# Dr. DEVENDRA LINGOJWAR



Ph.D. Biochemistry (INDIA), Post Doc Hematology – Medicine (USA) 1108, Sairaj Heights, Punavale, Bengaluru Mumbai Highway, Pune 411033, INDIA

dplingojwar@gmail.com +91 7020970265

Ph.D. Biochemistry and Post Doc in Medicine with 18 plus years of experience in Molecular Biology: R&D, Genomics, Viral Diagnostics, Viral Vaccine, Protein Engineering, Protein Therapeutics, Protein Purification and Drug Development.

# Brief career summary: Total Experience: 18 years

8 years in Biotech companies: Clinical Trials, Viral testing pharma products, CRO and Mentoring: Pune India.

4 years in Research Institute: NIV ICMR Pune and NIIH ICMR Mumbai, India.

3 years in University and Academic Research: Pune, India.

2 years in Research Institute in USA: Albert Einstein College of Medicine, NYC, New York, USA.

1 year Teaching experience: Pune, India.

Nationality: Indian Date of Birth: October 18, 1975 Present Location: Pune, INDIA

# AIM: To explore *Molecular Biology* for providing solutions for diagnostics and therapeutics

#### **EDUCATION**

1. Ph.D. Biochemistry: University Department of Chemistry, University of Pune, Pune, India (May 2009 to Oct 2013)

Ph.D. thesis title: Molecular Identification of Bacterial Species from Pristine Alkaline Crater Lake, Lonar and Molecular studies of "a" and "c" chains of Fo subunit of ATP Synthase Gene"

- 2. M.Sc. Biotechnology: SRTM University Campus School of Life Sciences, Nanded, India (Jul 1997 to Jun 1999)
- M.Sc. thesis title "Studies in the resistance of malaria parasite to antimalarial drugs: A case study of Nanded city"
- 3. B.Sc. Biology with Chemistry, GN College of Science, Ballarpur, Nagpur University, India (Jul 1993 to Jun 1996)

# AWARDS, HONORS, AND FELLOWSHIPS

- 1. "Distinguished Bioentrepreneur 2020" by Microbiologists Society, India (2021) "Contributions in the time of COVID19 pandemic for lab BSL2 lab setup for COVID19 diagnostics, phase I and phase II Clinical Trials and overall impact in the field of microbiology"
- 2. Best oral presentation "Int. Conf. on Revolution of Lab Med. in Molecular Biology" NIIH ICMR, Mumbai, India (2017) "PEG Recombinant Albumin is a novel second generation active plasma expander: Role of pattern of PEGylation in inducing molecular, solution and SCD therapeutic activity of PEGAlb"
- 3. "Post-Doc Fellowship in Medicine" by Albert Einstein College of Medicine New York, USA (2014)
- "Research in the development of therapeutic reagents for sickle cell disease"
- 4. "DHYAS foundation 2012" by Excellence group, India in Health and Environment safety as Team Leader (2012)" Best NGO in the state of Maharashtra in the field of Health and Environ safety category" awarded for contribution in Sickle cell disease in Maharashtra.
- 5. "Research Fellowship in Virology" by Indian Council of Medical Research (ICMR), New Delhi, India (2002) "Generation of infectious cDNA clone for hepatitis viruses for recombinant DNA vaccine research".

# RESEARCH EXPERIENCE

- 1. Senior Scientist Molecular Biology: ADEETECHGENE BIOTECH PVT. LTD. (March 2020 onwards)
- 2. Post Doc. Research Fellow in Medicine Albert Einstein College of Medicine, New York USA (Jul 2014 to Jul 2016)
- 3. Scientist Molecular Biology: ATG LAB Pune, (Oct 2007 to March 2020, except PhD and Post Doc duration)
- 4. Scientific Staff Protein Biochemistry: (Project Assistant-II) IRSHA, Bharati Vidyapeeth University Pune, (Jan 2006 to Jan 2007)
- 5. Principal Investigator in Sickle Cell Disease RESEARCH Pune, India (Jul 2005 to Dec 2005)
- 6. Senior Research Fellow in Virology: National Institute of Virology (ICMR New Delhi) Pune, (Jul 2002 to Jun 2005)
- 7. Research Fellow in Biochemistry: University of Pune Pune, (Oct 2000 to Jun 2002)
- 8. Laboratory Technician Hematology, Genetics: B.J. Medical College Pune and NIIH Mumbai, INDIA (Sep 1999 to Oct 2000)

# **TEACHING EXPERIENCE**

1.Asst. Prof.: Dr. D.Y. Patil Biotech and Bioinfo Institute - Pune, (Jan 2007/Aug 2007) for "Molecular Virology"

2.AssT. Prof.: Indian Institute of eBusiness Management for MBA Biotech (Aug-Sep 2007) for "Business in Biotech"

