

Curriculum Vitae

Dr. B. NAGESHWARI.

Lecturer, Department of Biotechnology,

Govt Autonomous College, Rajamahendravaram, A.P., India.

Mobile: 9866219559 / 9704343364 : email: b.nageshwari@gcrjy.ac.in

Designation:

(2011 - till date) Assistant professor of Biotechnology, Department of Biotechnology, Govt Autonomous College, Rajamahendravaram, A.P, India.

(2010 - 2011) Academic Consultant, Department of Biotechnology, Mahatma Gandhi University, Nalgonda, Telangana, India.

Academic Qualifications:

(2002-08) **Doctor of Philosophy**, Cellular Immunology lab, School of Life Sciences, University of Hyderabad, Hyderabad, A.P., India.

Research Area: Cancer biology and Immunology.

Title of Thesis: Effect of levamisole on human multiple myeloma Cell lines in *vitro*- Alkaline phosphatase activity as a "Putative" target.

Course on **pharmaceutical documentation / GMP / Validation / CQM/Regulatory affairs and statistical quality control techniques.** –Sri Siva Sai Institute of Pharmaceutical Excellence, Hyderabad, A.P.

(1999-2001) **Master of Science in Biotechnology**, Pune University, Selected through (All India Common Entrance Exam conducted by JNU, New Delhi)

(1996-99) **Bachelor of Science** (Micro-biology, Botany, Chemistry), Geetanjali Degree College for Women, Osmania University, Hyderabad, A.P.

Academic Distinctions, Scholarships and Honours:

Ranked among top 20% of the awardees in National Eligibility Test and have taken the **ShyamaPrasad Mukherjee (SPM) Fellowship Test 2002.**

Awarded with **National Merit Research Fellowship by Council of Scientific and Industrial Research (CSIR)**, Govt. of India for the period of 5 years to pursue Ph. D. in any of the Indian Universities and Institutions.

Junior Research Fellowship (JRF) and Senior Research Fellowship (SRF) by Council for Scientific and Industrial Research (CSIR), Govt. of India during doctoral studies.

Qualified National Eligibility Test (NET) for lectureship in Indian Universities conducted jointly by University Grants Commission (UGC) -Council for Scientific and Industrial Research (CSIR), Govt. of India.

Qualified Graduate Aptitude Test for Engineering (GATE-2001) an examination administered jointly by the Indian Institutes of Technology (IIT) and Indian Institute of Science (IISc) and Ministry of Human Resources, Govt. of India.

M. Sc., in Bio Technology, Selected through All India Common Entrance Exam conducted by JNU, New Delhi.

Awarded with community based merit scholarship for excellence in Master of Sciences.

Awarded with community based merit scholarship for passing high school and Intermediate with Distinction.

Awarded with Special scholarship from an organisation “**RastriyaBhasha**” which promotes National-Language, for securing highest marks in HINDI in secondary school.

Teaching Experience:

- Training M.Sc. curricular-study project and summer-project students in the field of Biotechnology.
- Lecture theory classes in Immunology, Molecular biology, Medical Biotechnology, other core subjects and specializations of biotechnology for undergraduate and postgraduate students.

Membership of professional societies:

- Indian Immunology Society, India.
- Society of Biological Chemists, India.
- Indian Association of Nuclear Chemists and Allied Scientists.

Membership in College Level Committees:

- Medical Inspection –Coordinator ---2013-18
- Auction committee –Coordinator --2017-18
- Centre for Innovation, Incubation and Entrepreneurship - Mentor and Coordinator-- 2016-18
- Food Processing and Preservation course-Assistant Nodal Officer—2015-17
- Green Cell – Committee Member --2016-17
- Green Audit Committee Member –2017--18
- Red Ribbon Club and Red Cross –Committee Member--2016-17
- Community College ---monitoring Committee Member--2015-17.
- Community College--Admission Committee Member --2015-17.
- U.G.C Committee Member ----2013 -17.
- Value Education Cell Committee--- Committee Member----2013 -17.
- Annual Stock Verification ---Committee Member---- 2013-17.
- UG Board of Studies in Biotechnology –Chairperon –ANUR---- 2103-17.
- Admission Committee Member –Biotechnology --Govt college (A) Rjy---2013-17
- Community College---Staff Selection Committee Member -- 2015-16.
- Anti Ragging Squad on Campus 2015-16
- Women Empowerment Cell--Committee Member----2014-16.
- Soft launch of Digital Classrooms --Committee Member---2017
- Student interaction committee member.
- Member : Advisory board : DST FIST –Project Implementation
- Securitizing committee : for appointment of FDP substitute teacher in Biotechnology.

