

Curriculum vitae

Samudrala Gourinath, Ph.D, FNA

Professor

School of Life Sciences

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Date of Birth: 16th April 1972

Academic Qualifications

YEAR	DEGREE	FIELD OF STUDY	INSTITUTION AND LOCATION
1999	Ph.D.	Biophysics – Crystallography	All India Institute of Medical Sciences, New Delhi, India
1995	M.Sc.	BioTechnology	University of Pune, Pune, India
1992	B.Sc. (Tech)	Chemical Technology	Loyola Academy, Osmania University, Hyderabad, India

Positions Held

- *July 2015 – present- professor, School of life Sciences, Jawaharlal Nehru University, New Delhi-110067, India.*
- *2016 – Guest faculty, Department of Biotechnology, South Asian University, New Delhi*
- *2012-July 2015. Associate professor, School of life Sciences, Jawaharlal Nehru University, New Delhi-110067, India.*
- *2003- 2012. Assistant Professor, School of life Sciences, Jawaharlal Nehru University*
- *2005, 2006 and 2007 summers. Visiting research fellow, Rosensteil Basic Medical Research Center, Brandeis University, Waltham, MA, USA.*
- *2000 – 2003. Postdoctoral Fellow, Rosensteil Basic Medical Research Center, Brandeis University, Waltham, MA, USA*
- *1999 – 2000. Senior Demonstrator, Department of Biophysics, All India Institute of Medical Sciences, New Delhi, India.*

Academic and Professional Honors

- SERB-STAR research award - 2021
- Visitors Award (Presidents Award)-2016 for Molecular Parasitology group at JNU.
- National Bioscience Award for career development 2013 (announced in June 2014), awarded by Department of Biotechnology, Ministry of Science and Technology, Govt. of India.
- Indo-US science and Technology Forum fellowship for 2010, Visited Prof. Niko Gregorif, HHMI, Brandeis University
- Innovative Young Biotechnologist Award for 2006 (**IYBA-2006**) by Department of Biotechnology, **Ministry of Science and Technology, Govt of India.**
- Awarded **DAAD (German academic exchange service)** fellowship for short term, 1998.
- 1996. Qualified for the **JRF/NET Fellowship** awarded by the **Council for Scientific and Industrial Research**, Government of India.
- 1996. Qualified the **Graduate Aptitude Test in Engineering** (percentile score 95.43).
- 1993-1995. Department of Biotechnology, Ministry of Science & Technology, Government of India fellowship for MSc Biotechnology 1993-1995
- 1987-1989. Awarded the **Telugu Vignana Parithoshikam (Andhra Pradesh state merit scholarship)** by **State Govt. Andhra Pradesh.**
- 1987. Awarded the **National merit scholarship** by **Govt. of India.**

Membership of Scientific Organizations

Elected fellow of Indian National Sciences Academy - 2019
Elected to GRC-2016
Elected Fellow of Telengana Academy of Sciences - 2016
Elected Fellow of AP Academy of Sciences - 2016
Indian Biophysical society
International union of crystallography
Indian Crystallographic Association
Protein Society, India
American chemical society

Publications in Peer-Reviewed Journals : 110 (Pubmed)

Ph.D students supervised : 17

As Co-supervisor – 9

Book Chapter in the books

1. **Ameobiasis: SPRINGER** Publishers (2015) Structural Biology of de novo Cysteine Biosynthetic Pathway Enzymes. Isha Raj, Sudhir Kumar, Mohit Mazumder, **S. Gourinath**
2. Poonam Kumari, Pragyan Parimita Rath and Samudrala **Gourinath**, titled “Structural and functional studies of serine biosynthetic pathway enzymes” in the book titled E. histolytica in “Entamoeba: Species, Classification and Biology”, by **Nova Science Publishers**, Inc. Hauppauge, NY 11788 USA (2020)


Publications in Peer-Reviewed Journals

1. D Sarkar, R Vijayan, **S Gourinath**, AK Sau (2022) A unique aromatic cluster near the active site of H. pylori CPA is essential for catalytic function. **Biophysical Journal** 121 (2), 248-262
2. N Kumar, PP Rath, P Aggarwal, S Maiti, NS Bhavesh, **S Gourinath** (2022) Unravelling the Biology of EhActo as the First Cofilin From Entamoeba histolytica. **Frontiers in cell and developmental biology**, 10, 785680-785680.
3. P Umarao, PP Rath, **S Gourinath** (2022) Cdc42/Rac Interactive Binding Containing Effector Proteins in Unicellular Protozoans With Reference to Human Host: Locks of the Rho Signaling. **Frontiers in genetics**, 124
4. Khan MZ., Singha B, Ali MF, Taunk K, Rapole S, **Gourinath S**, Nandicoor VK. (2021) Redox homeostasis in Mycobacterium tuberculosis is modulated by a novel actinomycete-specific transcription factor. **The EMBO Journal**, e106111.
5. S Devi, P Tomar, KF Tarique, **S Gourinath** (2021) Inhibiting pyridoxal kinase of Entamoeba histolytica is lethal for this pathogen. **Frontiers in cellular and infection microbiology**, 11, 660466.
6. R Vijayan, **S Gourinath** (2021) Structure-based inhibitor screening of natural products against NSP15 of SARS-CoV-2 revealed Thymopentin and Oleuropein as potent inhibitors. **Journal of proteins and proteomics**, 1-10
7. Nagaraja S, Cai MW, Sun J, Varet H, Sarid L, Trebicz-Geffen M, Shaulov Y, Mazumdar M, Legendre R, Coppée JY, Begley TJ, Dedon PC, **Gourinath S**, Guillen N, Saito-Nakano Y, Shimokawa C, Hisaeda H, Ankri

- S. (2021) Queuine Is a Nutritional Regulator of *Entamoeba histolytica* Response to Oxidative Stress and a Virulence Attenuator. **mBio**. **12**(2):e03549-20.
8. Ruhel R, Mazumder M, Gnanasekaran P, Kumar M, **Gourinath S**, Chakraborty S. (2021) Functional implications of residues of the B' motif of geminivirus replication initiator protein in its helicase activity. **FEBS J**. PMID: 34092039
 9. Kumari P, Vijayan R and **Gourinath S** (2021) Structural analysis of EhPSP in complex with 3-phosphoglyceric acid from *Entamoeba histolytica* reveals a basis for its lack of phosphoglycerate mutase activity. **IJBM**. **178**:1-10
 10. Singh RK, Kumar D, **Gourinath S**. (2021) Phosphoserine aminotransferase has conserved active site from microbes to higher eukaryotes with minor deviations. **Protein Pept Lett**. PMID: 33588715
 11. Dutta A, Sarkar D, Murarka P, Kausar T, Narayan S, Mazumder M, Ainavarapu SRK, **Gourinath S**, Sau AK. (2021) An evolutionary non-conserved motif in *Helicobacter pylori* arginase mediates positioning of the loop containing the catalytic residue for catalysis. **Biochem J**. **478**, 871-894. PMID: 33480396
 12. Kumar S, Vijayan R, Dash AK, **Gourinath S**, Tyagi RK. (2021) Nuclear receptor SHP dampens transcription function and abrogates mitotic chromatin association of PXR and ER α via intermolecular interactions. **Biochim Biophys Acta Gene Regul Mech**. **1864**(3):194683. PMID: 33444783
 13. KF Tarique, S Devi, P Tomar, MF Ali, SAA Rehman, **S Gourinath** (2020) Characterization and functional insights into the *Entamoeba histolytica* pyridoxal kinase, an enzyme essential for its survival. **J. Struct. Bio**. **212** (3), 107645
 14. Kumar S, Mishra S, **Gourinath S**. (2020) Structural and functional diversity of *Entamoeba histolytica* calcium-binding proteins. **Biophys Rev**. **12**(6):1331-41. doi: 10.1007/s12551-020-00766-6.
 15. Rath PP, and **Gourinath S**. (2020) The actin cytoskeleton orchestra in *Entamoeba histolytica*. **Proteins**. **88**, 1361-1375. doi: 10.1002/prot.25955.
 16. S Dharavath, R Vijayan, K Kumari, P Tomar, **S Gourinath** (2020) Crystal structure of O-Acetylserine sulphydralase (OASS) isoform 3 from *Entamoeba histolytica*: Pharmacophore-based virtual screening and validation of novel inhibitors. **Eur. J. of Med. Chem**, **192**, 112157.
 17. Kumari P, Idrees D, Rath PP, Vijayan R and **Gourinath S** (2020) Biochemical and biophysical characterization of the smallest pyruvate kinase from *Entamoeba histolytica*. **BBA proteins proteom**. **1868**: 140296.
 18. A Ahmad, S Mishra, Somlata, **S Gourinath** (2020) Role of kinases in virulence and pathogenesis of protozoan parasite *E. Histolytica*. **Frontiers in bioscience**, **25**, 1617.
 19. Verma D, Agarwal S, Keerthi V, Murmu A, **Gourinath S**, Bhattacharya A, Chary KR. (2020) Ca²⁺-binding protein from *Entamoeba histolytica* (EhCaBP6) is a novel GTPase. **Biochem Biophys Res Commun**. **527**:631-637.
 20. N Sabharwal, K Varshney, PP Rath, **S Gourinath**, U Das (2020) Biochemical and biophysical characterization of nucleotide binding domain of Trehalose transporter from *Mycobacterium tuberculosis*. **IJBM**, **152**, 109-116.
 21. Rani Komal, Tyagi Mitali, Mazumder Mohit, Singh Akanksha, Shanmugam Annaian, Dalal Krishna, Pillai Manoj, **Samudrala Gourinath**, Saroj Kumar, Srinivasan Alagiri (2020). Accelerated identification of serine racemase inhibitor from *Centella asiatica*. **Scientific Reports**. **10**. 4640