# SCIENTIFIC ADVISOR / TECHNICAL CONSULTANT FOR MOLECULAR DIAGNOSTICS AND VIROLOGY

- 1. EON Biotechnology UK, for COVID19 regulatory documentation, RTPCR, Rapid Antigen
- 2. NMB Therapeutics Inc, New York USA: COVID19 Therapeutics
- 3. House of Diagnostics Delhi, India. BSL2 Lab design for COVID19 testing
- 4. Anabio Bengaluru, India, BSL2 design and project proposal till recruitment for mask testing against COVID19
- 5. Government Medical College Baramati India: COVID19 BSL2 lab design to making it functional
- 6. SSLS, Pune India: Virology Biosafety lab BSL2+ establishment: concept to design
- 7. NVBDCP Surat, India: Dengue Virus serotyping by qualitative and Real-Time PCR diagnostics
- 8. PRADO Preclinical Pvt. Ltd. Pune, India: Adventitious agent's testing for private pharma companies

#### CONTRIBUTION AND ACCOMPLISHMENTS

(With study design, execution, analysis, reporting, presentation, publication, plus business development)

# 1. ADEETECHGENE BIOTECH PVT. LTD. (Academic projects and industrial CRO services in startup, biotech business)

Research projects: 1. Genetic Modifier studies and 2. haplotyping studies in Indian Sickle cell disease patients.

- **a. Clinical trials (as Central Lab):** Phase II clinical trials for Dr. Reddy's Lab including lab work to sample shipment and logistics, Coordinating pan India with 10 clinical sites, Viral load analysis and reporting to sponsor (antiparasitic drug repurposing for COVID19, Phase I clinical trials pharmacokinetics and pharmacodynamics for MedRegneCo USA, for COVID19 drug discovery. Handled more than 15 staff for clinical trials project coordination.
- b. BSL2 Lab setup for Government and private sector for COVID19 Diagnostics and BSL2 lab for model Coronavirus testing.
- c. Scientific Consultant Virologist for Rapid Antigen and RTPCR kit documentation for USFDA, WHO dossiers submission EONBT UK
- d. COVID19 B2B services: Antiviral testing, RTPCR and Antigen kits (RT PCR kit design, Business development and Antigen kit supply to local government bodies: Diagnocure, Angstrom Biotech, Phase Scientific (HK).
- e. Academic and industrial lab services: CRO services for skill development in Biotechnology and Applied Bioinformatics specific in Molecular Biology, PCR Genomics, DNA barcoding etc. in Human genetics and genomics, Molecular Microbiology, Plant Molecular Biology etc. Skill development in Biotech PCR genomics: 200+students in 6-month projects, training, Biotech Internship and workshops. General administration, staff training, course and content development. Lab administration, and business development. Handled more than 10 to 20 staff/students depending on various projects in CRO and academic research.

# 2. Albert Einstein College of Medicine New York, USA (R&D project Drug development: Human Genetics)

Plasma expander-based drug designed using protein engineering, compared two isomers of PEG-Albumin. Using intravital microscopy and examined in transgenic Sickle Cell Disease (SCD) mice. Highly compact plasma expander due to higher packing density and compactness, induces more colloidal osmotic pressure and resolves vaso-occlusive crisis (VOC) better than the other molecules.

# 3. National Institute of Virology, NIV - ICMR Pune, India (R&D project Drug development: Human Virology)

First time reported - Human Parvovirus B19 virus in Indian SCD patients using serology and genomics. First time established SCD affected tribal sera bank in India for virus and antibody testing in Indian tribal population. Contributed for Dengue virus projects during Dengue outbreak in 2003 in Pune district: Dengue virus platelet assay for FCRγII receptor, Generation of Hepatitis E virus infectious cDNA clones for rDNA vaccine, Chandipura virus NT test etc.

# 4. ATG LAB, Pune, INDIA (Academic projects and industrial CRO services in startup)

Provided transferable skills in molecular biology including PCR genomics and DNA barcoding in bacteria, plants, viruses, human and parasites. Skill development in Biotech PCR genomics: 100+students in 6-month projects, 300+ students in training, 400+ students in workshops. General administration, staff training, course and content development. Provided consultancy with lab services to pharma and biopharma companies for adventitious agent testing (22 viral and non-viral adventitious agents testing panel in duck and swine), Provided R&D services to academic institutes. Guidance to M.Sc. and Ph.D. students with publications as guide and coguide.

# 5. Regional Society for Education and Research in Community Health (RESEARCH), Pune INDIA (Non-profit, for human genetics studies in NGO)

SCD epidemiology (10,000 tested till date), clinical genomics, genetics modifiers and molecular haplotyping. Grant writing and submission, lab establishment in the rural tribal area, training staff, Arranging Diagnostic camp, Marriage Counseling and Genetic Counseling for prenatal diagnosis, SCD clinical management. Project idea, training students, data analysis and troubleshooting

# 6. Interactive Research School for Health Affairs, Bharati Vidyapeeth University – Pune, INDIA (Nutraceuticals for Beta thalassemia, ADHD and type 2 diabetes: Omega 3 fatty acid and cardiovascular marker studies)

First Time Reported- Mg deficiency in type 2 diabetes, which gained most of the citations in micronutrient deficiency in type 2 diabetes. Beta thalassemia field level screening test development (award: Lockheed Martin Gold Medal). Conducted research on these two prominent projects, diabetes and beta-thalassemia.

