List of Publications of Professor M.R.N. Murthy

1974

1. Crystal and Molecular Structure of N-acetyl-L-glutamine, M.R.N.Murthy, K.Venkatesan and F.Winklar (1974) Cryst. Struct. Comm. 3, 743-746.

1976

2. Crystal and Molecular Structure of N-acetyl-L-glutamine M.R.N.Murthy, K.Venketesan and F.Winklar (1976) J. Chem. Soc., Perkin II, 768-771.

3. Structure of an adduct of 2-phenyl -3- methylpyrrocoline and acetylene dicarboxylate, M.R.N.Murthy, K.Venketesan and H.Manohar (1976) Cryst. Struct. Comm. 5, 899-904.

1977

4. Peptide conformations: Crystal structures of tert-butyloxycarbonylglycyl-L-proline and its benzyl ester, R.E.Marsh, M.R.N.Murthy and K.Venketesan (1977), J. Amer. Chem. Soc., 99, 1251-1256.

1980

5. Structure of apo-GAPDH at 3.0 A resolution
M.R.N.Murthy, R.M.Garavito, J.E.Johnson, M.G.Rossmann (1980)
J. Mol. Biol., 138, 859-872.

1981

6. Structure of heme environment of beef liver catalase at 2.5A resolution. T.J.Reid III, M.R.N.Murthy, A.Sicignano, N.Tanaka, W.D.L.Musick and M.G.Rossmann (1981),Proc. Natl. Acad. Sci., USA, 78, 4767-4771.

7. Crystal Structure of Catalase, M.R.N.Murthy, T.J.Reid III, A.Sicignano, M.G.Rossmann (1981), Kristallography 1017-1023.

8. Crystallization of tobacco ring spot virus, K.L.Heuss, M.R.N.Murthy, and P.Argos (1981), J. Mol. Biol., 153, 1161-1168.

1982

9. Structure of Beef liver catalase, M.R.N.Murthy,T.J.Reid III,A.Sicignano,N.Tanaka and M.G. Rossmann (1982), J. Mol. Biol. 152, 465-499.

10. The structure of beef liver catalase
M.R.N.Murthy,T.J.Reid III,A.Sicignano,N.Tanaka and M.G.Rossmann (1982)
in The Biological Chemistry of Iron, ed. H.B. Dunford et al., Reidel, 439-458.

1983

11. Structural comparisons of some small spherical viruses,
M.G.Rossmann, C.Abad-Zaratero, M.R.N.Murthy, L.Liljas (1983)
J. Mol. Biol. 165, 711-736.

12. Comparison of the nucleotide sequence of cucumber mosaic virus and brome mosaic virus, M.R.N. Murthy (1983)
J. Mol. Biol. 168, 469-475.

13. Evolutionary relationship of alfalfa mosaic virus with cucumber mosaic virus and brome mosaic virus,
H.S. Savithri and M.R.N. Murthy (1983), J. Bio Sci., 5, 183-187.

1984

14. A fast method of comparing protein structures,
M.R.N. Murthy (1984), FEBS Lett. 168, 97-102.

15. Stability and structural transitions of tomato aspermy virus and cucumber mosaic virus. H.S.Savithri, S.Devarajan and M.R.N. Murthy(1984), Virology, 134, 398-405,

1985

16. Similarities in the genomic sequence and coat protein structures of viruses, M.R.N. Murthy and H.S Savithri (1985),J. Biosci., 8, 815-821.

17. The structure of a T=1 icosahedral empty particle from southern bean mosaic virus, J.W. Erickson, A.M., Silva, M.R.N. Murthy and M.G. Rossmann (1985), Science, 229, 625-629.

1986

18. Refined Structure of beef liver catalase at 2.5 A resolution.
I.Fita, A.M.Silva, M.R.N.Murthy and M.G.Rossmann (1986)
Acta Cryst. B42 497-515.

19. Comparison of beef liver and P. Vitale catalases, W.R.Malik Adamyan, V.V.Barynin, A.A.Vagin,V.V.Borisev, B.K.Vainshtein, I.Fita, M.R.N.Murthy and M.G. Rossmann (1986), J. Mol. Biol. 188, 63-72 (1986).