22. Tandon S, Manhas R, Tiwari N, Munde M, Vijayan R, **Gourinath S**, Muthuswami R, Madhubala R. (2020) Deciphering the interaction of benzoxaborole inhibitor AN2690 with connective polypeptide 1 (CP1) editing domain of *Leishmania donovani* leucyl-tRNA synthetase. **J. Biosci.** **45**,63.
23. Rani P, Gautam G, Anwar T, **Gourinath S**, Datta A. (2020) Crystal structure of Gig2 protein from *Candida albicans* provides a structural insight into DUF1479 family oxygenases. **Int J Biol Macromol.** **150**:1272–1280.
24. Devi S, Tarique KF, Farhan ALI M, Abdul Rehman SA and **Gourinath S** (2019) Identification and characterization of *Helicobacter pylori* O-acetylserine-dependent cystathionine β -synthase, a distinct member of the PLP-II family. **Molecular Microbiology.** **112**(2):718-739.
25. Gautam G, Ali MS, Bhattacharya A, **Gourinath S**. (2019) EhFP10: A FYVE family GEF interacts with myosin IB to regulate cytoskeletal dynamics during endocytosis in *Entamoeba histolytica*. **PLoS Pathogens.** **15**(2):e1007573.
26. Kumari P, M Babuta, A Bhattacharya, **S Gourinath** (2019) Structural and functional characterisation of Phosphoserine phosphatase, that plays critical role in the oxidative stress response in the parasite *Entamoeba histolytica*. **J. Struct Biol.** **206**(2):254-266.
27. Dutta A, Mazumder M, Alam M, **Gourinath S**, Sau AK. (2019) Metal-induced change in catalytic loop positioning in *Helicobacter pylori* arginase alters catalytic function. **Biochem J.** **476**(23):3595–3614.
28. RK Singh, P Tomar, S Dharawat, S Kumar, **S Gourinath** (2019) N-terminal residues are crucial for quaternary structure and active site conformation for the phosphoserine aminotransferase from enteric human parasite *E. histolytica*. **Int J. of Biol Macromol.** **132**:1012-1023.
29. Agarwal S, Anand G, Sharma S, Parimita Rath P, **Gourinath S**, Bhattacharya A. (2019) EhP3, a homolog of 14-3-3 family of protein participates in actin reorganization and phagocytosis in *Entamoeba histolytica*. **PLoS Pathog.** **15**(5):e1007789.
30. Dutta P, Jijumon AS, Mazumder M, Dileep D, Mukhopadhyay AK, **Gourinath S**, Maiti S. (2019) Presence of actin binding motif in VgrG-1 toxin of *Vibrio cholerae* reveals the molecular mechanism of actin cross-linking. **Int J. of Biol Macromol.** **133**: 775-785.
31. Das U, Singh E, Dharavath S, Subhramanyam UKT, Pal RK, Vijayan R, Menon S, Kumar S, **Gourinath S**, Srinivasan A. (2019) Structural insights into the substrate binding mechanism of novel ArgA from *Mycobacterium tuberculosis*. **Int J Biol Macromol.** **125**:970-978.
32. Sharma DP, Vijayan R, Abdul Rehman SA, **Gourinath S** (2018) Structural insights into the interaction of helicase and primase in *Mycobacterium tuberculosis*. **Biochemical J.** **475** (21), 3493-3509
33. Babuta M, Kumar S, **Gourinath S**, Bhattacharya S, Bhattacharya A. (2018) Calcium-binding protein EhCaBP3 is recruited to the phagocytic complex of *Entamoeba histolytica* by interacting with Arp2/3 complex subunit 2. **Cell Microbiol.** :e12942.

34. Chadha S, Vijayan R, Gupta S, Munde M, **Gourinath S**, Madhubala R (2018) Genetic manipulation of *Leishmania donovani* threonyl tRNA synthetase facilitates its exploration as a potential therapeutic target. **PLoS Negl Trop Dis.**;12(6):e0006575.
35. Singh KP, Anwar S, Zaidi A, Singh K, Das P, **Gourinath S**, Ali V. (2018) LdIscU is a [2Fe-2S] scaffold protein which interacts with LdIscS and its expression is modulated by Fe-S proteins in *Leishmania donovani*. **Int J Biol Macromol.** 116:1128-1145
36. Pandey P, Verma V, Dhar SK, **Gourinath S**. (2018) Screening of *E. coli* β -clamp Inhibitors Revealed that Few Inhibit *Helicobacter pylori* More Effectively: Structural and Functional Characterization. **Antibiotics**;7(1).E5.
37. Eniyan K, Dharavath S, Vijayan R, Bajpai U, **Gourinath S**. (2018) Crystal structure of UDP-N-acetylglucosamine-enolpyruvate reductase (MurB) from *Mycobacterium tuberculosis*. **Biochim Biophys Acta.** 1866(3):397-406.
38. Devi S, Abdul Rehman SA, Tarique KF, **Gourinath S**. (2017) Structural characterization and functional analysis of cystathionine β -synthase: an enzyme involved in the reverse transsulfuration pathway of *Bacillus anthracis*. **FEBS J.** 284(22):3862-3880.
39. Srivastava VK, Yadav R, Watanabe N, Tomar P, Mukherjee M, **Gourinath S**, Nakada-Tsukui K, Nozaki T, Datta S. (2017) Structural and thermodynamic characterization of metal binding in Vps29 from *Entamoeba histolytica*: implication in retromer function. **Mol Microbiol.** Sep 12. doi: 10.1111/mmi.13836. [Epub ahead of print]
40. Preeti Pandey, Verma V, Gunjan G, Nilima kumara, Dhar SK and **S. Gourinath**. (2017) Targeting the β -clamp in *Helicobacter pylori* with FDA-approved drugs reveals micromolar inhibition by diflunisal. **FEBS letters.** **591**(15):2311-2322.
41. Gunajna Gautam, Abdul rehman SA, Pandey P, **Gourinath, S**. (2017) Crystal structure of the PEG-bound SH3 domain of myosin IB from *Entamoeba histolytica* reveals its mode of ligand recognition. **Acta Cryst.** (2017). **D73**, 672–682
42. Verma D, Murmu A, **Gourinath S**, Bhattacharya A, Chary KVR. (2017) Structure of Ca^{2+} -binding protein-6 from *Entamoeba histolytica* and its involvement in trophozoite proliferation regulation. **PLoS Pathogens.** **13**(5):e1006332.
43. S Dharavath, I Raj, **S Gourinath** (2017) Structure-based mutational studies of O-Acetylserine Sulphydrylase reveal the reason for the loss of cysteine synthase complex formation in *Brucella abortus*. **Biochemical J.** **474**, 1221-1239.
44. Mazumder M, Ponnann P, Das U, **Gourinath S**, Khan HA, Yang J, Sakharkar MK. (2017) Investigations on Binding Pattern of Kinase Inhibitors with PPAR γ : Molecular Docking, Molecular Dynamic Simulations, and Free Energy Calculation Studies. **PPAR Res.** 2017:6397836
45. Preeti Pandey, Khaza Faisal Tarique, Mohit Mazumder, Syed Arif Abdul Rehman, Nilima kumari and **S. Gourinath**. (2016) Structural insight into β -Clamp binding site in DNA Ligase of *Helicobacter pylori*. **Scientific Reports.** 6:31181

46. Anwar T & **Gourinath S.** (2016) Deep Insight into the Phosphatomes of Parasitic Protozoa and a Web Resource ProtozPhosDB. **PLoS One.** **11**, e0167594.
47. Ansari, MF., Siddiqui, SM., Ahmad, K., AVECILLA, F., Sudhaker Dharavath, **S Gourinath**, Amir Azam (2016) Synthesis, antiameobic and molecular docking studies of furan-thiazolidinone hybrids. **Eur. J. of Medicinal Chem.** **124**, 393-406.
48. Sanjeev Kumar, Mohit Mazumder, Nisha Gupta, Sudip Chattopadhyay and **S. Gourinath.** (2016) Crystal structure of *Arabidopsis thaliana* calmodulin7 and insight into its mode of DNA binding. **FEBS letters.** **590(17):3029-39.**
49. Singh RK., M. Mazumder, Sharma B., **Gourinath, S.** (2016) Structural investigation and inhibitory response of halide on phosphoserine aminotransferase from *Trichomonas vaginalis*. **BBA (Gen).** **1860(7):1508-18.**
50. Tarique, KF., Abdul Rehman, SA., Devi, S., Priya Tomar and **Gourinath, S.** (2016) Structural and functional insight into the stationary-phase survival protein SurE, an important virulence factor of *Brucella abortus*. **Acta Crystallographica Section F: Structural Biology Communications.** **72:** 386-396.
51. Tarique, KF., Devi, S., Abdul Rehman, SA and **Gourinath, S.** (2016) Crystal structure of HINT from *Helicobacter pylori*. **Acta Crystallographica Section F: Structural Biology Communications.** **72:**42-48
52. Mohit Mazumder and **S. Gourinath** (2016) Structure-based design of inhibitors of the crucial cysteine biosynthetic pathway enzyme O-acetyl serine sulfhydrylase. **Current Topics in Medicinal Chemistry.** **16(9):948-59.**
53. Mansuri MS, Babuta M, Ali MS, Bharadwaj R, Jhingan GD, **Gourinath S**, Bhattacharya S, Bhattacharya A. (2016) Autophosphorylation at Thr279 of *Entamoeba histolytica* atypical kinase EhAK1 is required for activity and regulation of erythrophagocytosis. **Sci Rep.** **6:**16969.
54. Rana M, Devi S, **Gourinath S**, Goswami R, Tyagi RK. (2016) A comprehensive analysis and functional characterization of naturally occurring non-synonymous variants of nuclear receptor PXR. **Biochim Biophys Acta-GRM.** 2016 Mar 4. pii: S1874-9399(16)30040-2.
55. M. Gupta, M. Mazumder, K. Dhatchinamoorthy, M. Nongkhlaw, D. Thangminlen Haokip, **S Gourinath**, S. S. Komath and R. Muthuswami (2015) Ligand-induced conformation changes drive ATP hydrolysis and function in smarcal1. **FEBS Journal.** **282(19):3841-59.** 
56. Verma S, Kumar S, Gupta VP, **Gourinath S**, Bhatnagar S, Bhatnagar R (2015) Structural basis of *Bacillus anthracis* MoxXT disruption and the modulation of MoxT ribonuclease activity by rationally designed peptides. **J Biomol Struct Dyn.** **33(3):606-24.**
57. Sanjeev Kumar, Saima Aslam, Mohit Mazumder, Pradeep Dahiya, Aruna Murmu, Babu A. Manjasetty, Rana Zaidi, Alok Bhattacharya and **S. Gourinath** (2014) Crystal Structure of Calcium Binding Protein-5 from *Entamoeba histolytica* and its involvement in initiation of phagocytosis of human erythrocytes. **PLoS Pathogens.** **10(12):e1004532.**
58. Tarique KF, Rehman SAA, Betzel Ch and **S. Gourinath** (2014) Structure-based identification of inositol polyphosphate 1 - phosphatase from *Entamoeba histolytica*. **Acta Cryst D70**, 3023-33.

