

Dr. Gunanidhi Dhangadamajhi
gunarmrc@gmail.com, guna_dmajhi@rediffmail.com

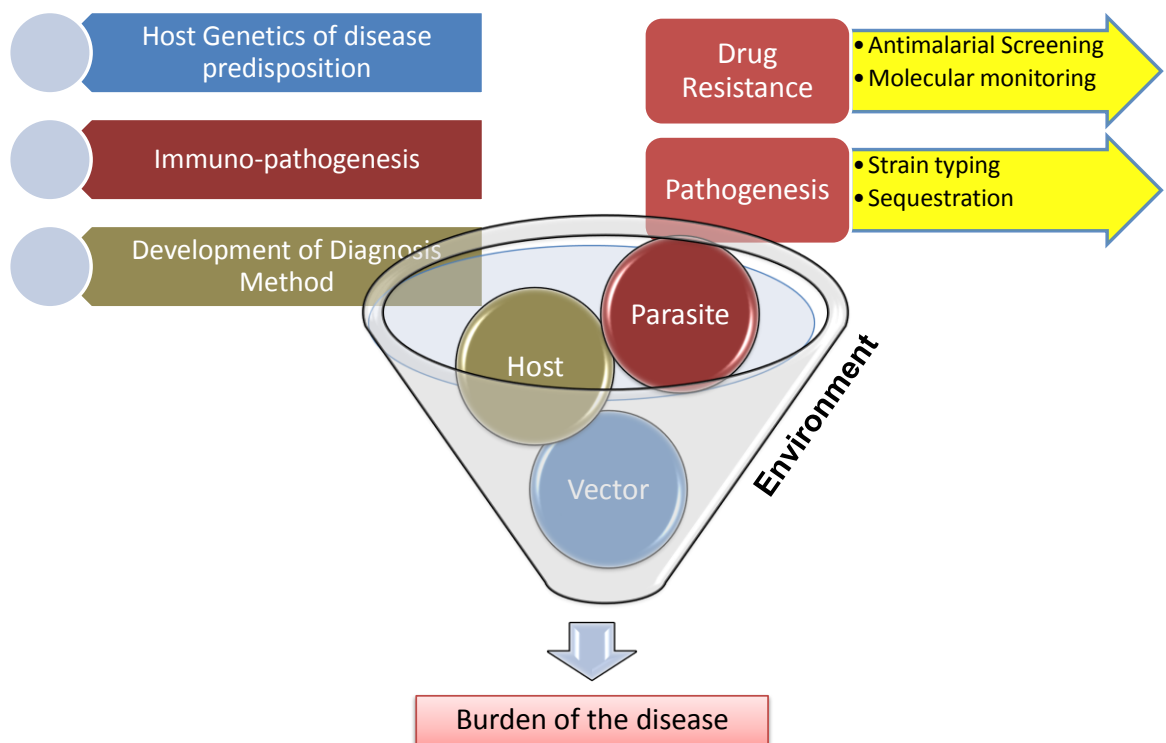
Department of Biotechnology,
North Orissa University, Baripada
Odisha, 757003, INDIA
Mob: 91-9439705468



A. Research Interest: Specialization & Present Research Area:

Malaria: Drug Resistance, Parasite Epidemiology, Immunogenetics and Pathogenesis.

Key Research Areas in the Laboratory of Dr. G Dhangadamajhi



My laboratory focuses on:

- *In vitro* antimalarial activity, phytochemical screening and their toxicity
- Target specific identification of antimalarials from synthetic derivatives (using rDNA technology) and their cytotoxic effects.

- ▶ Molecular Surveillance of antimalarial resistance
- ▶ Malaria Pathogenesis and Human immunogenetics.