Refresher Course / Orientation courses attended

- 42nd Orientation Course : Orientation Course : 2nd to 28th Feb 2015 : Jawaharlal Nehru Technological University , Hyderabad
- Strategies for Research Oriented Teaching : Refresher Course: 20th Jan to 8th Feb 2014 Jawaharlal Nehru Technological University ,Hyderabad
- Recent Advances in Biotechnology & Bioinformatics : Refresher Course :5th to 26th Nov 2012:Jawaharlal Nehru Technological University ,Hyderabad

Paper Presentations/ Invited Talks:

- **Innovation through Biotechnology is a pleasant responsibility:** (Resource person)
National Seminar : 26th Feb 2018 : SVD Government College (Women), Nidadavole, West Godavari Dist., A.P.
- **Mana TV:** Resource Person for Biotechnology. “ Constructionog Genomic and cDNA libraries”.
- **Endocrine System – Disorders & Stress Response :** (presented paper) National Seminar : 16th& 17th Dec 2014 :Government College (Autonomous) Rajamahendravaram, A.P.
- **Effect of levamisole on human multiple myeloma cell lines *invitro*- Alkaline phosphatase activity as a “putative” target.** Oral Presentation given at **BioQuest-2008**, Hyderabad CentralUniversity, Hyderabad-India.

As Organizing Committee Member

- **Renewable Energy Research and Education** (Organising Committee member) International Conference : 8th -10th Feb 2018.
- **Biomass to Bioenergy** (Organising Secretary) National workshop : 19th and 20th Dec 2017 : Government College (Autonomous) Rajamahendravaram, A.P.
- **Digital Science Lab** (Organizing Member) Workshop: 24th Nov 2016: Govt College (A), Rajamahendravaram. A.P.
- **Advances Break through, challenges and Developments in Foodomics:** National Seminar (Co-Convenor) 10th and 11th Nov 2016: Govt College (Autonomous) Rajahmahendravaram. A.P.
- **Data Analysis & its applications:** (Organizing Committee Member) National Workshop: 30th Jan2015: Government College (Autonomous), Rajamahendravaram. A.P.

Poster presented

- Advances, Break throughs, challenges and Developments in Foodomics : “Making food safe from farm to plate” : National Seminar (Co-Convenor) 10th and 11th Nov 2016 : Govt College (Autonomous) Rajamahendravaram
- “Bacterial cell wall lipopolysaccharide in species specific immune stimulation”. Presented Poster at National Seminar on Microbial Diversity –Exploration and Bioprospecting 27- 28 March, 2010. Department of Microbiology, Kakatiya University, Warangal, India.
- Tissue Non-specific alkaline Phosphatase of B lymphocytes : Functional Analysis using levamisole as a tool”. Presented at 5th International Alkaline Phosphatase Symposium May 16-19th, 2007 Huingne –France. (Organised by Hypophosphatasia Europe).
- “Inhibition of Syndecan-1 expression and M-Protein secretion in myeloma cell Lines *in vitro* by Levamisole”. Presented Poster at 32nd Annual Conference of Indian Immunology Society 24-27th Nov- 2005. Post Graduate Institute of Medical Education and Research, Chandigarh-India.
- “Anti-proliferative effect of levamisole on human myeloma cell lines-RPMI 8226 and U266B1”. Presented Poster at 30th Annual Conference of Indian Immunology Society: 23-25th Nov- 2003. Sanjay Gandhi Institute of Medical Sciences, Lucknow-India.

Attended : Conferences/Workshops/Seminars/Symposiums/Trainings/Faculty Development Programmes.