59. Singh RK, Raj I, Pujari R, **Gourinath S.** (2014) Crystal Structures and Kinetics of Type III 3-phosphoglycerate dehydrogenase reveal Catalysis by Lysine. **FEBS J.** **281(24):**5498-512.
60. Kumar N, Somlata, Mazumder M, Dutta P, Maiti S, and **Gourinath S (2014).** EhCoactosin stabilizes actin filaments in the protist parasite *Entamoeba histolytica*. **PLoS Pathogens.** **10(9):**e1004362.
61. Tarique FA., Abdulrehman, S. A, and **Gourinath S (2014)** Structural elucidation of a dual active PAP Phosphatase1 of *Entamoeba histolytica*: capable of hydrolysing both 3'adenosine5'-phosphate and inositol 1,4-bisphosphate. **Acta. Crystallogr. D** **70** :2019-31.
62. Kumar S, Kumar N, Alam N and **Gourinath S.** (2014) Crystal structure of serine acetyl transferase from *Brucella abortus* and its complex with coenzyme A. **Biochim Biophys Acta.** 1844(10):1741-1748.
63. Mazumder M, Padhan N, Bhattacharya A and **Gourinath S (2014)** Prediction and analysis of canonical EF hand loop and qualitative estimation of Ca²⁺ binding affinity. **PLoS One.** 9(4):e96202.
64. Das U, Pogenberg V, Subhramanyam UKT, Wilmanns M, **Gourinath S,** A Srinivasan. (2014) Crystal structure of the VapBC-15 complex from *Mycobacterium tuberculosis* reveals a two-metal ion dependent PIN-domain ribonuclease and a variable mode of toxin–antitoxin assembly. **J. Structural Biology.** **188:** 249-258.
65. George B, Ruhel R, Mazumdar M, Sharma VK, Jain SK, **Gourinath S,** Chakraborty S. (2014) Mutational analysis of the helicase domain of a replication initiator protein reveals critical roles of Lys 272 of B' motif and Lys 289 of β -hairpin loop in geminivirus replication. **J Gen Virol.** **95** :1591-602.
66. Singh, N. K, Hasan SS, Kumar J, Raj I, Pathan AA, Parmar A, Shakil S, **Gourinath S,** Madamwar D. (2014) Crystal Structure and Interaction of Phycocyanin with β -Secretase: A Putative Therapy for Alzheimer's Disease. **CNS Neurol Disord Drug Targets.** **13** :691-698.
67. Khan, J. M, Abdulrehman, S. A, Zaidi. F. K, **Gourinath. S,** and Khan R. H. (2014) Hydrophobicity alone can not trigger aggregation in protonated mammalian serum albumins. **Phys Chem Chem Phys.** **16:**5150-61.
68. Anwar. T and **Gourinath S.** (2013) Analysis of the Protein Phosphotome of *Entamoeba histolytica* Reveals an Intricate Phosphorylation Network. **PLoS One.** 8(11):e78714.
69. Das U, Kumar N, **Gourinath S,** Srinivasan A. (2013) Preliminary crystallographic analysis of recombinant VapBC-15 toxin-antitoxin complex from *Mycobacterium tuberculosis*. **Acta Crystallogr Sect F Struct Biol Cryst Commun.** 69:1242-5.
70. Qadeer A, Ahmad E, Zaman M, Khan MW, Khan JM, Rabbani G, Tarique KF, Sharma G, **Gourinath S,** Nadeem S, Badr G, Khan RH. (2013) Concentration-dependent antagonistic persuasion of SDS and naphthalene derivatives on the fibrillation of stem bromelain. **Arch Biochem Biophys.** 540:101-16.
71. Raj, I., Mazumder, M., **Gourinath, S.** (2013) Molecular basis of ligand recognition by OASS from *E. histolytica*: Insights from structural and molecular dynamics simulation studies. **BBA (General subjects)** 1830: 4573-83.
72. Rehman, S. A. A., Verma, A., Mazumder, M., Dhar, S. K., **Gourinath, S.,** (2013) Crystal structure and mode of helicase binding of the C-terminal domain of primase from *Helicobacter pylori*. **J. Bacteriology,** 195(12):2826-38.

73. Kumar, S., Mazumder, M., **Gourinath, S.** (2013) Single residue mutation in EhSAT3 active site assists in partial regaining of feedback inhibition by cysteine. **PLoS ONE**. 8(2):e55932.
74. Sanjeev Kumar, S., Zaidi, R. and **Gourinath, S.** (2012) Cloning, purification, crystallization and preliminary crystallographic study of calcium-binding protein 5 from *Entamoeba histolytica*. **Acta. Crystallogr. F68**. 1542-1544.
75. Kumar S, Ahmad E, Kumar S, Khan RH, **Gourinath, S.** (2012) Flexibility of EF-hand motifs: structural and thermodynamic studies of Calcium Binding Protein-1 from *Entamoeba histolytica* with Pb^{2+} , Ba^{2+} , and Sr^{2+} . **BMC Biophys.** 5, 15.
76. Isha Raj, Sudhir Kumar and **Gourinath, S.** (2012). The narrow active site cleft of O-acetyl serine sulfhydrylase from *Leishmania donovani* allows complex formation with serine acetyl transferases having a range of C-terminal sequences. **Acta. Crystallogr. D68**, 909-19.
77. Ahmad M. F., Yadav B., Kumar P., Puri A., Mazumder M., Ali A., **Gourinath. S.**, Muthuswami R., and Komath S. S. (2012). The GPI anchor signal sequence dictates the folding and functionality of the ALS5 adhesin from *Candida albicans*. **PLoS ONE** (7), 4, e35305.
78. Isha Nagpal, Isha Raj, Naidu Subbarao, **S. Gourinath (2012)**. Virtual Screening, Identification and *in vitro* testing of novel inhibitors of O-Acetyl-L-Serine Sulfhydrylase of *Entamoeba histolytica*. **PLoS ONE**, 7(2):e30305.
79. Javed M. Khan, Atiyatul Qadeer, Sumit K. Chaturvedi, Ejaz Ahmad, Syed Arif A. Rehman, **S. Gourinath**, Rizwan H. Khan (2012). SDS Can Be Utilized as an Amyloid Inducer: A Case Study on Diverse Proteins. **PLoS ONE**. (7),1, e29694.
80. Sudhir Kumar, Isha Raj, Isha Nagpal, N. Subbarao and **S. Gourinath (2011)**. Structural and biochemical studies of Serine Acetyltransferase reveal why the parasite *Entamoeba histolytica* cannot form Cysteine Synthase complex. **J. Biol. Chem.** 286 (14), 12533-41.
81. Shivesh Kumar, Ejaz Ahmad, M. Shahid Mansuri, Sanjeev Kumar, Ruchi Jain, Rizwan Hasan Khan, **S. Gourinath (2010)**. Crystal structure and trimer-monomer transition of N-terminal domain of EhCaBP1 from *Entamoeba histolytica*. **Biophys. J.** (98). 2933-2942.
82. Kashav, T., Nitharwal, R., Abdulrehman, S.A., Gabdoulkhakov, A., Saenger, W., Dhar, S.K. **Gourinath, S (2009)**. Three-dimensional structure of N-terminal domain of DnaB Helicase and Helicase-Primase interactions in *Helicobacter pylori*. **PLoS ONE**. (10):e7515.
83. Ranjan, R., Ahmed, A., **Gourinath, S.**, Sharma, P. (2009). Dissection of mechanisms involved in the regulation of plasmodium falciparum calcium dependent protein kinase 4 (PfCDPK4). **J. Biol. Chem.** 284(22):15267-76.
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85. Krishna Ch, Kumar M, Kumar S, Jain S, Alam N, **Gourinath S.** (2008) Crystal structure of native O-acetyl-serine sulfhydrylase from *Entamoeba histolytica* and its complex with cysteine: Structural evidence for cysteine binding and lack of interactions with Serine acetyl transferase. **Proteins**.72 ,1222-1232
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104. **Gourinath, S.**, Alam, N., Srinivasan, A. & Singh, T. P. (2000) Crystal structure of the bifunctional inhibitor of trypsin and alpha-amylase from ragi seeds at 2.2 Å resolution. *Acta. Cryst.* **D56**, 287-293.