# 7. Biochemistry Division, Chemistry Department, University of Pune - Pune, INDIA (Entry level academic basic research which leads to PhD studies with same guide at later years)

Initial work on alkaliphiles formed the basis of Bioenergetic studies: Molecular aspects of ATP synthase about thermodynamically challenging proton uptake in Alkaliphile. First Time Reported: no specific amino acid residues in ATP synthase is required for bacteria to grow at high pH. PhD studies application: Bioenergy generation

# 8. B.J. Medical College – Pune and NIIH ICMR Mumbai, INDIA (Entry level job which made my way to human genetics studies in future career)

Contributed to the first-ever multicentric project amongst Primitive Tribal Population of India on SCD by ICMR. Fieldwork and lab establishment in tribal areas, population screening for genetic analysis, diagnosis of hemoglobinopathies-Beta Thalassemia, SCD, HbF and G6PD deficiency in tribal areas by arranging camps. Sample preparation for further molecular tests at NIIH Mumbai.

### COMPLETED RESEARCH PROJECTS: HUMAN VIROLOGY: Dengue, HEV, Parvovirus B19, HHV6, CMV, COVID19 etc.

- 1. Prevalence and pathogenesis of human parvovirus B19 in sickle cell affected population
- 2. Generation of infectious cDNA clones for hepatitis E virus for developing rDNA vaccine
- 3. Viremia and altered platelet aggregation: early triggers of thrombocytopenia in Dengue virus infection
- 4. Preparation of tribal sera bank at ICMR NIV for sickle cell anemia affected tribes for different viruses
- 6. Neutralizing antibodies against Chandipura virus in Western Indian tribal population affected by Sickle Cell Disease
- 7. Human Herpes Virus 6, Cytomegalovirus and Human Parvovirus B19 virus in aplastic anemia cases in KEM Mumbai
- 8. **Serotype** analysis of **Dengue virus** from Western India Surat NVBCDP, Gujarat
- 9. Novel **Coronavirus SARS 2 COVID19**: Diagnostics and Therapeutics: Lab set up Maharashtra Govt. Medical college, Private labs in Delhi and Bengaluru, Regulatory documentation for kits, (EONBT, UK), **Clinical trials** for COVID19 **Viral load** phase II (Dr. Reddy's Lab, INDIA) and KIT preparation of **Pharmacokinetics** and **pharmacodynamic** studies phase I (MedRegen USA), etc.

### COMPLETED RESEARCH PROJECTS: HUMAN GENETICS: Sickle Cell Disease: HbS, HbE and Beta Thalassemia etc.

- 1. Intervention program on nutritional anemia and hemoglobinopathies in Indian primitive tribes
- 2. Sickle Cell Disease (SCD) epidemiology studies in Western India and Central India
- 3. Prevalence and pathogenesis of B19 virus in Sickle Cell Disease affected tribes in Western, Central and Southern India
- 4. Sickle Cell Disease **prevalence studies** in Eastern India (Chhattisgarh) and Central India (Maharashtra)
- 5. Sickle Cell Disease epidemiology studies of tribal and non-tribal population groups from Central and South India
- 6. Beta thalassemia POC diagnostic kit development: Lockheed Martin Gold medal awarded project for point of care assay development
- 7. **Single blood drop technology** for diagnosis of homozygous Sickle Cell Disease (Maharashtra) point of care **assay development** for Sickle Cell Disease
- 8. Variation of abnormal hemoglobin: Sickle Cell Disease hemoglobin (HbS), Hb E and HbAJ in Durg Chhattisgarh
- 9. Research in the Development of Therapeutic Reagents for Sickle Cell Disease (drug discovery at EINSTEIN, New York USA)
- 10. Clinical genomics study of Indian Sickle Cell Disease patient with high fetal hemoglobin (Ongoing)
- 11. Sickle Cell Disease Sanger's Sequencing based molecular haplotype studies: Fetal Hb > 20% Vs HbF < 5% (Ongoing)
- 12. Conducting status survey of SCD and issuance of cards to tribal students in schools and hostels in Maharashtra (Ongoing)

#### RESEARCH SKILLS AND EXPERTISE

# A. Molecular Biology: Diagnostics and Therapeutics: Virology and Bacteriology

#### Viruses studied: Dengue, Hepatitis E virus, Human Parvovirus B19, HHV6, CMV, COVID19

Bioinformatics for viral and bacterial gene studies, primer design for PCR and primer and probe design for Real Time PCR, protocol standardization, DNA, RNA and protein extraction by manual and kit based protocols, PCR, Reverse Transcriptase PCR, Real-Time PCR (Eppendorf, Applied Biosystems, MJ mini, Bio-Rad), ELISA and virus NT, cloning and gene expression for infectious cDNA clones, Maxi and Miniprep of DNA, Viral molecular taxonomy and phylogeny, Viruses studied: Dengue, Hepatitis E virus, Human Parvovirus B19, HHV6, CMV, COVID19 for Real Time PCR Kit development, primer and probe design using RdRp and E/S/N gene, Bacterial 16S rRNA molecular phylogeny. Viral and Non - Viral infectious agents testing for pharma companies: viruses, bacteria, fungus and mycoplasma under adventitious agent testing (22 test panel of swine and duck viral and non-viral agents), Viral peptide design B19 virus, Platelet assays for Dengue virus, Dengue Virus serotyping by Real Time PCR and malarial parasite genotyping by Sanger's method. Negative staining for Transmission electron microscopy, virus isolation by animal cell culture e.g. HepG2 cell line and co-culture with primary liver culture for Hepatitis E virus. Acute and chronic phase viral peptide synthesis etc. Viral and Bacterial rDNA technology and genetic engineering, PCR amplified product cloning, TA clone, Transformation, Restriction digestion of PCR product and plasmid, screening of blue white colonies, colony PCR, Sanger sequencing and sequence analysis, submission to NCBI, protein conjugation and protein purification for viral vaccine studies etc.