2018

- Intellectual Property Rights & Its Education For Young Minds, at Govt (A) College , Rjy. National Workshop conducted by Board of Research Studies and Academic Cell, Govt (A) College , Rjy, on 21 April 2018
- Challenges and Opportunities in Andhra Pradesh After Bifurcation, Govt(A) College , at Rjy. National Workshop conducted by Faculty of Social Sciences, Govt (A) College , Rjy on 28th March 2018
- Practical Entrepreneurship with Realtime Entrepreneurs, National Workshop , conducted by Department of Commerce: Govt (A) College , Rjy. 14th March 2018.
- Innovation through Biotechnology is a pleasant responsibility: National Seminar : 26th Feb 2018: SVD Government College (Women), Nidadavole, West Godavari Dist., A.P.
- Renewable Energy Research Education: International Conference: 9-10 feb 2018. Government College (Autonomous) Rajamahendravaram.

2017

- Biomass to Bioenergy: National Workshop: 19-20 Dec 2017. Government College (Autonomous) Rajamahendravaram. (Organising Secretary)
- Cognitive Behavior Therapy and Social Skills Training: National Workshop: 15-16 December 2017. Adikavi Nannaya University, Rajamahendravaram.
- Virtual Classes : Workshop : on 17th Oct 2017 : Organised by commissionerate of Collegiate education, A.P., Vijayawada. At Diechman Hall, Acharya Nagarjuna University, Guntur.
- Three Day Residential (Faculty Development) Training Programme on New Market Oriented Restructured Courses, Aquaculture Technology, Sericulture Management & Paramedical science”: 9th to 11th Aug 2017, AP HRDI, Bapatla.
- STEM Teacher Training Workshop on Research Based Pedagogical Tools . 26th Feb to 1st Mar 2017. IISER, Pune, Ministry of Human Resource Development, Govt of India.
- Pedagogy and e-content development: National Workshop: 19th Jan 2017: Andhra Loyola College, Vijayawada, A.P. **2016**
- “Limited Liability Partnership – A New Opportunity”: National Seminar: 21-22 December 2016: Government College (Autonomous) Rajamahendravaram.
- Language skills employment opportunities: State Level Seminar: 15th Dec 2016: Government College (Autonomous) Rajamahendravaram.
- MOOCs: Workshop: 30th Nov & 1st Dec 2016: Government College (Autonomous) Rajamahendravaram.
- Digital Science Lab : Workshop: 24th Nov 2016 : Govt College (A), Rajamahendravaram. *Organizing Member*
- Advances, Break throughs, challenges and Developments in Foodomics : National Seminar (Co-Convenor) 10th and 11th Nov 2016 : Govt College (Autonomous) Rajamahendravaram.
- UGC sponsored one day international symposium on “Cellular Stress : International Symposium : 10th Aug 2016 : Govt College (Autonomous) Rajamahendravaram.
- Promotion of Nature Friendly Practices in Farming for Health of Environment and Mankind : Workshop & Training : 4th & 5th mar 2016 : Adikavi Nannaya University : Rajamahendravaram.

2015

- Semester System Orientation Workshop : 26th & 27th Nov 2015 :Adikavinannaya University Rajamahendravaram.
- Light Emitting Devices &Materials: Faculty Development Program cum Workshop : 20th Nov 2015: Government College (Autonomous) Rajamahendravaram.
- Right to Information Act : Training : 18th to 22nd May 2015 : Dr. MCR HRD Institute, Hyderabad
- E-Governance: Problems &Prospects : International Seminar : 8th Mar 2015: Government College (Autonomous) Rajamahendravaram
- Research Methodology: National Workshop: 7th Mar 2015 : Government College (Autonomous)Rajamahendravaram.
- Data Analysis &its applications: National Workshop: 30th Jan 2015: Government College (Autonomous) Rajamahendravaram. : *Organizing Committee Member.*

2014

- Endocrine System – Disorders & Stress Response National Seminar : 16th & 17th Dec 2014 :Government College (Autonomous) Rajamahendravaram: (*presented paper*)
- Advanced Technology Oriented Materials, ATOM-2014 : National Conference : 8th & 9th Dec 2014 : Government College (Autonomous) Rajamahendravaram
- Radiochemistry & Applications of Radioisotopes : National Workshop : 24th to 29th Nov 2014 : IANCAS and Government College (Autonomous) Rajamahendravaram
- Stress Resilience Techniques: InternatoinalWorkshop : 16thNov 2014 : Government College (Autonomous) Rajamahendravaram
- Nano Materials – Synthesis & Characterization Techniques State Level Seminar : 28thFeb 2014 :(Presented paper) Government College (Autonomous) Rajamahendravaram.
- Teaching English Grammar at UG Level-A New Perspective.: State Level Seminar : Government College (Autonomous) Rajamahendravaram :: 26thFeb 2014:
- Awareness workshop on Telugu poetry and changing trends.: State Level Workshop : 25th Feb2014: Government College (Autonomous) Rajamahendravaram
- Critical Analysis of Hindi and Telugu Literature. National Seminar: 10th & 11th Jan 2014 : Government College (Autonomous) Rajamahendravaram.