Invited Orations

1. "Crystal structure of the bifunctional inhibitor of trypsin and α -amylase from Ragi seeds at 2.9 Å resolution" is selected for *invited oral presentation* at **National symposium on Radiation and Molecular Biophysics**, January 21-24, 1998. BARC & TIFR, Mumbai.
2. "The structure solution from NMR model and refinement of α -amylase / trypsin bifunctional inhibitor". at discussion meeting on **Macromolecular crystallography** Feb 6-7, 1998. at MBU, IISc. Bangalore.
3. "New Structures of Myosin reveal Essential Features of Mechanical Transduction of muscle proteins" at **35th National Seminar on Crystallography** on 22nd -24th Feb 2006 at National Physical Laboratory, New-Delhi, INDIA
5. Crystal structure of native O-acetyl-serine sulfhydrylase from *Entamoeba histolytica* and its complex with cysteine: Structural evidence for cysteine binding and lack of interactions with Serine acetyl transferas. At 2nd International conference on Trends in cellular and molecular biology (5-7th Jan 2008), School of Life Sciences, New Delhi.
6. Invited for DBT sponsored workshop on Insilico Molecular Modeling and Drug Design at Biotechnology department, AMU, 2008. Invited for XVI Seminar on Amibiasis / EMBO workshop, Feb, 2009 at Guanajuato, MEXICO
7. Invited for a lecture on workshop on "Exploring proteins with Bioinformatics" at Bioinformatics center, AMU 2009 from 15th and 16th Jan.
8. Invited as a speaker at National workshop on advanced analytical instrumentation and applications-2009 from 5th to 7th Jan. AIF, JNU.
9. Invited speaker at Short Term Course on Bioinformatics held at IIT, Delhi on March 12 2009.
10. "Unusual arrangement of EF hand motifs in Calcium binding protein-1 of *Entameoba histolytica* and its functional implications" at **4th International symposium on recent trends in macromolecular structure and function** on Jan 21st-23rd Jan 2010 at University of Madras, Guiny campus, Chennai.
11. "Is Calcium binding protein-1 of *Entamoeba histolytica* a dual regulator?" At Indo-US symposium on "Modern Trends in Macromolecular Structires" Feb 21-24th 2011 held IIT Bombay.
12. Invited for a lecture at UGC-sponsored National symposium on "Biomolecular Drug targets" held during March 7-9th 2011 and presented talks entitled " Structural, functional studies and inhibitor screening of crucial cysteine biosynthetic pathway enzymes from *E. histolytica*" at Interdisciplinary biotechnology unit, AMU, Aligarh.
13. Invited for a lecture for "**EMBO Global Exchange Lecture Course & Symposium on "Amoebiasis: Exploring the Biology and the Pathogenesis of Entamoeba"** held during 4-7th, March 2012 at Khajuraho, India; entitled "Investigations into the loss of regulation in cysteine biosynthetic pathway of *E. histolytica*."
14. Invited for a lecture for "Current Trends in Structural Biology (CTSB)'2012, held during 2nd April 2012, Department of Biophysics, AIIMS; entitled "Continuous production of Cysteine in *E. histolytica* due to loss of regulation in cysteine biosynthetic pathway"
15. Invited to 41st annual meeting of Indian Crystallographic association meeting on National seminar on Crystallography, 2012, held during Oct 8th to 10th at Triple helix auditorium, Central

- leather research institute, Chennai entitled “Crystal structure and mode of helicase binding of the C-terminal domain of primase from *Helicobacter pylori*.”
16. Invited to 81st annual meeting of **Society of Biological Chemists (India)**’ 2012, held during Nov 8 to 11th at Science City auditorium complex, Kolkata entitled “Structural Investigations into Regulation of Cysteine Biosynthesis”
 17. Invited to National symposium on trends in Biomolecular Interaction 2013, held during March 13-14 at Interdisciplinary biotechnology unit, AMU, Aligarh. Entitled “Structural and biochemical studies reveal the reasons for loss of feed-back regulation and Cysteine synthase complex formation in parasite *E. histolytica*.”
 18. Invited to DST-INSPIRE Science Camp held at Rattan Institute of Technology and management during 23rd to 27th April 2013. Delivered lecture on “Molecules of Life”
 19. Invited for a lecture for “**National symposium on recent advances in free radical biology and biochemistry**” held during 6th March 2014 at Department of Biochemistry, AMU, Aligarh.
 20. Invited for a lecture for “**6th International symposium on recent trends in Macromolecular structure and Function**” held during 22nd-24th Jan 2014 at University of Madras, India; entitled “Structural and Functional studies of crucial Ser and Cys biosynthetic pathway enzymes from *E. histolytica*”.
 21. Invited for a lecture for “**Parasitology-2014: A conference on recent trends in molecular parasitology**” held during 27-29th March 2014 at Jawaharlal Nehru University; entitled “Structural and Functional Characterization of Calcium sensor proteins involved in phagocytosis”.
 22. Invited lecture at **SLS40** held during Feb 13-15, 2014 at convention center, JNU: entitled “Structural and functional Studies of crucial amino acid biosynthetic pathway enzymes from *E. histolytica*”
 23. Invited for a lecture at “**Indo-US International conference / workshop on Recent advances in structural biology and Drug discovery**” held during Oct 9-11, 2014 at IIT-Roorkee; entitled “EhCoactosin stabilizes actin filaments in the protist parasite *Entamoeba histolytica*: Structural and functional studies”.
 24. Invited for a lecture at **43rd National Seminar in Crystallography** held during 12th-14th Nov, 2014 at CDRI-Lucknow; entitled “Structural and functional characterization of Sulfate activation pathway enzymes: PAP phosphatases from *E. histolytica*.”
 25. Invited for a lecture at **Bioworld 2014: Protein structure and function** held during 12th-14th December 2014 at IIT-Delhi; entitled “Coactosin stabilizes actin filaments in the parasite *Entamoeba histolytica*: Structural and functional revelations”.
 26. Invited for a lecture at **NXCM-2014: International symposium-cum-workshop Frontiers of structural biology, New advances in X-ray diffraction and cryo-electron microscopy** held during 15th – 17th December, 2014 organised by RCB at INSA; entitled “Structure based functional prediction of Calcium Binding Protein-5 from *Entamoeba histolytica* and its involvement in initiation of phagocytosis of human erythrocytes”.
 27. Invited for a lecture at **Inspire science Camp-2014** held during 16th – 20th Dec, 2014 organised at Pt. L. R. College of Technology, Faridabad; entitled “Visualization of Biological macromolecules.”
 28. Invited for a lecture at 1st International conference on Translational research from basic science to clinical application, held during 5-7th Feb 2015, organized at KIIT University, Bhubaneswar; entitled “Structural and functional studies, inhibitor development against cysteine biosynthetic pathway enzymes of *E. histolytica*”.
 29. Invited for a lecture at **Workshop on structural biology: An introduction to Protein crystallography**” held during 15th – 18th April 2015, organized by NIMHANS, Bangalore; entitled “Challenges in cytoskeletal protein crystallography”

30. Invited for a lecture at “**Indo-French seminar on Application of Structural Biology in Translational Research & Structure- Guided- Drug- Design** “ held during 19th – 20th Nov 2015, organized by Tata memorial center, Advances Center for treatment, research and education in Cancer; lecture titled “Structural and functional studies, inhibitor development against cysteine biosynthetic pathway enzymes of *E. histolytica*”
31. Invited for a lecture at “**44th National Seminar on Crystallography**” held during 10th-13th July 2016, organized by NCCS, IISER Pune, NCL and Univ of Pune; lecture titled “Understanding the phagocytic cup formation in *Entamoeba histolytica*: Structural and functional studies of Individual components”.
32. Invited for a lecture at “**Symposium on Pathogens and host response**” held during 10th to 12th August 2016, Organised by NII, New Delhi; lecture titled “Understanding the phagocytic cup formation in *Entamoeba histolytica*: Structural and functional studies of Myosin IB”.
33. Invited for a lecture at “**2nd National conference on Current Trends in Life Science**” held during 20-21st February, 2017, Organised by Central University of South Bihar, Patna; entitled “Structural investigation of cysteine biosynthetic pathway enzymes of *E. histolytica* : Investigation into loss of cysteine synthase complex formation”.
34. Invited for a lecture at “**Molecular insights in Genetics and biotechnology- Emerging trends and future prospects**” held during 27-28th Feb 2017, Organised by Osmania University, Hyderabad.
35. Invited for a lecture at “UGC & DBT sponsored National symposium cum bioinformatics workshop on **Current trends in proteomics and bioinformatics**” held during March 16-17th 2017, Organised by Interdisciplinary Biotechnology Unit, Aligarh Muslim University.
36. Invited for a lecture at “Annual Symposium of **Indian Biophysical Society 2017**, held during 23-25 March in IISER, Mohali.
37. Delivered a lecture at Department of Department of International health, Biomedical chemistry, graduate school of Medicine, **Tokyo University**, 19th Oct, 2017.
38. Invited for a lecture at workshop on "Protein structure and drug discovery" organised by Department of Biotechnology & Bioinformatics, School of Life Sciences, University of Hyderabad, during August 27 to September 5, 2017)
39. Delivered a lecture at School of Molecular and Cell Biology, University of the Witwatersrand, Johannesburg, South Africa on 8th Feb 2018.
40. Invited for a lecture at SBC, during 16-19 Nov 2017 organised by JNU, New Delhi.
41. Invited for a lecture at TIFR, Mumbai on 25th of January 2018.
42. Invited for a lecture at 11th symposium, ‘Frontiers in Biomedical Research’. Theme: Challenges In Human Health: Prevention, Diagnosis and Cure organized by ACBR, DU during Februar19th to 21st, 2018. Titled “Structural and functional studies, inhibitor development against cysteine biosynthetic pathway enzymes of *E. histolytica*”
43. Invited for a lecture at Workshop on “Emerging Trends in Target Identification and Drug Design” (31st Jan 2018) organised by Biotechnology department, Jaypee Institute of Information Technology (JIIT). Titled “Crystal Structure of *Helicobacter pylori* β -clamp and its interaction with DNA ligase: Inhibitor screening against ligase binding site on β -clamp”
44. Invited for One Day-Colloquium on “Ramachandran plot: A way forward to proteomics” on 8th Oct 2018, Department of Biotechnology, School of Life Sciences, Central University of Haryana. Titled “Structural and functional studies, inhibitor development against cysteine biosynthetic pathway enzymes of *E. histolytica*”
45. Invited for 59th International Annual Conference of The Association of Microbiologists of India (AMI- 2018) held at University of Hyderabad from 8th -12th Dec. Delivered a talk on “ Structural