#### B. Immunodiagnostics and molecular diagnostics: Virology: Human Parvovirus B19

Human Parvovirus B19 prevalence in SCD patients, Tribal sera bank for viral prevalence and blood component separation: Plasma, RBC, PBMC; DNA, protein isolation, PCR and Sanger's DNA Sequencing, Multiple Sequence alignment and phylogeny, IgM ELISA, IgG ELISA for establishing Transient Aplastic Crisis in sickle cell disease patient, for the first time in India using genotyping of the virus.

# C. Protein Engineering and Protein Therapeutics: Hematology Genetics: Sickle Cell Disease

Protein modification by PEGylation chemistry for plasma expander based protein therapeutics, human Albumin and recombinant Albumin modification using Cys34, purification and characterization, Analytical and preparative chromatography i.e. Size Exclusion Chromatography (SEC), Ion Exchange Chromatography (IEC), (Mono Q), DEAE, CM52), Amersham Pharmacia Biotech FPLC AKTA Basic and AKTA purifier preparatory system with Unicorn 7 software for scale-up of protein products, Colloidal Osmotic Pressure and Viscosity studies, molecular radius by Dynamic Light Scattering (DLS), Thermal Transition protein folding studies by Digital Scanning Calorimetry (DSC), MALDI TOF Mass Spectra data analysis, Final product development and preclinical trials on transgenic SCD mice models, BERK and NY1DD by intra vital microscopy.

# D. Epidemiology, Diagnostic and Clinical Studies: Hematology Genetics: Sickle Cell Disease

Fieldwork preparation in tribal areas, lab set up in the field, IV and finger-prick blood collection, blood component separation, processing for plasma/sera bank, RBCs and PBMCs; DNA and protein isolation, Solubility test and Hb electrophoresis, NESTROFT for thalassemia, Fetal Hb estimation by Singer's method and Bio-Rad HPLC Variant, Pedigree analysis and gene frequency studies, marriage counseling for sickle cell carrier population, prenatal diagnosis by ARMS PCR, genetic counseling.

#### E. Clinical Genomics: Sanger's DNA sequencing for Hematology Genetics Sickle Cell Disease

Polymorphisms in cis acting elements in beta globin gene cluster for BCL11A using Sanger's DNA sequencing and sequence analysis: Human genome map studies for beta-globin cluster region primer designing, PCR amplification of exon 1, exon 2 and exon 3 of Beta Globin (HBB), A Gamma Globin (HBG1) and G Gamma Globin (HBG2) with their promoter and introns regions, DNA sequencing by Sanger's method for clinical genomics studies, Analysis of clinical biochemistry, HbF level and reporting of SNPs.

# Beta globin haplotype studies using Sanger's DNA sequencing and sequence analysis: Sickle Cell Disease

Xmn I (G  $\gamma$  region), Hinc II ( $\varepsilon$  region, 5'  $\psi\beta$  and 3'  $\psi\beta$ ), Hind III (A  $\gamma$  region, and G  $\gamma$  region),) Rsa I (5' $\beta$ ), Ava II ( $\beta$ ) and Hinf I (3' $\beta$ ) etc.

# CONTRIBUTIONS IN RESEARCH

# Molecular Biology: Virology, Microbiology and Human Genetics

- 1. First time reported **Human parvovirus B19** associated transient aplastic crisis in Sickle Cell Disease patients in India, sequence data will be significant for global B19 viral vaccine for humans.
- 2. Basic research on bacterial adaptation studies at alkaline pH from Pristine alkaline Lake, Lonar, applications in bioenergy generation better option than solar energy.
- 3. Developed single blood drop technology for mass screening for **Sickle Cell Disease** for cost effective testing, proposed to Health Ministry Govt. of India.
- 4. Conducted NGO based projects for understanding epidemiology of Sickle Cell Disease in India
- 5. Trained more than one thousand biotech students in Molecular Biology (mostly PCR genomics and Sanger's DNA sequencing chromatogram data interpretation and data analysis using bioinformatics online tools and software) with wet lab facilities for 8 plus years.

