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Education

Ph.D., Biotechnology JN Tech University – India	Sep. 2013
PG Diploma, Patent Law NALSAR University of Law and Research – India.	June 2011
M.S, Biotechnology Bangalore University – India.	June 2004
B.S, Medical Lab Technology SV University – India.	Apr. 2002

Appointments

TIGS Visiting Scientist University of California, San Diego - USA Generating new strategies for combatting malaria, dengue fever, Zika and Chikungunya.	July 2018 to Present
Specially Appointed Researcher Osaka University – Japan # Clinical development of blood stage malaria vaccine candidate BK-SE36. # Study on host-parasite interaction of malaria infection. # Drug-induced antimalarial immunity as a novel strategy for parasite control.	Apr. 2014 to May 2018
Foreign Post-Doctoral Fellow RIKEN – Japan Development of <i>Plasmodium</i> and <i>Toxoplasma</i> DNA gyrases as drug targets.	Apr. 2013 to Mar. 2014
Scientist – C ICGEB – India Downstream process, analytical development & technology transfer to Industry (PfMSP-Fu to Zydus Cadila).	Jan. 2013 to Mar. 2013
Research Associate ICGEB – India Studies on blood stage malaria vaccine candidates (PfAARP, PfMSP-Fu & PfAMSP Fu).	Jan. 2011 to Dec. 2012
Teaching Faculty JN Tech University - India Teaching specific topic modules in Molecular Biology, Genetic Engineering and General & Industrial Microbiology to Master students. Organizing summer training in the campus and placing students for summer training programs in various research institutes.	Sep. 2007 to Dec. 2010
Junior Research Fellow JN Tech University - India Research on anti-malarial drug artemisinin and its precursor arteannuin B.	June 2005 to May 2007

Awards

- Industry sponsored Taniguchi memorial fellowship, BIKEN, Japan (2015, 2016, 2017, 2018).
- Travel fellowship award (Japan to Brazil), JSPS, Japan (2017).
- Global Health Innovative Technology project fellowship, Japan (2014).
- RIKEN post-doctoral fellowship, Japan (2013).
- DBT fellowship award (2011-2012).
- Research Excellency award, India (2009).
- National award (1st prize), ANVESHAN 2009, India.
- Cash award (100,000 INR), ANVESHAN 2009, India.
- Zonal award (1st prize), ANVESHAN 2009, India.
- Best poster and cash award (International conference, VIT), 2009, India.
- 1st rank in all India research entrance examination conducted by JNT University in 2007, and fellowship for pursuing Ph.D. (full-time).

Grants

1. **Grant-in-Aid for Early-Career Scientists (18K15136) from The Japan Society for the Promotion of Science (JSPS)**, Apr 2018 - Mar 2020 (discontinued).
¥4,160,000 - Principal Investigator
"Drug-induced antimalarial immunity as a novel strategy for parasite control".
2. **CELESTIAL Labs**, Aug 2009
₹ 2,50,000 – Co-Principal Investigator with Mangamoori LN (JNTUH)
"Purification and biological assay development for CLP-1".
2. **VIVIMED Labs**, Dec 2007
₹ 2,50,000 – Co-Principal Investigator with Mangamoori LN (JNTUH)
"Identification & Purification of enzyme involved in bioconversion root synthesis of sodium ascabyl phosphate".

Publications – Submitted/ In Press / Peer Reviewed

1. Tougan T, **Edula JR**, Takashima E, Morita M, Tsuboi T, Horii T (2018) Uptake mechanism of host serum proteins by malaria parasite Plasmodium, Nat. Commun. Under peer review.
2. **Edula JR**, Tougan T, Horii T (2018) Exposure of phosphatidylserine induced by compounds enhances phagocytosis of malaria-infected red blood cells, Sci. Rep. Under peer review.
3. Nirianne MQ, Yagi M, **Edula JR**, Tougan T, Horii T (2018) First in human phase-1 clinical trail of blood stage malaria vaccine BK-SE36/CPG, Clin Infect Dis. Under peer review.
4. **Edula JR**, Sahoo BR, Satish T, Rao PS, Mangamoori LN. (2017) Dioxygenase from *Streptomyces pactum* A2: production, structural and functional attributes with biotransformation activity to enhance the production of artemisinin. Int J Biol Macromol, under peer review.
5. Tougan T, **Edula JR**, Takashima E, Morita M, Shinohara M, Shinohara A, Tsuboi T, Horii T. (2018) Molecular camouflage of *Plasmodium falciparum* merozoites by binding of host Vitronectin to P47 fragment of SERA5, Sci Rep.8:5052. DOI:10.1038/s41598-018-23194-9.
6. Sahoo, Maruyama K, **Edula JR**, Tougan T, Lin Y, Lee YH, Horii T, Fujiwara. (2017) Mechanistic and structural basis of bioengineered bovine cathelicidine-5 with optimized therapeutic activity. Sci Rep.7: 44781. doi: 10.1038/srep44781.