- and functional studies, inhibitor screening against cysteine biosynthetic pathway enzymes of *E. histolytica*”
46. Invited for a lecture at IICT, Hyderabad on 14th Dec 2018. Delivered a talk on “Structural and functional studies of SAT of *E. histolytica* : understanding the feedback regulation”
 47. Delivered an invited talk at **University of Copenhagen**, Faculty of Health and Medical Sciences, Novo Nordisk Foundation Center for Protein Research on 17th June 2019, titled “**The role of Myosin IB and GEF (FP10) interactions in phagocytic cup formation of *Entamoeba histolytica***”
 48. Invited for One Day-Colloquium on “Ramachandran plot: A way forward to proteomics” on 8th Oct 2018, Department of Biotechnology, School of Life Sciences, Central University of Haryana. Titled “Structural and functional studies, inhibitor development against cysteine biosynthetic pathway enzymes of *E. histolytica*”
 49. Invited for 59th International Annual Conference of The Association of Microbiologists of India (AMI- 2018) held at University of Hyderabad from 8th -12th Dec. Delivered a talk on “ Structural and functional studies, inhibitor screening against cysteine biosynthetic pathway enzymes of *E. histolytica*”
 50. Invited for a lecture at IICT, Hyderabad on 14th Dec 2018. Delivered a talk on “Structural and functional studies of SAT of *E. histolytica* : understanding the feedback regulation”
 51. Delivered a lecture at School of Molecular and Cell Biology, University of the Witwatersrand, Johannesburg, South Africa on 8th Feb 2018.
 52. Invited for a lecture at 11th symposium, ‘Frontiers in Biomedical Research’. Theme: Challenges In Human Health: Prevention, Diagnosis and Cure organized by ACBR, DU during Februar19th to 21st, 2018.
 53. Invited for a lecture at RCB symposium on Multidisciplinary research at ESRF: An opportunity for Indian science" held at RCB on 14/6/2019. Delivered a talk on “Structural investigation into regulation of cytoskeletal dynamics during phagocytosis in *E. histolytica*”
 54. Invited for a lecture at 30th National congress of Parasitology and Global summit on Malaria Elimination (NCP-GSME-2019) held at JNU convention center during 26th to 28th Sep 2019. Delivered a talk on “ The role of unconventional myosin in phagocytic cup formation of *E. histolytica*”
 55. Invited for a lecture at Kalyani University, national conference on 'Stress Responses and Diseases' held during March 6-7, 2020. Delivered a talk on “Reverse transsulfuration pathway to produce cysteine in pathogenic bacteria”.
 56. Invited for a lecture by IISER, Kolkatta, March 7th2020. Delivered talk on “Structural and functional studies of Myosin IB: Understanding the role in phagocytic cup formation in *Entamoeba histolytica*”
 57. Investigation into the role of unconventional Myosin and its binding proteins in phagocytic cup formation of *Entamoeba histolytica*. at NSC 48, Nov 25th to 27th, IIT Roorkee. (Hybrid mode conference)
 58. Delivered a lecture on “Corona virus and drug development” at Virtual workshop and Hands on training on Bioinformatics Approaches for Data analysis and Research organised by Department of Biotechnology, Jaypee Institute of information Technology, Noida.

Refreed Papers in Published Conference Proceedings

- 1) Shalini Mishra, **Samudrala Gourinath***.Importance of PH domain-containing protein kinase (PHDK) involved in the phagocytosis process in *E.histolytica*. **29th Annual Meeting of the German Society for Parasitology** held on 15-17 March 2021 Virtual conference in Bonn, Germany.
- 2) Khushboo Kumari, **Samudrala Gourinath***Structural and functional role of active site residues in the reaction mechanism of HpdUTPase. **PDB50 Anniversary Symposium in Asia**, organized as a satellite event of the 59th Annual Meeting of the Biophysical Society of Japan on 24 November 2021, (virtual).
- 3) Suneeta Devi, Khaja Faisal Tarique, Mohammad Farhan Ali and **Samudrala Gourinath**. 'Deciphering enzymes of reverse transsulfuration pathway to produce cysteine in Helicobacter pylori' at 44th Indian Biophysical Society Meeting, March 30- April 1, 2022, Advanced Centre for Treatment Research and Education in Cancer, Navi Mumbai, India. Ratna Phadke Lecture award for Dr. Suneeta Devi at 44th Indian Biophysical Society Meeting
- 4) Preeti Umarao*, Pragyan Parimita Rath, Gunjan Gautam, **Samudrala Gourinath** **Biophysical characterization of E. histolytica FYVE domain-containing protein (FP10) and its interactive partners**. 48th National Seminar on Crystallography held on 25-27th November 2021 at IIT Roorkee. (Presented Poster)
- 5) 2. Preeti Umarao*, Avinash Kumar Gautam, Gunjan Gautam, **Samudrala Gourinath**. Structural characterization of EhFP10, an FYVE domain-containing protein from *Entamoeba histolytica*. **5th World Congress** on Drug Discovery and Development held on 25-26th September 2021 virtually. (Presentation by the student)
- 6) Khushboo Kumari, **Samudrala Gourinath***Structural and functional role of active site residues in the reaction mechanism of HpdUTPase. **PDB50 Anniversary Symposium in Asia**, organized as a satellite event of the 59th Annual Meeting of the Biophysical Society of Japan on 24 November 2021, (virtual). (Oral Presentation by the student)
- 7) Shalini Mishra, **Samudrala Gourinath***.Importance of PH domain-containing protein kinase (PHDK) involved in the phagocytosis process in *E.histolytica*. **29th Annual Meeting of the German Society for Parasitology** held on 15-17 March 2021 digital conference in Bonn, Germany. (Presentation by the student)
- 8) Priya Tomar, **Samudrala Gourinath**,: "PP2A PHOSPHATASE ACTIVATOR (PTPA): KEY TO THE MASTER REGULATOR IS CRUCIAL FOR SURVIVAL OF ENTAMOEBIA HISTOLYTICA; STRUCTURAL AND FUNCTIONAL ELUCIDATION." **43rd annual biophysical society meeting, San diego 2020**, USA.
- 9) Ramachandran Vijayan, Sudhaker Dharavath, Khushboo Kumar, priya Tomar and **Samudrala Gourinath**. Rational drug design approaches for the development of potent anti-protozoan inhibitors against enzymes involved in cysteine biosynthetic pathway of *Entamoeba histolytica*. **International Conference on Recent trends in Structural Bioinformatics and Computer aided Drug Design (ICSBCADD'2019)** held during 11-13 December, 2019, Alagappa University, Karaikudi, India

- 10) Priya Tomar, **Samudrala Gourinath**,; structural and functional characterization of PP2A from *Entamoeba histolytica*. **Biosparks,2019, JNU**.
- 11) Shalini Mishra, **Samudrala Gourinath***. Importance of PH domain-containing protein kinase (PHDK) involves in the trogocytosis process in *E.histolytica*. **17th ANNUAL SCIENTIFIC FEST BIOSPARK-2019** held on 15-16 March 2019 in JNU, SLS, New Delhi, India.
- 12) Pragyan Parimita Rath, Nitesh Kumar, Mrigya Babuta, **S. Gourinath**. Tale of the two domains of twinfilin: Deciphering phagocytosis through actin depolymerization. **ASBMB Annual Meeting, held in conjunction with Experimental Biology 2018**, scheduled April 21-25, in San Diego, California.
- 13) Mohammad Farhan Ali, Suneeta Devi and **S. Gourinath**. Structural analysis of *Entamoeba histolytica* serine protease inhibitor. **46th National Seminar on Crystallography** held during June 27-29, 2018, at NIMHANS, Bengaluru, India.
- 14) Preeti Umarao, Gunjan Gautam, **S. Gourinath**. Structural Characterization of Myosin IB interacting protein FP10 domain from *Entamoeba histolytica*. **46th National seminar on crystallography 2018**, held during 27-29 June in NIMHANS, Banglore, India.
- 15) Pragyan Parimita Rath, Nitesh Kumar, **Samudrala Gourinath**. Structural and functional analysis of EhTwinfilin. **Hands-on training workshop on crystallization in lipid bilayer**, 29-30th May 2018, ICGEB, New Delhi.
- 16) Pragyan Parimita Rath, Nitesh Kumar and **Samudrala Gourinath**. Different faces (phases) of Actin Depolymerizing Factors from *Entamoeba histolytica*. **63rd Annual Meeting of Biophysical Society** that will be held from 2nd March to 6th March 2019, in Baltimore, Maryland, USA.
- 17) Shalini Mishra, Alok Bhattacharya, **Samudrala Gourinath**. Structural and functional studies of the crucial kinase (EhC2PK) in *Entamoeba histolytica*.at **46th National Seminar in Crystallography** organized in *National Institute of Mental Health & Neuro Sciences (NIMHANS), Bangalore*. The conference is from 27th June 2018 to 29th June 2018.
- 18) Ramachandran Vijayan, Sudhaker Dharavath, Khushboo Kumari, Priya Tomar and **Samudrala Gourinath** Structure-based development of anti-protozoan inhibitors against enzymes involved in cysteine biosynthetic pathway of *Entamoeba histolytica*. **59th Annual conference of Association of Microbiologists India & International Symposium on Hist-Pathogen Interactions** held duing 9-12 December, 2018 in University of Hyderabad, India.
- 19) Pragyan Parimita Rath, Nitesh Kumar, Mrigya Babuta, Alok Bhattacharya, **Samudrala Gourinath**. Tale of the two domains of twinfilin: Deciphering phagocytosis through actin depolymerization. ASBMB, Annual Meeting, held in conjunction with Experimental Biology 2018, held during April 21-25, 2018, in San Diego, California.
- 20) Mohit Mazumder, Sanjeev Kumar, Devbrat Kumar, **S. Gourinath**^[1]. Designing and validation of calcium binding site in EF-hand motif and comparative insights into the site-specific binding affinity. 20th International symposium on calcium binding proteins and calcium function in health and disease (CaBP20). Awaji Yumebutai International Conference Center, Awaji City, Japan held from 22nd – 26th Oct 2017.
- 21) Priya Tomar, Suneeta Devi, Khaja Faisal Tarique, Syed Arif Abdul Rehman and **Samudrala Gourinath**. Structural and functional characterization of Pyridoxal kinase from *Entamoeba histolytica* as a potent drug target. Annual Symposium of **Indian Biophysical Society 2017**, held during 23-25 March in IISER, Mohali. (A.R. Gopala Ayengar Award for poster presentation).
- 22) Dharavath S, Raj I, **Gourinath S**. Structure-based mutational studies of O-Acetylserine Sulphydrylase reveal the reason for the loss of cysteine synthase complex formation in *Brucella abortus*. **ICCBM-16**, held during July 2nd - July 7th, 2016, organized by Czech and Slovak Crystallographic Association, **Prague**.
- 23) Poonam kumari and **S. Gourinath**. Characterization of a crucial enzyme in serine biosynthetic pathway from *E. histolytica*. **44th National Seminar on Crystallography** held during 10th-13th July 2016, organized by NCCS,