#### SCIENTIFIC CONTRIBUTIONS AND ACADEMIC ACTIVITIES

- A. Workshops conducted in Molecular Biology and genomics: 13 workshops 550+ beneficiary
- B. Volunteer judge at NYC Science and Engineering Fair: Cell and Molecular Biology: March 2015
- C. Volunteer judge at NYC Science and Engineering Fair: Cell and Molecular Biology: March 2016
- D. Volunteer judge at NYC Science and Engineering Fair: Cell and Molecular Biology: March 2016
- E. "Bio-entrepreneurship in Genomics" Patkar Varde College Goregaon Mumbai (Feb, 2018),
- F. Member of Academic Council: D.Y. Patil Education Society Kolhapur, India for Biotechnology for year 2020 2022.
- G. Member of Board of Studies: Bajaj College of Science, Wardha India for Biotechnology for year 2020- till date
- H. Delivered Invited lectures:
- 1. "Bio-entrepreneurship in Genomics" Patkar Varde College Goregaon Mumbai (Feb., 2018),
- 2. "Applications of Molecular Markers in Animal Diversity Assessment" Wadia College, Pune (Oct., 2018),
- 3. "Bio entrepreneurship: Fun, Business, Risks and sometimes success" SRTM University, Nanded. (Mar., 2019),
- 4. "Sickle Cell Disease in India and The World" DY Patil Education Society Kolhapur (Sep, 2019)
- 5. "Success Story as Bioentrepreneur" Microbiologists society of India and Bajaj college of Science, Wardha, Webinar (Jul , 2020)
- 6. "Sickle Cell Disease: "Epidemiology, Diagnostics, Pathogenesis, Therapeutics, and way forward" in India and The World" Biotechnology Day 2022, SRTM University Nanded (Dec., 2022)

# I. Upcoming August 2023.

Co-convener and scientific advisory committee member for the upcoming National conference on "Sickle Cell Disease Elimination by 2047: Ways forward to make the mission Possible" to be held in August 2023 at Jaipur. Collaboration of ADEETECH® Pune and Biotechnology Dept. Central University Rajasthan.

**E. Reviewer for National and International journals:** Scientific Reports, Journal of Genetic Syndromes & Gene Therapy, Journal of Phylogenetics & Evolutionary Biology, Journal of data mining in genomics and proteomics, Current Agriculture Research Journal, Transcriptomics, Current Science

# PUBLICATIONS (Full Length Papers available in Google Scholar, ResearchGate, etc.)

1. NCBI database DNA and Protein (88): All corresponding and first or senior authored) (3 submitted in May 2023 and 14 under publication sequences for Sickle cell haplotype and genetic modifiers, 11+ 5.8S-ITS2-28S nucleotide data of Indian medicinal plants)

NCBI: https://www.ncbi.nlm.nih.gov/nuccore/?term=lingojwar

2. Publications in International and National Journals, (18 journal publications) with 296 citations; Hi Index 6, i10 index 6.

https://scholar.google.co.in/citations?user=tsq9ab0AAAAJ&hl=en&oi=ao

- 3. International and National Conferences abstracts: (25)
- 4. https://www.researchgate.net/profile/Devendra\_Lingojwar2 (RG Score 182.1) (57.68% citations, 24.47% full text)
- 5. https://www.linkedin.com/in/dr-devendra-lingojwar-71378039/