Present Position: Lecturer at Department of Biotechnology (16th July 2012 – till date)

B. Educational Qualification

2006 – 2011	Doctoral Thesis: Role of Nitric Oxide (NO) in pathogenesis of severe <i>Plasmodium falciparum</i> malaria. Utkal University, Bhubaneswar, Orissa, India.
2004 – 2006	Master of Science in Botany with Specialization in Molecular Biology and Biotechnology (First class) Ravenshaw College, Cuttack, Utkal University Bhubaneswar, Orissa, India
2001 – 2004	Bachelor of Science (Undergraduate) in Botany (Hon's), Chemistry and Zoology (First class with distinction) Government College, Bhawanipatna, Sambalpur University, Sambalpur Orissa. India

C. Academic Achievements

- ▶ Qualified CSIR-UGC JRF Dec 2005 [CSIR-UGC JRF is a fellowship awarded through national eligibility test for pursuing PhD]
- ▶ Short listed for Shyama Prasad Mukharjee Fellowship Test 2005-06 [Top 20% of the CSIR-UGC JRF awardees in an academic year are short listed].
- ▶ Qualified GATE, Feb 2006 with All India Rank of 71 and Score 99.28 percentile [GATE is the entrance examination for postgraduate programmes in Indian Institute of Sciences (IISc) and Indian Institutes of Technology (IITs).]
- ▶ Qualified CSIR-UGC NET June-2006

D. Scholarship Received

- (1) Junior Research Fellowship by CSIR from 17th October to 2008 October
- (2) Senior Research Fellowship by CSIR from October 2008 to 17th October 2011.

E. Post Doctoral Scholarships Awarded

- (1) Post doctoral fellowship at **Indiana University School of Medicine**, South Bend (A partnership with University of Notre Dame), USA from 1st August 2012 to 30th September 2015.
- (2) Two years resident post doctoral fellowship at **Centre for Disease Control (CDC)**, Atlanta, USA by **American Society of Microbiology** from 1st October 2012.

£: these fellowships could not be availed due to my joining at NOU as lecturer in Biotechnology

F. Publications

1. **Dhangadamajhi G**, Mohapatra BN, Kar SK, Ranjit MR. The CCTTT pentanucleotide microsatellite in iNOS promoter influences the clinical outcome in *P. falciparum* infection. **Parasitol Res.** 2009, 104: 1315-20.
2. **Dhangadamajhi G**, Mohapatra BN, Kar SK, Ranjit MR. Endothelial nitric oxide synthase gene polymorphisms and *Plasmodium falciparum* infection in Indian adults. **Infect Immun.** 2009, 77: 2943-7
3. **Dhangadamajhi G**, Mohapatra BN, Kar SK, Ranjit MR. Genetic variation in neuronal nitric oxide synthase (nNOS) gene and susceptibility to cerebral malaria in Indian adults. **Infect Genet Evol.** 2009, 9: 908-11
4. **Dhangadamajhi G**, Kar SK, Ranjit MR. High prevalence and gender bias in distribution of *Plasmodium malariae* infection in central east-coast India. **Trop Biomed.** 2009, 26: 326-33
5. **Dhangadamajhi G**, Mohapatra BN, Kar SK, Ranjit MR. A new allele (eNOS4e) in the intron 4 (VNTR) of eNOS gene in malaria infected individuals of the population of Orissa (an eastern Indian state). **Nitric Oxide.** 2010, 22: 58-9

6. **Dhangadamajhi G**, Mohapatra BN, Kar SK, Ranjit MR. Gene polymorphisms in angiotensin I converting enzyme (ACE I/D) and angiotensin II converting enzyme (ACE2 C→T) protect against cerebral malaria in Indian adults. **Infect Genet Evol.** 2010 10: 337-41
7. Rout R, **Dhangadamajhi G**, Mohapatra BN, Kar SK, Ranjit MR. Genetic diversity of PfEMP1-DBL 1- α and its association with severe malaria in a hyperendemic state of India. **As Pac J Trop Med** (2010) 412-420.
8. **Dhangadamajhi G**, Rout B, Kar SK, Ranjit MR. Genetic diversity of *Plasmodium vivax* in a hyper-endemic area predominated by *Plasmodium falciparum*; A preliminary study. **Trop Biomed.** 2010, 27; 578-584.
9. Rout R, **Dhangadamajhi G**, Mohapatra BN, Kar SK, Ranjit MR. High CR1 level and related polymorphic variants are associated with cerebral malaria in eastern-India. **Infect Genet Evol** 2011, 11: 139-44.
10. **Dhangadamajhi G**, Kar SK, Ranjit MR. The survival strategies of malaria parasite in the red blood cell and host cell polymorphisms. **Malaria Research and Treatment.** 2010, doi:10.4061/2010/973094
11. Rout R, **Dhangadamajhi G**, Ghadei M, Mohapatra BN, Kar SK, Ranjit M. Blood group phenotypes A and B are risk factors for cerebral malaria in Odisha, India. **Trans R Soc Trop Med Hyg** 2012, 106(9):538-43
12. #Das Sutar S, #**Dhangadamajhi G**, Kar SK and Ranjit MR. Molecular monitoring of antimalarial drug resistance among *Plasmodium falciparum* field isolates from Odisha, India. **ACTA Tropica** 2013 126 (1): 84–87. # = **equally contributed authors**