7. Kalra A*, **Edula JR***, Gupta PK, Pandey AK, Chauhan VS. (2016) Antigenicity of a bacterially expressed triple chimeric antigen of *Plasmodium falciparum* AARP, MSP-3₁₁ and MSP-1₁₉: PfAMSP-Fu₃₅. PLoS One. 11 (10): e0165720. doi: 10.1371/journal.pone.0165720. *Equal contribution.
8. Nagano S, Lin TY, **Edula JR**, Heddle JH. (2014) Unique Features of Apicoplast DNA Gyases from *Toxoplasma gondii* and *Plasmodium falciparum*. BMC Bioinformatics. 15:416. doi: 10.1186/s12859-014-0416-9.
9. Pandey AK, Reddy KS, Sahar T, Gupta S, Singh H, **Edula JR**, Asad Mohd, Siddiqui FA, Gupta P, Singh B, More KR, Mohammed A, Chitnis CE, Chauhan VS, Gaur D. (2013) Identification of a potent combination of key *P. falciparum* merozoite antigens that elicit strain transcending parasite neutralizing antibodies. Infect Immun. 81(2): 441-51. doi: 10.1128/IAI.01107-12.
10. **Edula JR**, Parcha SR, Mangamoori LN. (2010) Intracellular expression and purification of recombinant enzyme involved in bioconversion of Arteannuin B to Artemisinin in *Escherichia coli* expression system. Rec. Res. Sci. Tech. 3(1): 90-96.
11. **Edula JR**, Parcha SR, Mangamoori LN. (2010) Cloning and expression of the gene involved in enhanced production of artemisinin, an effective anti-malarial drug by bioconversion. J Biotechnol. 150:91-96. doi: 10.1016/j.jbiotec.2010.08.234.
12. Beevi SS, Mangamoori LN, Subathra M, **Edula JR**. (2010) Hexane Extract of *Raphanus sativus* L., Root Inhibits Cell Proliferation and Induces Apoptosis in Human Cancer Cells by Modulating Genes Related to Apoptotic Pathway. Plant Foods Hum Nutr. 65 (3): 200-9. doi: 10.1007/s11130-010-0178-0.
13. Kumari M, Chandel AK, **Edula JR**, Mangamoori LN. (2009) Value-added enzymes: Production technologies & commercialization, Biotechnology: An Indian Journal, 3(2), 90-98.
14. Chandal AK, Narasu ML, Rudravaram R, **Edula JR**, Pasha P, Ravindra P, Rao LV. (2007) Forecasting bioethanol production from agro crop residues in Andhra Pradesh state: a case study. Tech Spec. Vol.1,(2),12-27.

Scientific Meetings & Invited Presentations

BIKEN Annual Research Meeting, Osaka University

Jan. 2018

Research update presentation

International Conference on Biotechnology and Bioengineering-Trends, JNTUH, India

Mar. 2017

Led by JNTUH, DBT & SNIST

Invited talk " Uniqueness of the blood-stage malaria vaccine candidate BK-SE36"

Japan – Brazil Malaria Workshop, Sao Paulo, Brazil

Mar. 2017

Led by Nagasaki University, Japan & University of Sao Paulo, Brazil

Invited presentation

AP Science Congress 2010 & Annual Convention of APAS, JNTUH, India

Nov. 2010

Led by Andhra Pradesh Academy of Science & JNTUH, India

Invited presentation

International Conference on Biotechnology: A Global Scenario, Kakatiya Univ., India

Nov. 2010

Invited presentation

International Conference on Recent Advances in Drug Discovery, Kakatiya Univ., India

Oct. 2010

Invited presentation

14th International Biotechnology Symposium & Exhibition on Biotechnology for the Sustainability of human society, Univ. of Bologna, Italy

Sep. 2010

Invited presentation

International Conference on Biotechnological Solutions for Environmental Sustainability, VIT Univ., India

Oct. 2009

Invited presentation

ANVESAN – 2009, Student Research convention, National wide, Bengal Engineering & Science Univ., India

Feb. 2009

Invited research competition

Led by Association of Indian Univ. & Bengal Engineering & Science Univ., India

ANVESAN – 2009, Student Research convention, South zone, SV Univ., India

Feb. 2009

Invited research competition

Led by Association of Indian Univ. & SV Univ. India

International Conference on Frontiers in Biological Sciences, NIT-R, India

Oct. 2009

Invited poster presentation

6th Technology Led Entrepreneurship Program, IICT, India

June 2009

Invited Training

Led by CSIR-HRD & IICT, India

Workshops and Conferences Organized

1. **AP Science Congress 2010 & Annual Convention of APAS** organized by Andhra Pradesh Academy of Science and JNTUH, India, Nov. 2010.
2. **Two week hands on training program on Modern Techniques in Biotechnology**, JNTUH, India, May – June 2008.
3. **Two week hands on training program on Molecular Biology Techniques** (A TEQIP sponsored program), JNTUH, India, Nov. – Dec. 2006.

Professional Affiliations

1. American Society for Biochemistry and Molecular Biology
2. Japanese Society of Tropical Medicine
3. The Molecular Biology Society of Japan
4. Japanese Society of Parasitology
5. The Japanese Society for Vaccinology