#### **PUBLICATIONS**

- 1. Henu Kumar Verma, Yashwant Kumar Ratre, L.V.K.S Bhaskar, Tarun Sahu, **Devendra Purushottam Lingojwar** Hematopoietic stem cell transplant therapy, clinical trials, complications, and quality of life for patients with Sickle cell anemia: Clinical potential and future perspectives. Iran J Ped Hematol Oncol. 2022, Vol 12, No 4, 272-302
- 2. **Devendra Lingojwar**, Savita Bhutoria, Fantao Meng, Sangeetha Thangaswamy, Henny H Billett, Caterina Minniti, Amy Tsai, Marcos Intaglietta, Craig A Branch, Seetharama A Acharya, Therapeutic Activity of Peg Albumin in Transgenic Mouse Model of Sickle Cell Disease Is a Function of the Pattern of Pegylation, Blood (2016) 128 (22): 4848.
- 3. Sarita Lingojwar, Gayatri Sonawane and **Devendra Lingojwar\*** "Molecular identification of Indian medicinal plant tulsi (Ocimum tenuiflorum Linn.) by Internal Transcribed Spacer 2 region" Medicinal Plants Vol. 8 (4), December 2016, 267-271
- 4. **Devendra Lingojwar\***, Pramod Gupta, Savita Bhutoria, Sarita Lingojwar, Nikhil Mishra, Anil Kumar (2016) "Variation of abnormal hemoglobins concentrated in Durg, Chhattisgarh: A brief note based on cross-sectional study" Journal of Genetic Disorder and Genetic Reports 5:2
- 5. Santosh A. Misal, **Devendra P. Lingojwar**, Mahendra N. Lokhande, Pradeep D. Lokhande, Kachru R. Gawai "Enzymatic transformation of nitro-aromatic compounds by a flavin-free NADH reductase from Lysinibacillus sphaericus" Biotechnology Letters January 2014, 36(1), 127-131 (PMID 24068503)
- 6. **Devendra Lingojwar**, Ravikant Jadhav and Kachru Gawai "Alkaliphile specific motif analysis of Stenotrophomonas species DL18 F1Fo-ATP synthase c-subunit isolated from Indian alkaline Soda Lake, Lonar." Current Science May 2013, 104(9), 1216-1218
- 7. **Devendra Lingojwar**, Ravikant Jadhav, Sanket Khobragade and Kachru Gawai "Isolation and identification of alkaliphiles from Indian Soda Lake, Lonar and their applications in Microbial Fuel Cell" SRTMU's Research Journal of Science March 2013, 2(1), (ISSN No. 2277-8594)
- 8. Santosh A. Misal, **Devendra P. Lingojwar**, Kachru R. Gawai "Properties of NAD (P) H Azoreductase from Alkaliphilic Red Bacteria Aquiflexum sp. DL6" Protein Journal 2013, 32, 601-608 (PMID 24186471)
- 9. S.A. Misal, V.D. Bajoria, **D.P. Lingojwar** and K. R. Gawai "Purification and Characterization of Nitroreductase from red alkaliphilic bacterium Aquiflexum sp. DL6" Applied Microbiology and Biochemistry, 2013, 49(3), 249-254 PMID 23882943
- 10. **Devendra Lingojwar**, Ravikant Jadhav and Kachru Gawai "Isolation and identification of alkaliphile Stenotrophomonas species DL18 from Indian Soda Lake, Lonar and analysis of F1FoATP synthase a-subunit" Dec 2012, 1(53), (doi: 10.3410/f1000research.1-53.v1)
- 11. Khanapurkar, R. S., Paul Nilesh, Desai D. M., **Lingojwar, D. P.**, Raut, M. R., and Gangawane, A. K. "Molecular identification of Tinospora sinensis by ITS2 sequence analysis." International Journal of Molecular Biology, 2012, 3(2), 55-57
- 12. Khanapurkar, R. S., Desai D. M., Gudekar N.S., Lingojwar, D. P., Raut, M. R., Vichare V.V., and Gangawane, A. K. "Molecular identification of Tinospora cordifolia by ITS2 sequence analysis." International Journal of Biochemistry and Biotechnology, July-Dec 2012, 3(2), 91-94 (ISSN0976-6235)
- 13. Hariomsing Powar, **Devendra P. Lingojwar** and Vijay S. Wadhai, Isolation of bacteria from Personal Computer Hardware and its molecular Detection by 16s rRNA hyper variable Region (V4) Specific Sequence Analysis Asian Jr. of Microbiol. Biotech. Env. Sci.2012, 14(4), 547-552, (ISSN:0972-3005)

- 14. Santosh A. Misal, **Devendra P. Lingojwar**, Ravindra M. Shinde and K. R. Gawai "Purification and Characterization of Azoreductase from alkaliphilic bacterium Bacillus badius'. Process Biochemistry June 2011, 46(6), 1264-1269
- 15. Vishal Gaddelpalliwar, A.Y. Dawande and **Devendra Lingojwar** "Comparative studies on hyper variable regions of 16S ribosomal RNA in alkaliphiles of Lonar Lake: A Bioinformatics approach" Asiatic J. Biotech. Rec. 2010, 1(3), 200-213
- 16. **Devendra p. Lingojwar,** Diagnosis of sickle cell anemia by single blood drop technology, Indian Patent Journal, 2008 Date of Publication 05/Dec/2008. Indian Patent Journal Mumbai Dec 2008. Application No. 2384/MUM/2008/A
- 17. Diwan AG, Pradhan AB, **Lingojwar DP**, et al "Serum Zinc, Chromium and Magnesium levels in type 2 Diabetes" International Journal of Diabetes in Developing Countries, 2006,26(3), 122-123
- 18. Kate SL and **Lingojwar DP** "Epidemiology of Sickle cell disorder in the state of Maharashtra" International Journal of Human Genetics, 2002, 2(3), 161-167

# Manuscripts submitted / under submission (sickle cell disease) (first / corresponding author\*)

- 1. Ananthanarayanan, Aparna; Bhutoria, Savita; Hazarika, Lima; Lingojwar, Sarita; Ghatbandhe, Pankaj; **Lingojwar, Devendra\*** "Role of microRNA in Sickle Cell Disease Pathogenesis and Therapeutics". Annals of Human Genetics (Ref. No. AHG-REV-17-0041)
- 2. **Devendra Lingojwar**, Savita Bhutoria, Craig Branch, Marcos Intaglietta, Seetharama Acharya\* "PEGylation Induced Colloidal Plasma Expander Like Properties of PEG-recombinant Albumin: Influence of Pattern of PEGylation in Inducing Plasma Expansion Properties" (with PI, Albert Einstein College of Medicine, NY USA)
- 3. **Devendra Lingojowar,** Sudam Kate, Shobha Gangodkar, Millind Gore, Akhileshchandra Mishra, Atanu Basu\*. Human Parvovirus B19 infection in some Tribal Populations from India with Homozygous Sickle Cell Disease. (with PI, at NIV ICMR, Pune INDIA)

Presentation at State, National and International conferences: (\*corresponding/\$presenting author) Only Sickle Cell Disease studies: Epidemiology, Pathogenesis and drug development