2012

- Capacity Building of Women Managers in Higher Education : Workshop : 27th – 31st Aug,2012 ,Univ College of Technology, Osmania University
- Social Reform & Education – A: Tool of Women Empowerment-some reflections.: National Seminar: 18th& 19th Mar 2012: SreeKandukuriVeereshalingam Theistic College, Rajahmundry
- Training Programme on Environmental Governance to Combat Climate Change 16th to 18thFeb 2012, Dr. MCR HRD Institute, Hyderabad.

Till ---2011

- 6-Day Teacher Induction Training Program : Training : 26th to 31st Dec 2011 : Government College (Autonomous) Rajamahendravaram
- Microbial Diversity –Exploration and Bioprospecting : National Seminar . 27th - 28th Mar 2010. : Department of Microbiology, Kakatiya University, Warangal, Telangana State.
- Indo-German workshop on Molecular Epidemiology of Infectious Diseases- held at University ofHyderabad during November 28-30, 2008.
- 5th International Alkaline Phosphatase Symposium, : (Presented Poster) : International Symposium,: May 16th to 19th 2007 : Organised by Hypophosphatasia Europe. Huingne – France.
- International Workshop on defining the future –HIV/ AIDS-Next 25 years. : University of Hyderabad, Hyderabad –December 18-20, 2006.
- 32nd Annual Conference of Indian Immunology Society 24-27th Nov- 2005. Post Graduate Institute of Medical Education and Research, Chandigarh-India.
- 31st Annual Conference Indian Immunology Society, Nov-2004.Centre for Biotechnology, AnnaUniversity, Madras-India.
- 30th Annual Conference of Indian Immunology Society: 23-25th Nov- 2003. Sanjay Gandhi Institute of Medical Sciences, Lucknow-India.
- Continuing Medical Education course on ‘Basic Immunology’ held at Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow on November 22,2003.

Published papers :

- Alkaline Phosphatase Activity of Normal and Malignant Human Lymphocytes
B. Nageshwari • RamchanderMerugu
Ind J ClinBiochem <https://doi.org/10.1007/s12291-018-0757-7>
- Studies on 3H-levamisole binding to murine splenic lymphocytes, normal, malignant human lymphocytes and fate of levamisole in cell culture.
B Nageshwari ,R Merugu
Biomedical and Biotechnology research journal : DOI : 10.4103/bbrj.bbrj_106_17
- Effect of levamisole on expression of CD138 and interleukin-6 in human multiple myeloma cell lines.
Nageshwari B, Merugu R
Indian Journal of Cancer ; DOI : 10.4103/ijc.IJC_349_17
- Effect of levamisole on alkaline phosphatase activity and immunoglobulin secretion of lipopolysaccharide stimulated murine splenic lymphocytes.
BadguNageshwari, RamchanderMerugu.
Biomedical and Biotechnology Research Journal 2017; 1; 151-6.
- Bioremediation of waste waters by the anoxygenic photosynthetic bacterium *Rhodobacter sphaeroides* SMR 009. RamchanderMerugu, **NageshwariBadgu**. International Journal of Research in Environmental Science and Technology. 2014; 4(1):16-19.
- Biofabrication and Characterization of Zinc Nanorods from Aloe vera. ValluruSrinivas Rao, **DrB Nageshwari**, International Journal of Science and Research, 2013.
- Human Alkaline phosphatases in health and disease: A mini review **NageshwariBadgu** andRamchanderMerugu International Journal of Research in pharmaceutical Sciences.2013; 4(3), 371-379.
- Factors influencing the production of hydrogen by the purple non sulphur phototrophic bacterium *Rhodospseudomonas acidophila* KU001. RamchanderMerugu, M.P. PratapRudra, **NageshwariBadgu**. Microbial Biotechnology, (2012), 5(6), 674-678.
- Photoproduction of hydrogen under different cultural conditions by alginate immobilized *Rhodospseudomonas palustris* KU003. RamchanderMerugu, M.P. PratapRudra, **Nageshwari Badgu**. International Journal of Environment and Bioenergy, 2012 , 4 (3) : 141 – 146
- Influence on different cultural conditions on photoproduction of hydrogen by *Rhodospseudomonas palustris* KU003. RamchanderMerugu, M.P. PratapRudra, **NageshwariBadgu**. International Scholarly Research Network, ISRN Renewable Energy, Volume 2011, Article ID 328984
- Anti-proliferative effect of levamisole on human myeloma cell lines *in vitro*. MadduriRamanadham, and **BadguNageshwari**. Journal of Immunotoxicology, 2010; 7(4): 327–332.