20. The structure of rabbit muscle phosphoglucomutase at
intermediate resolution, Zheng-Zoing Lin, M.Konno, C.A- Abad Zaratero, R.Wierenga, M.R.N.Murthy, W.J.Ray,Jr., M.G.Rossmann (1986)
J. Biol. Chem., 261, 264-274.

21. Protein structural homology: A metric approach,
R.Usha and M.R.N. Murthy (1986), Int. J. Pep. Pro. Res. Vol. 28 364-369.

22. Strategies for collecting screen less oscillation data,
S.K.Munshi and M.R.N.Murthy, (1986), J. Appl. Crystl. 19, 61-62.

1987

23. Stability of belladonna mottle virus: role of polyamines and cations.
H.S.Savithri, S.K.Munshi, S.Suryanarayana, S.Divakar and
M.R.N.Murthy (1987), J. Gen. Virol. 68, 1553-1561.

24. Structural studies on belladonna mottle virus,
M.R.N.Murthy, S.K.Munshi, C.N.Hiremath, S.Suryanarayana and
H.S. Savithri (1987), Curr. Science, 56, 168-169.

25. Symmetry of belladonna mottle virus, rotation function studies,
S.K.Munshi, C.N.Hiremath, H.S.Savithri and M.R.N.Murthy(1987)
Acta Cryst. B43, 376-382.

1989

26. Primary structure of belladonna mottle virus coat protein.
S.Suryanarayana, N.Appaji Rao, M.R.N.Murthy, and H.S.Savithri (1989)
J. Biol. Chem. 264, 6273-6279.

27. Structure-function relationships of icosahedral plant viruses,
H.S.Savithri, S.Suryanarayana and M.R.N. Murthy(1989)
Achiv. Virol. 109, 153-172.

28. Crystal structure of putrescine -glutamic acid complex, S.Ramaswamy, M.Nethaji and M.R.N.Murthy (1989), Current Science, 58, 1160-1162.

1990

29. Structure of belladonna mottle virus: Cross rotation function studies with southern bean mosaic virus, C.N.Hiremath, S.K.Munshi and M.R.N.Murthy (1990), Acta Cryst, B46, 562-567.

30. Crystal structure of putrescine - aspartic acid complex.
S.Ramaswamy and M.R.N.Murthy (1990), Current Science, 59, 379-382.

1991

31. Crystal structure of hexanediamine - glutamic acid complex.
S.Ramaswamy and M.R.N.Murthy (1991), Current Science, 60, 173-176.

32. Crystal and molecular structure of putrescine DL- glutamic acid complex. S.Ramaswamy and M.R.N.Murthy (1991), Current Science, 61, 410-413.

33. Crystal structure of sym-homospermidine triphosphate monohydrate.
S.Ramaswamy and M.R.N.Murthy (1991), Indian .J. Biophys. Biochem., 28, 504-512.

1992

34. Crystal structures of propanediamine complexed with L and DL-glutamic acid: effect of chirality on propanediamine.
S.Ramaswamy and M.R.N.Murthy (1992), Acta.Cryst. B48, 488-492.

35. Structure and assembly of spherical plant viruses.
M.R.N. Murthy, C.N. Hiremath and H.S.Savithri (1992), in G.N. Ramachandran festchrift, pp687-702, Indian Academy of Science, Bangalore.

36. Crystal structure of cadaverine dihydrochloride monohydrate.
S.Ramaswamy and M.R.N.Murthy (1992), Ind. J. Biochem. Biophys., 29, 402-406.

37. Nucleotide sequence of the 3'terminal region of belladonna mottle virus (renamed Physalis mottle virus) RNA and analysis of the evolutionary relationships among tymoviral coat proteins, A.N.K.Jacob, M.R.N.Murthy and H.S.Savithri (1992)
Arch. Virol.123, 367-377.