- 1. **Devendra Lingojwar**, Sudam Kate\*. "Sickle thal in Sickle Cell Anaemia Detection Camp" National C3 Thalassemia Conference, theme: Care, Curb, Cure Thalassemia. Thalassemia society of India, Pune chapter Nov 13, 2022.
- 2. **Devendra Lingojwar,** Sangeetha Thangaswamy, Savita Bhutoria, Craig Branch, Seetharama Acharya\*. Therapeutic Activity of Semisynthetic Colloidal Active Plasma Expanders in Transgenic SCD Mice, Berk: Efficacy is Better on Improving Tissue Oxygenation. 3rd Global Congress on SCD, February 21-24, 2017, Bhubaneswar, Odisha, India (Oral presentation)
- 3. **Devendra Lingojwar**, Savita Bhutoria, Craig Branch, Marcos Intaglietta, Seetharama Acharya\*. PEG recombinant Albumins is a Novel Second Generation Active Colloidal Plasma Expander: Role of pattern of PEGylation in inducing Molecular, Solution and SCD Therapeutic Activity of PEG Alb. International Conference on Revolution of Laboratory Medicine in Molecular Biology NIIH ICMR Mumbai Feb 15-17, 2017 (*Best oral presentation award*)
- 4. **Devendra Lingojwar\***, Anuja Kapre, Prathamesh Kale, Ravikant Jadhav, Lima Hazarika, Neeraja Danda, Savita Bhutoria, Sarita Lingojwar. Blood transfusion events in pediatric non-tribal population groups affected by SCD in Central India. Accepted in conference presentation: International Conference on Revolution of Laboratory Medicine in Molecular Biology NIIH ICMR Mumbai Feb 15-17, 2017

- 5. **Devendra Lingojwar\***, Ravikant Jadhav, Prathamesh Kale, Lima Hazarika, Neeraja Danda, Savita Bhutoria, Anuja Kapre, Sarita Lingojwar. Inherent Moderate Anemia In The Community And Its Possible Correlation With Frequency Of Hemolytic Events In SCD: Pilot Study From Tribal Rural Central India. Accepted in conference presentation: International Conference on Revolution of Laboratory Medicine in Molecular Biology NIIH ICMR Mumbai Feb 15-17, 2017
- 6. **Devendra Lingojwar**, Savita Bhutoria, Fantao Meng, Sangeetha Thangaswamy, Henny H Billett, Caterina Minniti, Amy Tsai, Marcos Intaglietta, Craig A Branch and Seetharama A Acharya\* "Therapeutic Activity of PEG Albumin in Transgenic Mouse Model of SCD Is a Function of the Pattern of Pegylation" American Society of Hematology 58th Annual Meeting and Exposition, San Diego CA, USA December 3-6, 2016 (abstract to be published in Blood December 2016 issue)
- 7. **Devendra Lingojwar\***, Ravikant Jadhav, Lima Hazarika, Prathamesh Kale, Chetan Shinde, Sarita Lingojwar "Sickle cell anaemia prevalence amongst different tribal and non-tribal population groups from Ballarpur, district Chandrapur, Central India". Sickle Cell in Focus 2016, NHLBI, NIH Washington DC, June 2-3, 2016
- 8. **Devendra Lingojwar**, Savita Bhutoria, Craig Branch and Seetharama Acharya\* "Influence of Pattern of PEGylation on the structure and Supra Perfusion Resuscitation Fluid Like Activity of PEG-Albumin" Dennis Shields Postdoctoral Poster Session, Albert Einstein College of Medicine, New York, USA May 11, 2016
- 9. **Devendra Lingojwar\***, Pramod Gupta, Ravikant Jadhav, Saurabh Gawande, Vaishnavi Digaskar, Nikhil Mishra, Anil kumar, Sarita Lingojwar "Presence of hemoglobin E in Durg Chhattisgarh:" "Pune public health conference 2014-IPHA-IAPSM Joint State Conference" organized by the Interdisciplinary School of Health Sciences, University of Pune, Pune INDIA 25-26/02, 2014
- 10. George Thomas, Vinit Pereira and **Lingojwar D\*** "Single Blood Drop Method for SCD Lab Detection in Field." "5<sup>th</sup> International Symposium on Genetics, Health and Disease" organized by Department of Human Genetics & Centre for Genetic Disorders, Amritsar India Feb 17-19, 2008
- 11. Grishma Rane, **Devendra Lingojwar\*** "SCD prevalence in Pimple Gurav, Pune city" State level conference in biotechnology and workshop on Advanced genetic Engineering and Molecular Biology Techniques, Modern College of Arts, Science and Commerce, Shivajinagar Pune, INDIA December 29 to 30, 2007
- 12. **Devendra Lingojwar\*** "SCD: Epidemiology, diagnosis and pathogenesis" Sickle cell sanjivani project report after completion of project Montfort ITI funded by Catholic Relief Services Mumbai Ballarpur INDIA Sep 2005
- 13. .Devendra Lingojwar, Sudam Kate, Millind Gore, Atanu Basu\* "Prevalence of Human Parvovirus B19 in some tribal population groups from India affected by SCD" International symposium on Emerging Viral Infections: New Frontiers & Challenges, oragnized by National Institute of Virology Indian Council of Medical Research October 11 to 13, 2004 Pune INDIA
- 14. **Devendra Lingojwar\***, Sudam Kate, "Field work for SCD diagnosis" II International update on SCD and other sickling syndromes organized by Regional Haemoglobinopathies Detection and Management Centre, Indira Gandhi Medical College Nagpur, INDIA February 26 to 29, 2004
- 15. Kate SL, **Lingojwar DP\*** "Epidemiology of Sickle cell disorder in the state of Maharashtra" National seminar on Modern Biology",Organized by, Centre for Biotechnology and Department of environmental sciences, Nagarjuna University, Nagarjunanagar, INDIA August 28-30, 2003
- 16. Kate SL\*, **Lingojwar DP**, Basutkar, Kate AS, "Diagnosis of sickle cell disorder and hemoglobinopathies: field work experience" Haldane symposium on Sickle cell disorder organized by society of Bionaturalist, Genetics Department, Barkatullah University Bhopal, INDIA January 2000