Summary of Completed Research Project

Title : Effect of levamisole on human multiple myeloma cell lines *in vitro*- Alkaline Phosphatase activity as a “putative” target.

Mitogen / antigen stimulated B lymphocytes express Alkaline Phosphatase (APase) activity. In resting B cells and in resting & activated T cells, APase activity is negligible. Enhanced enzyme activity has been observed during the proliferative phase and differentiation of B cells (in mice and rats) indicating that the enhanced expression of APase correlates well with proliferation and differentiation of B cells. Lymphocytes from normal human did not express APase activity, whereas lymphocytes isolated from bone marrow samples of multiple myeloma patients showed significantly high APase activity. Human Myeloma cell lines (RPMI 8226 and U266 B1) as well as bone-marrow derived myeloma cells from multiple myeloma patients express APase activity. Therefore, myeloma cells (malignant differentiated B cells) offer an experimental system to understand the role of APase in B cell differentiation and carcinogenesis. Levamisole, an inhibitor of TNAPase has been used to study its effect on TNAPase and associated functions. Levamisole inhibited the mitogen-induced proliferation and differentiation of B cells and the proliferation of the myeloma cell lines via inhibition of APase in murine system and cell lines in a dose-dependent manner. Levamisole also inhibited the release of immunoglobulin by the myeloma cells indicating a role of APase in proliferation and differentiation function (immunoglobulin secretion). The function of APase in dephosphorylation was monitored by expression of CD138 on the myeloma cells. The shedding of CD138 has been shown to be increased by tyrosine phosphorylation of its cytoplasmic domain. APase is involved in dephosphorylation of the tyrosine. Inhibition of APase by levamisole resulted in phosphorylation of cytoplasmic domain there by causing subsequent shedding of CD138. The binding of levamisole to alkaline phosphatase in normal and myeloma cells has been confirmed using ³H-levamisole.

Techniques used:

- Isolation of lymphocytes from mouse spleen, human peripheral blood and bone marrow samples of myeloma patients.
- Culture and Maintenance of isolated primary cells and established cell lines both adherent and suspension culture.
- Cell lines handled : B cell lines : RPMI 8226 and U66 B1, T cell line : Sup T1, Hep G2 : Yac - 1: murine T cell lymphoma.
- Mitogenic / antigenic stimulation of primary lymphocytes isolated from mouse and human peripheral blood.
- Lymphocyte proliferation and cytotoxicity assays using ³H-Thymidine and MTT.
- Cytochemical staining of lymphocytes.
- Purification of Alkaline phosphatase.

- Activity staining of enzyme on polyacryamide gel.
- Phosphatase assays : alkaline phosphatase and pyrophosphatase.
- Immunostaining, Immunofluorescence, , Confocal microscopy, Immunoprecipitation, immunodiffusion.
- Raising polyclonal antibodies / Preparation of antiserum, ELISA, Blotting technic.
- Dot Blot assay
- Flow cytometry (FACS)
- Isolation of DNA, RNA and protein.
- SDS and Native PAGE gels.
- Microbial culture, Preparation of competent cells, *E. coli* transformation, Molecular cloning, designing primers.
- PCR, RT-PCR, Agarose gel electrophoresis.
- Phosphatase assay.
- Intracellular localisation of enzyme alkaline phosphatase using 3H-levamisole
- Assays for Apoptosis :Caspase assay, DNA fragmentation, Cytochrome - *c* assay.
- Chromatography: Gel exclusion, Ion-exchange, Affinity, TLC, HPLC.