IISER Pune, NCL and Univ of Pune.

- 24) Dhakaram Pangeeni Sharma, SA Abdul Rehman, Preeti Pandey, **S. Gourinath**. Exploring the role of DnaG primase at replication fork from *Vibrio cholerae*. **44th National Seminar on Crystallography** held during 10th-13th July **2016**, organized by NCCS, IISER Pune, NCL and Univ of Pune.
- 25) Preeti Satyawali, Vijay Verma, Suman Kumar Dhar and S.Gourinath. “Drug Screening against Ligase Binding Site of *H.pylori* β -Clamp and Inhibition Studies.” 56th Annual Conference of Association of Microbiologists of India (**Dec. 7-10, 2015**), at Convention center, JNU.
- 26) Tamanna Anwar and **Samudrala Gourinath** “**From genome to phosphatome: Comparative insight into the phosphatomes of parasitic protozoa**” in Target Validation using Genomics and Informatics Conference at Wellcome Genome Campus, Hinxton, Cambridge, UK (**December 08-10, 2015**).
- 27) Tamanna Anwar and **Samudrala Gourinath** “**Mining Genome of a Parasitic Protozoan *Entamoeba histolytica* for Protein Phosphatases**” in Indo-US Bilateral Conferences-cum-Workshop: Big Data Analysis and Translation in Disease Biology (Big Data and Disease) at Jawaharlal Nehru University, **New Delhi, India (January 18-22, 2015)**.
- 28) Nitesh Kumar, Somlata, Mohit Mazumder, Priyanka Dutta, Sankar Maiti, **S. Gourinath**. Ehcoactosin stabilizes actin filaments in the protest parasite *E. histolytica*. International symposium-cum-workshop, Frontiers of Structural Biology, New Advances in X-ray diffraction and cryo-electron microscopy. Held during 15th-17th Dec 2014 at INSA, New Delhi.
- 29) Sanjeev Kumar, Saima Aslam, Mohit Mazumder, Babu A. Manjasetty, Rana Zaidi, Alok Bhattacharya, **S. Gourinath**. Calcium binding protein-5 of *E. histolytica* is an essential light chain of Myosin IB. International symposium-cum-workshop, Frontiers of Structural Biology, New Advances in X-ray diffraction and cryo-electron microscopy. Held during 15th-17th Dec 2014 at INSA, New Delhi.
- 30) Rohit Kumar Singh, Isha Raj, Rajesh Pujari, **S. Gourinath**. Crystal structure and kinetics elucidate the role of lysine in 3-phosphoglycerate dehydrogenase from *E. histolytica*. International symposium-cum-workshop, Frontiers of Structural Biology, New Advances in X-ray diffraction and cryo-electron microscopy. Held during 15th-17th Dec 2014 at INSA, New Delhi.
- 31) Preeti Satyawali, Arif Abdulrehman A, Faisal Tarique K, Nilima Kumar, **S. Gourinath**. An insight into crystal structure of *Helicobacter pylori* DNA polymerase sliding clamp. International symposium-cum-workshop, Frontiers of Structural Biology, New Advances in X-ray diffraction and cryo-electron microscopy. Held during 15th-17th Dec 2014 at INSA, New Delhi.
- 32) Sanjeev Kumar and **S. Gourinath**. Calcium concentration is crucial for Crystallization of Calcium Binding Protein-5 from *Entamoeba histolytica*. 15th International conference on the crystallization of biological macromolecules, held during Sep 17-20, 2014 at University of Hamburg, Germany.
- 33) Suneeta Devi, Khaja Faisal Tarique, Syed Arif Abdul Rehman, **S. Gourinath**. Structural study of O-acetylserine sulfhydrylase(OASS) and Serine Acetyl Transferase (SAT)-Imperative enzymes in sulfur metabolism pathway. **Indo-US International conference / workshop on Recent advances in structural biology and Drug discovery**” held during Oct 9-11, 2014 at IIT-Roorkee. (got best poster award)
- 34) Preeti Satyawali, Sayed Arif Abdulrehman, Khaja Faisal Tarique, Nilima Kumari, **S.Gourinath**. Crystal Structure of Beta Clamp from *Helicobacter pylori*, an essential processivity promoting factor in replication. **Indo-US International Conference/WORKSHOP** on “Recent Advances in Structure Biology & Drug Discovery” held during October 9-11,2014 at IIT, Roorkee.
- 35) Nitesh Kumar, Somlata, Mohit Mazumder, P. Dutta, S. Maiti, **S. Gourinath**. EhCoactosin stabilizes actin filaments in the protist parasite *Entamoeba histolytica*: Structural and functional studies. **Indo-US International conference / workshop on Recent advances in structural biology and Drug discovery**” held during Oct 9-11, 2014 at IIT-Roorkee.
- 36) Rohit Kumar Singh, Isha Raj, Rajesh Pujari and **S. Gourinath**. Crystal structures and kinetics of 3-phosphoglycerate dehydrogenase From *E. histolytica* reveal ligand-induced cleft closure and catalysis by lysine. **ISRTMSF-2014 “6th international Symposium on Recent Trends in Macromolecular Structure and Function”**.
- 37) Nitesh Kumar, Somlata, Mohit Mazumder, Simanti Bhattacharya, Sankar Maiti, Alok Bhattacharya and **S. Gourinath**. Eh Coactosin stabilizes actin filaments in the protist parasite *Entamoeba histolytica*. **National**

Conference on Recent Trends in Protein Structural Biology December 16-18, 2013 at Jamia Millia Islamia, New Delhi.

- 38) Nitesh Kumar, Somlata, Mohit Mazumder, Simanti Bhattacharya, Sankar Maiti, Alok Bhattacharya and **S. Gourinath**. Eh Coactosin stabilizes actin filaments in the protist parasite *Entamoeba histolytica*. **PARASITOLOGY-2014: A conference on recent trends in molecular parasitology, JNU. March 27-29, 2014**
- 39) Aruna Murmu, saima Aslam, **S.Gourinath**, Alok Bhattacharya. Functional characterization Calcium Binding Protein 6 (EhCaBP6) from *Entamoeba histolytica*. **PARASITOLOGY-2014: A conference on recent trends in molecular parasitology, JNU. March 27-29, 2014**
- 40) Sanjeev Kumar, Saima Aslam, Mohit Mazumder, Rana Zaidi and **S. Gourinath**. Crystal Structure of Calcium Binding Protein-5 from *Entamoeba histolytica* and its involvement in initiation of phagocytosis of human erythrocytes (From Mar 27th-29th 2014). **PARASITOLOGY-2014: A conference on Recent Trends in Molecular Parasitology at JNU- New Delhi .**
- 41) Mohit Mazumder, Alok Bhattacharya and **S. Gourinath**. A novel algorithm for qualitative estimation of Ca²⁺ binding affinity and prediction of canonical EF hand loop. **PARASITOLOGY-2014: A conference on recent trends in molecular parasitology, JNU. March 27-29, 2014.**
- 42) Gunjan Gautam, Syed Arif Abdulrehman, **S. Gourinath**. Crystallization of C-terminal Domain (CTD) of Unconventional Myosin of *E. histolytica*. **PARASITOLOGY-2014: A conference on recent trends in molecular parasitology, JNU. March 27-29, 2014**
- 43) Sudhaker Dharavath, Sudhir Kumar and **S.Gourinath**. Investigation of loss of feedback inhibition in EhSAT3 from *Entamoeba histolytica*. **82nd Annual Meeting of the Society of Biological Chemists (India) and International Conference on Genomes: Mechanism and Function. Hyderabad, India (02.12.13 to 5.12.2013).**
- 44) Sudhaker Dharavath, Sudhir Kumar and **S.Gourinath**. The structural and functional characterisation of EhSAT isoform-3 from *Entamoeba histolytica*. **PARASITOLOGY-2014: A conference on recent trends in molecular parasitology, JNU. March 27-29, 2014**
- 45) Suneeta Devi, Khaja Faisal Tarique, Syed Arif Abdul Rehman and **S. Gourinath**. Structural study of O-acetylserine sulphydylase (OASS) and Serine Acetyl Transferase (SAT)-Imperative enzymes in sulfur metabolism pathway. **PARASITOLOGY-2014: A conference on recent trends in molecular parasitology, JNU. March 27-29, 2014.**
- 46) Preeti satyawali, Syed arif abdul rehman, Khaja Faisal tarique, Nilima Kumari, **S. Gourinath**. Cloning, expression, purification and crystallization of beta clamp protein from *Helicobacter Pylori*. **National Conference on Recent Trends in Protein Structural Biology December 16-18, 2013 at Jamia Millia Islamia, New Delhi.**
- 47) Sanjeev Kumar, Saima Aslam, Mohit Mazumder, Rana Zaidi and **S. Gourinath**. Crystal Structure of Calcium Binding Protein-5 from *Entamoeba histolytica* and its involvement in initiation of phagocytosis of human erythrocytes (From November 21st-23rd 2013). Oral presentation at **NSC-42, JNU- New Delhi.**
- 48) Sudhir Kumar, Mohit Mazumder, and **S. Gourinath**. Structural and functional studies of *E. histolytica* Serine acetyl transferases: Insight into the differential regulation and isoforms. National symposium on frontiers of biophysics, **Biotechnology and Bioinformatics (37th IBS). Held during Jan 13-16, 2013, at Department of Biophysics, University of Mumbai.** (got best poster award)
- 49) Nitesh Kumar, Somalata, Simanti Bhattacharya, Sankar Maiti, and **S. Gourinath**. Structural and functional studies of Coactosin from *E. histolytica*.: contrary to the other ADF/COFILIN family proteins. National symposium on frontiers of biophysics, **Biotechnology and Bioinformatics (37th IBS). Held during Jan 13-16, 2013, at Department of Biophysics, University of Mumbai.**