G. Workshop/Conferences attended:

- **2009:** Genetic Epidemiological Methods for Detection of Complex Human traits Organized by TCG-ISI Centre for Population Genomics, Kolkata, India and University of Pittsburgh, Pittsburgh, USA. February 23-28
- **2009:** X International Symposium on Vectors & Vector Borne Diseases Organized by Goa University and National Institute of Malaria Research, INDIA. November 4-6
- **2010:** International Symposium on Recent Advances in Ecology and Management of Vectors and Vector Borne Diseases Organized by Defense Research & Development Establishment, Ministry of Defense, Gwalior, INDIA. December 1-3,
- **2011:** 8th Joint Annual Conferences of The Indian Society for Malaria and other Communicable Diseases & the Indian Association of Epidemiologists Organized by RMRC, Bhubaneswar, Odisha, INDIA. April 15-17
- **2011:** XI International Symposium on Vectors & Vector Borne Diseases Organized by RMRCT Jabalpur, INDIA. October 15-17,

► **2013:** XII International conference on Vector and Vector Borne Diseases organized by Mohanlal Sukhadia University, Udaipur, Rajasthan, India, 313001 and National Academy of Vector Borne Diseases, Bhubaneswar, 16-18 September 2013

H. Abstracts published at National/International Conferences:

1. High Prevalence and gender bias in distribution of *Plasmodium malariae* infection in Central East-coast India. Published at X International Symposium on Vectors & Vector Borne Diseases, Goa, INDIA. 2009; P-139
2. Genetic variation of nitric oxide synthase (NOS) genes and susceptibility to cerebral malaria in Indian adults. Published at X International Symposium on Vectors & Vector Borne Diseases, Goa, INDIA. 2009; P-194
3. Complement receptor 1 density polymorphisms and severe *Plasmodium falciparum* malaria in Orissa. Published at International Symposium on Recent Advances in Ecology and Management of Vectors and Vector Borne Diseases, Gwalior, INDIA. 2010; P-91
4. Genetic Diversity of *Plasmodium vivax* in Orissa. Published at 8th Joint Annual Conferences of The Indian Society for Malaria and other Communicable Diseases & the Indian Association of Epidemiologists, Bhubaneswar, INDIA. 2011; P-89
5. The Blood Group Phenotypes “A” and “B” are the Risk Factors for Severe *Plasmodium falciparum* Malaria in Orissa. Published at XI International Symposium on Vectors & Vector Borne Diseases, Jabalpur, INDIA. 2011; P-97
6. The insertion/deletion polymorphism in the 5’UTR of TLR2 gene influences surface expression of TLR2 on monocytes and is associated with protection from cerebral malaria in India published at XII International conference on Vector and Vector Borne Diseases organized by MSU, Udaipur, Rajasthan, and NAVBD, Bhubaneswar, 16-18 September 2013.

I. Technical Expertise

Molecular Biology: DNA isolation, Polymerase Chain Reaction (PCR), PCR-RFLP, Allele specific PCR, RT-PCR, Agarose gel electrophoresis, Native polyacrylamide gel electrophoresis

(PAGE), Gel extraction and purification of DNA, Recombinant DNA technology, SSCP and sequencing.

Biochemistry and Immunology: Plant extracts preparation, ELISA, Flow-Cytometry, cell culture, SDS-PAGE and Western blotting, HPLC

Microbiology: Bacteria culture, Malaria parasite (*P falciparum*) culture, staining and identification procedure

J. Computer skills and Bio-informatics: Proficient in MS-Windows including MS-office. Softwares like Graphpad prism (version 4.0) for analysis of general statistics, microsat tool kit for checking, formatting and analyzing haploid and diploid microsatellite data, SNP Alyze software (version 7.0), arlequin (version 3.1), PopGene (version 1.31) and Haploview (version 4.2) for analysis of population genetics data. BLAST search and Primer designing.