

28. Dissertations Guided (PG) :

1. "Antibiotic sensitivity pattern of methicillin - resistant *Staphylococcus aureus* (MRSA)".
2. "The influence of concentration variations of divalent cations, calcium and magnesium on the *in vitro* susceptibility of microorganism to various antibiotics".
3. "Investigation of *in vitro* and *in vivo* effect of garlic extract on hospital acquired multidrug resistant strains of *E. coli* and *Staphylococcus aureus*".
4. "Reduction of mortality by some antibiotics in septicemia of silkworm, *Bombyx mori*".
5. "Soft Salt – Mannitol Agar – Cloxacillin Test; a specific test for detection of methicillin – resistant *Staphylococcus aureus*".
6. "Infectivity of *Serratia marcescens* to the silkworm *Bombyx mori* and its effect on certain biochemical constituents in the haemolymph and gut".

7. "Aetiology of Urinary Tract Infections".
8. "Frequency of Occurrence of Stool pathogens in Open Toilet System".
9. "Study on decolorization of paper mill effluent by *Aspergillus niger* and *Rhizopus oryzae*".
10. "Effect of Oil pulling on Dental Caries Causing Bacteria".
11. "Antimicrobial activity of polyoxometalates and natural lignins against methicillin-resistant *Staphylococcus aureus* (MRSA)".
12. "Antibacterial activity of polyoxometalate compounds and *Curcuma longa* against methicillin-resistant *Staphylococcus aureus* (MRSA)".
13. "*In vitro* studies on proteolytic dehairing of hides using the proteolytic enzymes of bacterial strains, *Bacillus subtilis* and *Pseudomonas aeruginosa*".
14. "Antibacterial activity of polyoxometalate compounds and some β -lactam antibiotics against methicillin-resistant *Staphylococcus aureus* (MRSA)".
15. "Effect of compounds of heteropolyanions on penicillinase activity of methicillin-resistant *Staphylococcus aureus* (MRSA) strains".
16. "Characterization of antimicrobial substances produced by *Bacillus* species isolated from soil".

M. Phil Dissertations Guided: Total: 5

T. Durai Anand