- 50) Mohit Mazumder, Narendra Pradhan, Alok Bhattacharya and **S. Gourinath**. Prediction and analysis of canonical EF hand loop and estimation of Ca²⁺ binding affinity from its primary sequence. **International Conference on Biomolecular forms and Functions. Held during 8-11 Jan 2013, at IISC, Bangalore.**
- 51) Sudhir Kumar, Isha Raj, Mohit Mazumder, and **S. Gourinath**. Structural and functional studies of *E. histolytica* Serine acetyl transferases. **International Conference on Biomolecular forms and Functions. Held during 8-11 Jan 2013, at IISC, Bangalore.** (got best poster award)
- 52) Nitesh Kumar, Somalata, Simanti Bhattacharya, Sankar Maiti, and **S. Gourinath**. Structural and functional studies of Coactosin from *E. histolytica*. **International Conference on Biomolecular forms and Functions. Held during 8-11 Jan 2013, at IISC, Bangalore.**
- 53) Nitesh Kumar, Sankar Maiti, Saima Aslam, Somalata and **S. Gourinath (2012)**. Structural and functional studies of Coactosin from *Entamoeba histolytica*. **EMBO Global Exchange Lecture Course & Symposium on “Amoebiasis: Exploring the Biology and the Pathogenesis of Entamoeba” held during 4-7th, March 2012 at Khajuraho, India**
- 54) Sanjeev Kumar, Rana Zaidi and **S. Gourinath (2012)**. Crystal Structure of CaBP5 from *Entamoeba histolytica* at **EMBO Global Exchange Lecture Course & Symposium on “Amoebiasis: Exploring the Biology and the Pathogenesis of Entamoeba” held during 4-7th, March 2012 at Khajuraho, India**
- 55) Sudhir Kumar, Isha Raj, Isha Nagpal and **S. Gourinath** “Structural and Biochemical Studies of Cysteine Biosynthetic Enzymes Reveal Why the Parasite *Entamoeba histolytica* Cannot Form a Cysteine Synthase Complex” at Hamburg school for Structure and Dynamics in infection, International symposium n structural and infection biology, 1-2nd July 2011.
- 56) S. Arif Abdulrehman, Tara Kashav, Ramgopal Nitharwal, Suman Kumar Dhar, and **Gourinath .S.** “**Helicase-Primase interactions and their structural studies in *Helicobacter pylori***” at 55th Biophysical society held on 5th March – 9th March 2011 at Baltimore, Maryland, USA.
- 57) Sudhir Kumar and **Gourinath, S.** “**Regulation of cysteine biosynthetic pathway in the light of crystal structure of *Entamoeba histolytica* serine acetyltransferase 1**” at 7th Asian Biophysics Association (ABA) Symposium & Annual Meeting of the Indian Biophysical Society (IBS) held on 30th Jan - 2nd Feb 2011 at India Habitat Center, New Delhi, India.
- 58) S. Arif Abdulrehman, Tara Kashav, Ramgopal Nitharwal, Suman Kumar Dhar, and **Gourinath .S.** “**Structural studies of DNA replication initiation complex proteins Primase and Helicase from *Helicobacter pylori***” at 7th Asian Biophysics Association (ABA) Symposium & Annual Meeting of the Indian Biophysical Society (IBS) held on 30th Jan - 2nd Feb 2011 at India Habitat Center, New Delhi, India.
- 59) Isha Raj, Isha Nagpal and **Gourinath S.** “**Two mutations at the C-terminal end of EhSAT could restore EhOASS-EhSAT interactions**” at 7th Asian Biophysics Association (ABA) Symposium & Annual Meeting of the Indian Biophysical Society (IBS) held on 30th Jan - 2nd Feb 2011 at India Habitat Center, New Delhi, India.
- 60) Sanjeev Kumar, Shivesh Kumar, Ejaz Ahmed, M. Shahid Mansuri, Rana Zaidi, Rizvan Hasan Khan and **Gourinath, S.** “**Calcium binding protein 1 of *Entamoeba histolytica*: a dual regulator**” at 7th Asian Biophysics Association (ABA) Symposium & Annual Meeting of the Indian Biophysical Society (IBS) held on 30th Jan - 2nd Feb 2011 at India Habitat Center, New Delhi, India.
- 61) Nitesh Kumar and **Gourinath, S.** “ **Three dimensional structure of Coactosin from *Entamoeba histolytica* at 1.4 Å resolution**” at 7th Asian Biophysics Association (ABA) Symposium & Annual Meeting of the Indian Biophysical Society (IBS) held on 30th Jan - 2nd Feb 2011 at India Habitat Center, New Delhi, India.
- 62) Isha Nagpal and **Gourinath, S.** “ ***In-silico* screening of inhibitors against OASS and SAT of *Entamoeba histolytica* cysteine biosynthetic pathway**” at 7th Asian Biophysics Association (ABA) Symposium & Annual Meeting of the Indian Biophysical Society (IBS) held on 30th Jan - 2nd Feb 2011 at India Habitat Center, New Delhi, India.
- 63) Sushant Kumar, S. Arif Abdulrehman and **S. Gourinath**. “Role of linker region in hexamerization of DnaB replicative helicase in Eubacteria” at 7th Asian Biophysics Association (ABA) Symposium & Annual Meeting of the Indian Biophysical Society (IBS) held on 30th Jan – 2nd Feb 2011 at India Habitat Center, New Delhi, India.

- 64) S. Arif Abdulrehman, Tara Kashav, Ramgopal Nitharwal, Suman Kumar Dhar, and **S. Gourinath**. "Helicase-primase interactions and their structural studies in *Helicobacter pylori*" 39th National seminar on crystallography on Oct 25-27, 2010 at Department of Physics and electronics, University of Jammu, Jammu Tawi.
- 65) Sudhir Kumar and **S. Gourinath**. "Crystal structure of *Entamoeba histolytica* serine acetyltransferase1 and its complex with Ser and Cysteine. 39th National seminar on crystallography on Oct 25-27, 2010 at Department of Physics and electronics, University of Jammu, Jammu Tawi.
- 66) S. Arif Abdulrehman, Tara Kashav, Ramgopal Nitharwal, Suman Kumar Dhar, and **S. Gourinath**. "Helicase-primase interactions and their structural studies in *Helicobacter pylori*" **4th International symposium on recent trends in macromolecular structure and function** on Jan 21st-23rd Jan 2010 at University of Madras, Guiny campus, Chennai.
- 67) Isha Raj, Isha Nagpal and **S. Gourinath**. "Investigations into the loss of EhOASS-EhSAT interactions" **4th International symposium on recent trends in macromolecular structure and function** on Jan 21st-23rd Jan 2010 at University of Madras, Guiny campus, Chennai.
- 68) Nitesh Kumar and **S. Gourinath**. "Three dimensional structure of Coactosin from *Entamoeba histolytica* at 1.4Å resolution." **4th International symposium on recent trends in macromolecular structure and function** on Jan 21st-23rd Jan 2010 at University of Madras, Guiny campus, Chennai.
- 69) Sudhir Kumar and **S. Gourinath**. "Crystal structure of *Entamoeba histolytica* serine acetyltransferase1 and its complex with cysteine." **4th International symposium on recent trends in macromolecular structure and function** on Jan 21st-23rd Jan 2010 at University of Madras, Guiny campus, Chennai.
- 70) Sudhir Kumar and **Gourinath, S.** "Crystallization and Preliminary crystallographic data of Serine acetyltransferase from *Entamoeba histolytica*" National Seminar on Crystallography, Mysore, Feb. 11-13, 2009
- 71) Kumar, S. and **Gourinath, S.** Crystal structure of calcium binding protein-1 from *Entamoeba histolytica* in complex with phenylalanine: Visualization of mode of target binding. EMBO world lecture course on Recent developments in Macromolecular Crystallography, at NCL, Pune, 9-14 Nov 2008.
- 72) Kumar, S. and **Gourinat, S.** Crystal structure of calcium binding protein-1 from *Entamoeba histolytica* in complex with phenylalanine: Visualization of mode of target binding. International Symposium on recent trends in macro molecular structure and function, Jan 7-12th 2008, Chennai. (**Got best poster award**)
- 73) Kumar, M., Krishna, Ch., Kumar, S., Jain, S., Alam, N. and **S. Gourinath**. Crystal structure of native O-acetylserine sulfhydrylase from *Entamoeba histolytica* and its complex with cysteine: Structural evidence for cysteine binding and lack of interactions with Serine acetyl transferas. International Symposium on recent trends in macro molecular structure and function, Jan 7-12th 2008, Chennai.
- 74) Alam, N, Kumar, S, Pradhan N., and **Gourinath, S.** "Crystal structure of a calcium binding protein-1 from *Entamoeba histolytica* : a novel arrangement of EF hands motifs. At National Symposium of Crystallography, January 22-24th 2007, Chennai.
- 75) Tara, K, Rajaram A, Alam N, Dhar SK and **Gourinath S.**" N-terminal domain dictates the quaternary states of *Helicobacter pylori* hexameric DnaB helicase. At society of biological chemistry, 75th Annual meeting Dec 8th-11th 2006. Delhi.
- 76) Kumar, S, Pradhan N., **Alam, N.** and **Gourinath S.** "Crystal structure of a calcium binding protein-1 from *Entamoeba histolytica* : a novel arrangement of EF hands motifs. At society of biological chemistry, 75th Annual meeting Dec 8th-11th 2006. Delhi.
- 77) Tara, K., Alam, N., Dhar, S. K. and **Gourinath, S.** "Structural studies of DnaB helicase from *Helicobacter pylori*". At Symposium on Macromolecular Crystallography. Nov 15-16, 2005. Hyderabad.* Got best poster presentation award.
- 78) **Gourinath, S.**, Srinivasan, A. and Singh, T. P. "Structure of novel bifunctional Inhibitor of trypsin and alpha - amylase from Ragi seeds." *At Cambridge healthtech Institute's Proteases Inhibitors: New therapeutics and approaches*, Nov 6-7, 1996. Baltimore, Maryland.
- 79) **Gourinath, S.**, Srinivasan, A. and Singh, T. P. "Crystal structure of the bifunctional inhibitor of trypsin and alpha-amylase from Ragi seeds at 3.3 Å resolution." *At XXVIII National seminar on Crystallography*, september 24-26, 1997. Kottayam, Kerala.
- 80) **Gourinath, S.**, Neelima, A., Srinivasan, A., Singh, T. P. "Crystal structure of the bifunctional inhibitor of trypsin and alpha-amylase from Ragi seeds at 2.9 Å resolution." *At XIII Inter National seminar on Biophysics*, september 29-24, 1999. Delhi.