Presentation at State, National and International conferences: (\*corresponding/ \$presenting author) Microbiology (Virology, Parasitology and Bacteriology)

- 17. **Devendra Lingojwar\*** "Modified method of hemozoin isolation" State level symposium on Recent Trends in Biotechnology for Rural and Industrial Development sponsored by UGC India, Rajarshi Shahu Mahavidyala, Latur INDIA March 20 to 21, 1999
- 18. Devendra Lingojwar\* "Drug resistance of Plasmodium falciparum: A case study of Nanded city" 13th National Congress of Parasitology, Centre for Applied Genetics, Bangalore University, Bangalore INDIA February 24 to 26, 1999
- 19.Atanu Basu\*, Pradeep Barde, **Devendra Lingojwar**, Akhilesh Mishra "Viremia and altered platelet aggregation: early triggers of thrombocytopenia in dengue virus infection?" American Society for Virology, 23rd Annual Meeting: McGill University, Montreal, Quebec, CANADA, July 10 to 14, 2004
- 20.Atanu Basu\*, Shobha Gangodkar, G Mulik, **Devendra Lingojwar**, Akhilesh Mishra "Ultrastructure of the Chittoor virus: A novel Bunyavirus isolated from India" American Society for Virology, 23rd Annual Meeting: McGill University, Montreal, Quebec, CANADA, July 10 to 14, 2004 (P16-2)
- 21.Santosh Misal, Ravindra Shinde, **Devendra Lingojwar**, Kacharu Gawai\* "Microbial Enzyme: A tool for Azo and Nitro reduction" Int. Conference on Emerging Trends in Chemistry ETIC, Savitribai Phule Pune University INDIA January 2010
- 22. Chetan Oturkar, **Devendra Lingojwar**, Kacharu Gawai\* "Isolation and molecular identification of catalytically active Bacillus lentus BI377 CH1 towards -N=N- cleavage". International Conference on Environmental Challenges: A global concern Jalandhar INDIA, October 2010 (P-120)
- 23. **Devendra Lingojwar**, Ravikant Jadhav, Sanket Khobragade, Sandeep Sarde, Santosh Misal, Kacharu Gawai\*, "Isolation and identification of alkaliphiles from Indian Soda Lake, Lonar and their applications in Microbial Fuel Cell" International Conference on Recent Innovations in Nano-Bio-Polymer-Pharmaceutical Technologies Nanded INDIA January 13 to 14, 2013
- 24. **Devendra Lingojwar**, Ravikant Jadhav, Kacharu Gawai\*, "Alkaliphile specific motif analysis of Stenotrophomonas species DL18 F1Fo- ATP synthase c-subunit isolated from Indian alkaline Soda Lake, Lonar" International Conference on Recent Innovations in Nano-Bio-Polymer-Pharmaceutical Technologies Nanded INDIA January 13 to 14, 2013
- 25. **Devendra Lingojwar\***, Rohini Mane, Gayatri Sonawane, Sarita Lingojwar. Internal Transcribed Spacer 2 (ITS2) region as a most convenient single amplification PCR-based maker for Ayurvedic plant identification (5th Bharatiya Vigyan Sammelan and Expo 2017, Fergusson College Pune) 11 to 14 May 2017.

# References and specific interest of guide /mentor:

- 1. Prof. Seetharama Acharya Albert Einstein College of Medicine, Bronx, NYC, USA (Post doc mentor: Protein Engineering based Sickle Cell Drug Discovery program in Sickle Transgenic mice)
- 2. Prof. Kachru Gawai, Biochemistry Div. Chemistry Dept. University of Pune, Pune, India. (Ph.D. Guide: Research in Extremophiles/alkaliphiles and protein biochemisty)
- 3. Padmshree Prof. Sudam Kate, Founder Director, Sudam Kate Research Foundation, Pune, India. (Early-stage mentor: Sickle cell Epidemiology studies in India)
- 4. Prof. Mahabaleshwar Hegde, Director Center for Innovation in Nutrition Health Disease, BVDM, Pune India. (Ex-Employer: Beta thal testing kit development, nutraceuticals for beta thalassemia and type 2 diabetes)