

## CURRICULUM VITAE

*Dr. Neelima Mishra*

**Designation:** Scientist 'F' (Sr. Deputy Director)

**Affiliation:** ICMR-National Institute of Malaria Research (Indian Council of Medical Research) Sector-8, Dwarka, New Delhi - 110 077, INDIA

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### *Profile*

Working on Antimalarial drug resistance monitoring and involved in Operational Research studies of national importance on Malaria in endemic and hard to reach areas in the country. Awarded Kshanika ICMR Oration Award in Biomedical Research for 2015.

### *Research Interest:*

- Development of Newer diagnostic tools for malaria
- Antimalarial drug resistance monitoring in *P. falciparum* and *P. vivax* malaria through in-vivo, in-vitro & molecular studies
- Antimalarial Pharmacokinetics and drug metabolism through HPLC
- Treatment practices and quality of antimalarials

### *Scientific Achievements:*

#### **Generated evidence based data on:**

- As lead investigator, she has developed novel diagnostic method for detecting the different species of Plasmodium with detection limit of <1 parasite/ul blood (Indian patent filed; International patent filing under process).
- Developed 25 sentinel sites under Nationwide sentinel site monitoring system in collaboration with National programme (NVBDCP) since 2009 for conducting therapeutic efficacy studies on Artemisinin based combination therapy in *P. falciparum* and chloroquine in *P. vivax* malaria across country. The in-vivo and molecular marker studies provided evidence for change of drug policy for falciparum malaria in seven states of Northeast India during 2012.
- As Principal Investigator, she has generated data on prevention strategies (Intermittent screening and treatment) for malaria in pregnancy in four districts of Jharkhand state

during 2012-2017, conducted GCP trial on Artemisinin resistance monitoring at two sites of North east India during 2013-14 and ,

- Studies on drug use practice including sale of oral Artemisinin Monotherapy leading ban in the country (2009).
- As Principal Investigator, involved in screening for G6PD enzyme deficiency including genotyping in North east India in more than 1000 patients (2012-2019).

### *Research Guidance*

Recognized as Registered guide for Ph.D in various universities:

- Dept. of Biotechnology, Goa University since 2008,
- Dept. of Biotechnology Jiwaji University, Gwalior, since 2010
- Dept. of Biotechnology IGNOU, New Delhi since 2012,
- Dept. of Biotechnology, Kumaon University, Nainital since 2013
- Dept. of Biotechnology, Indraprastha University (Delhi university), during 2014-2017.

### *Selected Publications*

1. Ram Suresh Bharti, Kapil Vashisht, Naseem Ahmed, Ajay Nayak, Veena Pande, **Neelima Mishra\*** First report of glucose-6-phosphate dehydrogenase (G6PD) variants (Mahidol and Acores) from malaria-endemic regions of northeast India and their functional evaluations in-silico *Acta Tropica* Volume 202, February 2020, 105252
2. Supriya Sharma, Kamlesh Kaitholia, Ram Suresh Bharti, Mrigendra Pal Singh, **Neelima Mishra\***, Novel molecular diagnostic technique for detecting the different species of Plasmodium. *Infection, Genetics and Evolution*, Volume 78, March 2020, 104122
3. Jayne Webster, Vinitkumar Mishra, Anupkumar Anvikar, Irene Kuepfer, Jenna Hoyt, Jane Bruce, Brian Greenwood, Daniel Chandramohan, Neena Valecha and **Neelima Mishra** Evaluation of Implementation of Intermittent Screening and Treatment for Control of Malaria in Pregnancy in Jharkhand, India. *The American Journal of Tropical Medicine and Hygiene* Available online: 09 March 2020, DOI: <https://doi.org/10.4269/ajtmh.19-0514>
4. Irene Kuepfer, **Neelima Mishra**, Jane Bruce, Vinit Mishra, Anupkumar R Anvikar, Sanghamitra Satpathi, Prativa Behera, Atis Muehlenbachs, Jayne Webster, Feiko terKuile, Brian Greenwood, Neena Valecha and Daniel Chandramohan. Effectiveness of intermittent screening and treatment for the control of malaria in pregnancy: a cluster randomised trial in India *BMJ Glob Health*. 2019; 4(4): e001399. Published online 2019 Jul 29. doi: 10.1136/bmjgh-2019-001399
5. **Mishra N**, Bharti RS, Mallick P, Singh OP, Srivastava B, Rana R, Phookan S, Gupta HP, Ringwald P, Valecha N. Emerging polymorphisms in falciparum *Kelch 13* gene in Northeastern region of India. *Malaria Journal*. 2016 Dec 3;15(1):583. (**Impact factor 3.079**)
6. **Mishra N**, Prajapati SK, Kaitholia K, Bharti RS, Srivastava B, Phookan S, Anvikar AR, Dev V, Sonal GS, Dhariwal AC, White NJ. Surveillance of artemisinin resistance

in *Plasmodium falciparum* in India using the *kelch13* molecular marker. Antimicrobial agents and chemotherapy. 2015 May 1;59(5):2548-53. **(Impact factor 4.476)**

7. **Mishra N**, Kaitholia K, Srivastava B, Shah NK, Narayan JP, Dev V, Phookan S, Anvikar AR, Rana R, Bharti RS, Sonal GS. Declining efficacy of artesunate plus sulphadoxine-pyrimethamine in northeastern India. Malaria journal. 2014 Jul 22;13(1):284. **(Impact Factor: 3.079)**
8. **Mishra N**, Singh JP, Srivastava B, Arora U, Shah NK, Ghosh SK, Bhatt RM, Sharma SK, Das MK, Kumar A, Anvikar AR. Monitoring antimalarial drug resistance in India via sentinel sites: outcomes and risk factors for treatment failure, 2009-2010. Bulletin of the World Health Organization. 2012 Dec;90(12):895-904. **(Impact Factor 5.25)**
9. **Mishra N**, Anvikar AR, Shah NK, Kamal VK, Sharma SK, Srivastava HC, Das MK, Pradhan K, Kumar H, Gupta YK, Gupta P. Prescription practices and availability of artemisinin monotherapy in India: where do we stand?. Malaria journal. 2011 Dec 13;10(1):360. **(Impact Factor 3.19)**
10. Elizabeth A Ashley,. **Mishra N...**, Nicholas J White. The spread of artemisinin resistance in falciparum malaria. The New England Journal of Medicine 2014, 371:411-23. **(Impact Factor: 59.6)**.