- 81) **Gourinath, S.**, Sharma, S., Singh, R. K., Ray, I., Gupta, M. N. and Singh, T. P. "Enhancement of enzyme activity through three - phase partitioning : Crystal structure of a modified serine proteinase at 1.5 Å resolution." At **National seminar on Recent trends in Crystallography, Biophysics and Computational Biology**. April, 24-26, 2000. Chennai. * Got best poster presentation award.
- 82) Garima, S., Sharma, S., **Gourinath, S.**, Paramasivam, M., Srinivasan, A. and Singh, T. P. "Structure of Phospholipase A2 from Indian common Krait (*Bungarus Caeruleus*) venom at 2.4 Å resolution." At **National seminar on Recent trends in Crystallography, Biophysics and Computational Biology**. April, 24-26, 2000. Chennai.

Academic / Advisory role out side JNU

Evaluation of RCB-IITD joint MFIRP Proposals - 2021

DBT nominee of the IBSC committee at DSS Takara Bio India Pvt. Ltd (DTI) from 2019-2021.

DBT nominee of the IBSC committee at ICGEB from 2019-2021.

Academic council committee member of ICGEB-JNU from 2015-2018

External member, Board of Studies, Center for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia from 2018 to 2020

UGC nominee of the Advisory committee of UGC-SAP programme of Department of Biochemistry and Biophysics, University of Kalyani from 2018 to 2023

Faculty review committee member for NII - 2021

Faculty review and promotion committee of RCB, 2021

Other Academic / Advisory role in JNU

Co-coordinator of Refresher course at UGC academic staff college, JNU in 2015.

Local Organising committee member of **Parasitology-2014: A conference on recent trends in molecular parasitology**” held during 27-29th March 2014 at Jawaharlal Nehru University.

Treasurer and Local Organising member of “**42nd National Seminar on Crystallography AND International Workshop on Application of X-ray diffraction for Drug Discovery**” held during 21-23 November 2013 at Jawaharlal Nehru University; co-organised by JNU, AIIMS, NII and RCB.

Local Organising committee member of **EMBO Global Exchange Lecture Course & Symposium on “Amoebiasis: Exploring the Biology and the Pathogenesis of Entamoeba”** held during 4-7th , March 2012 at Khajuraho, India.

Local Organising committee member of Asian Biophysical Association 2011 meeting to be held at Delhi.

Convener of CCP4 workshop held in JNU, Delhi Feb, 2010, co-organised by JNU, AIIMS, NII and RCB from India and EMBL, York university, CCP4 core group from Europe.

Organising Committee member for the 2nd International Conference on Trends in Cellular and Molecular Biology, Jan 5-7, 2008.

Organising Committee member for society of biological chemistry, 75th Annual meeting Dec 8-11 2006.
Delhi

Co-coordinator: Summer research programme 2009, 2014, 2016 of SLS, JNU.

Projects undertaken

Sponsoring Agency : Department of Science and Technology

Title: Structural studies of calmodulin and its complex with cellular targets

Duration: 2004 – 2007 : Amount of the grant: ~10 lakhs

Sponsoring Agency : Department of BioTechnology

Title: Structural and functional characterization of Helico bacter pylori helicase and its associated proteins.

Duration: 2005 – 2008 : Amount of the grant: ~29 lakhs

Sponsoring Agency : Department of Bio Technology- IYBA award

Title: Structural studies of EF hand containing proteins: specificity and affinity regulation of calcium binding and their functional implications

Duration: 2007 – 2012 : Amount of the grant: ~50 lakhs

Sponsoring Agency : CSIR

Title: Structural and functional studies of key cysteine biosynthetic pathway enzymes in *E. histolytica*.

Duration: 2007 – 2010 : Amount of the grant: ~18 lakhs

Sponsoring Agency : Department of Science and Technology

Title: Three dimensional structure determination of calcium binding protein-2 from *Entamoeba histolytica* and its complexes with cellular targets.

Duration: 2008-2011: Amount of the grant: ~23 lakhs

Sponsoring Agency : Department of BioTechnology

Title: Structural and functional characterization of calcium sensor proteins from *E. histolytica*

Duration: 2009 – 2012 : Amount of the grant: ~55 lakhs

Co-investigators: Prof. Alok Bhattacharya and Prof. K. V. R. Chary

Sponsoring Agency : Department of BioTechnology (Indo-German grant)

Title: Structural and functional Characterization of *Helicobacter pylori* pre-initiation Complex Proteins

Duration: 2010 – 2013 : Amount of the grant: ~70 lakhs

Sponsoring Agency : CSIR

Title: Structural and functional studies of crucial cysteine biosynthetic pathway enzyme: Serine acetyl transferase.

Duration: 2011 – 2014 : Amount of the grant: ~22 lakhs

Sponsoring Agency : Department of BioTechnology (Programe support on molecular parasitology)

Title: Structural and functional Characterization of crucial cysteine biosynthetic pathway proteins from *E. histolytica* and *L.donavani*

Duration: 2011 – 2016 : Amount of the grant: ~45 lakhs

Sponsoring Agency : UGC

Title: Structural and functional studies of actin binding protein coactosin from *E. histolytica*
Duration: 2013-2016: Amount of the Grant: ~6 lakhs

Sponsoring Agency : SERB-DST

Title: Structural studies of cysteine synthase complex
Duration: 2013-2016: Amount of the Grant: ~43lakhs

Sponsoring Agency : DBT

Title: Investigations into sulfate assimilation pathway in *E. histolytica*
Duration: 2013 – 2017 : Amount of the grant: ~45 lakhs

Sponsoring Agency : ICMR

Title: Structure-based development of anti-protozoan inhibitors against enzymes involved in cysteine biosynthesis: In- silico drug design against *Entamoeba histolytica* cysteine biosynthetic enzymes.
Duration: 2014 – 2017: Amount of the grant: ~25 lakhs

Sponsoring Agency : UPE-II

Title: Structural studies of replication initiation proteins from *H. pylori*.
Duration: 2015 – 2018 : Amount of the grant: ~11 lakhs

Sponsoring Agency : CSIR

Title: Structural and functional studies of Serine biosynthetic pathway enzymes from *E. histolytica*.
Duration: 2015 – 2018 : Amount of the grant: ~18 lakhs

Sponsoring Agency : DBT

Title: Design and validation of canonical EF hand loop with estimated Ca²⁺ binding affinity
Duration: 2016-2019: Amount of the grant: ~32 lakhs

Sponsoring Agency : SERB-DST

Title: Structural and functional studies of unconventional myosin IB in *E. histolytica*, understanding its role in Phagocytic cup formation.
Duration: 2017-2020: Amount of the grant: ~60 lakhs

Sponsoring Agency : DBT

Title: Structural, Functional Studies and Inhibitor Screening of PLP Kinase from *Entamoeba histolytica*: A Crucial Kinase for its Survival
Duration: 2018 – 2021 : Amount of the grant: ~85 lakhs

Sponsoring Agency : DBT (Co-PI- Prof. S. S. Komath, SLS and Dr. Manideepa banerjee, IIT-Delhi)

Title: Structural-functional analysis of GPI biosynthetic enzymes.
Duration: 2019-2022: Amount of the grant: ~105 lakhs

Sponsoring Agency : CSIR

Title: Structural and functional characterization of Reverse sulfurization pathway enzymes in *H. pylori*.
Duration: 2019 – 2022 : Amount of the grant: ~25 lakhs

Sponsoring Agency : SERB-DST

Title: Understanding the role of novel ADF domain containing proteins in the phagocytic cup formation of *E. histolytica*.
Duration: 2021 – 2024 : Amount of the grant: ~60 lakhs