1993

38. Structure of Sesbania mosaic virus at 4.7A resolution and partial amino acid sequence of the coat protein, H.S.Subramanya, K.Gopinath, M.V.Nayudu, H.S.Savithri and M.R.N.Murthy (1993), J. Mol. Biol. 229, 20-25.

1994

39. Polyamine structure and interactions.
S.Ramaswamy and M.R.N.Murthy (1994), J. Indian Ins. Science, 74,591-609.

40. Primary structure of sesbania mosaic virus coat protein its implications to the assembly and architecture of the virus, K.Gopinath, S.Sundaresh, M.Bhuvaneswari, A.Karande, M.R.N.Murthy M.V.Nayudu and H.S.Savithri (1994), Ind. J. Biochem. Biophys., 31, 322-330.

41. Studies on molecular evolution and structural features of double headed inhibitor of α-amylase and trypsin in plants, S.Velankar and M.R.N.Murthy(1994), J.Genetics, 73, 43-54.

42. Analysis of the effects of amino acid sequence on the structure of proteins, S.Baranidharan and M.R.N.Murthy(1994), Curr. Sci., 66, 847-856.

43. Crystallization and preliminary X-ray diffraction studies on a Trypsin / Chymotrypsin double headed inhibitor from horse gram, B.Prakash, M.R.N.Murthy, Y.N.Sreerama, P.R.Rama Sarma and, D.Rajagopala Rao (1994), J. Mol. Biol.235, 364-366.

1995

44. Structure of sesbania mosaic virus at 3.0A resolution, M.Bhuvaneshwari, H.S.Subramanya, K.Gopinath, M.V.Nayudu, H.S.Savithri and M.R.N.Murthy(1995),Structure, 3, 1021-1030.

1996

45. Analysis of amino acid sequences of plant Bowman-Birk inhibi-tors. B.Prakash, S.Selvaraj, M.R.N.Murthy, Y.N.Sreerama, D.Rajagopal Rao and L.R.Gowda (1996) J. Mol. Evol., 42, 360-369.

1997

46. Architecture of small RNA viruses
M.Bhuvaneswari, H.S.Subramanya, M.R.N.Murthy, K.Gopinath and H.S.Savithri (1997), Prog. Crystal Growth and Charact. 34, 1-10.

47. Triose Phosphate isomerase from Plasmodium falciparum: the crystal structure provides insights into antimalarial drug design., S.S.Velankar, S.S.Ray, R.S.Gokhale, S.Suma, H.Balaram, P.Balaram and M.R.N.Murthy (1997), Structure, 5, 751-761.

48. Sesbania mosaic virus structure at 3Å resolution
M.R.N.Murthy, M.Bhuvaneswari, H.S.Subramanya, K.Gopinath and H.S.Savithri(1997), Biophycal Chem. 68, 33-42.

49. Extended comformation of putrescine occuring on a centre of symmetry in its 1:2 complex with malonic acid., A.M.Babu, T.J.R.Weakley and M.R.N.Murthy (1997), Acta Cryst., C53, 365-367.

50. Analysis of the temperature factor distribution in high resolution protein structures, S.Parthasarathy and M.R.N.Murthy (1997),
Protein science 6, 2561-2567.

51. Studies on simultaneous inhibition of trypsin and chymotrypsin by horsegram Bowman-Birk inhibitor, B.Prakash, M.R.N.Murthy, Y.N.Sreerama, D.Rajagopal Rao and L.R.Gowda (1997), J. Biosci., 22, 545-554.

52. Source and target enzyme signature in serine protease inhibitor actice site sequences, B.Prakash and M.R.N.Murthy (1997), J. Biosci., 22, 555-565

53. Crystals of a thymidylate synthase mutant offer insights into crystal packing and plasticity of protein-protein cintacts. B. Gopal, V.Prasanna, S.Parthasarathy, D.V.Santi, P.Balaram and M.R.N.Murthy (1997), Current Science, 75, 299-304.

54. Thermodynamic of metal ion binding and denaturation of a calcium binding protein from *entamoeba histolytica*
B.Gopal, C.P.Swaminathan, S.Bhattachanray,A.Bhattacharya, M.R.N.Murthy and A.Surolia (1997), Biochemistry 36, 10901 – 10916

1998

55. Crystallization and preliminary x-ray diffraction studies of a recombinant calcium binding protein from *entamoeba histolytica*
B. Gopal, R.Suma, C. P. Swaminathan, A.Surolia, M.R.N.Murthy, A.Bhattacharya, S.Bhattacharya (1998)' Acta Cryst D54, 1442-1445.

56. Crystal structure of 1,4 butane di-ammonium di(ethane dioate) monohydrate (putrescinium (2+) di (hydrogen oxalate) monohydrate 2:1 complex
A.M. Babu, T.J.R.Weakley, and M.R.N.Murthy (1998)
Z. Kristallogr. New crystal structures, 213, 321-322.

57. Structural studies on isometric plant viruses, M.R.N.Murthy and H.S.Savithri (1998), Topics in Tropical Virology, 1, Eds: D.N.Black, D.D.Shukla and N.Rishi Malhotra Publishing House, New Delhi, pp 59 – 75.

58. Induction of spectroscopically defined trasition by Guanidinium hydrochloride on a recombinant Calcium binding protein from *E. hystolytica*
B.Gopal, J.V.Krishna Rao, C.J.Thomas, A.Bhattacharya, S.Bhattacharya, M.R.N.Murthy and A.Surolia (1998), FEBS Lett. 441, 71 – 76.

1999

59. Cavity creating mutation at dimer interface of *plasmodium falciparum* and restoration of stability by disulfide cross linking of subunit
B.Gopal, S.S.Ray, R. S.Gokhale, H.Balaram, M.R.N.Murthy and P. Balaram (1999). Biochemistry, 38, 478 – 486.

60. Effect of amino acid substitutions at the subunits interface on the stability and aggregation properties of a dimeric protein: role of Arg178 and Arg218 at the dimer interface of thymidylate synthase, V.Prasanna, B.Gopal, M.R.N.Murthy, D.V.Santi, P.Balaram (1999), Proteins, 34, 356 – 368.

61. On the correlation between the main chain and side chain atomic displacement parameters (B-values) in high resolution protein structures, S.Parthasarathy and M.R.N.Murthy (1999), Acta Crysta D55, 173 – 180.

62. Structure of Physalis mottle virus at 3.8A resolution: Implications for the viral assembly, S.Sri Krishna, C.N.Hiremath, S.K.Munshi, M.Sastri, H.S.Savithri and M.R.N.Murthy (1999), J. Mol. Biol., 289, 919 – 934.

63. Identification of a discrete intermediate in the assembly/disassembly of physalis mottle tymovirus through mutational alanysis, M.Sastri, S.Reddy, M.R.N.Murthy, S.SriKrishna and H.S.Savithri (1999), J. Mol. Biol., 289, 905 – 918.

64. Disulfide engineering at the dimer interface of L. Casei thymidylate synthase:
Crystal structure of the T155C/E188C/C244T mutant
S.S.Velankar, R.S.Gokhale, S.S.Ray, B.Gopal, D.V.Santi, P.Balaram and M.R.N.Murthy (1999), Protein Science, 8, 930-933.

65. Thermodynamics of target peptide recognition by calmodulin and a calmodulim analogue: implications for the central linker., Anu K Murthy, B.Gopal, P.R.Satish, S. Bhattacharya, A.Bhattacharya, M.R.N.Murthy and A. Surolia (1999), Febs Lett., 461, 19-24

66. Temperature-dependent cell transformation in a calcium-binding protein from *Entamoeba histolytica*, Anu K. Moorthy, B.Gopal, C.Gopi Mohan and M.R.N.Murthy (1999), Curr. Sci., 77, 855-856.

67. Structure, stability and assembly of physalis mottle virus.
M.R.N.Murthy, S.SriKrishna, M.Sastri and H.S.Savithri (1999)
Perspectives in Structural Biology, 467-484.

2000

68. Protein thermal stability: insights from atomic displacement parameters (B-values) S.Parthasarathy & M.R.N.Murthy (2000), Protein Engineering 13, 9-14.

69. Atomic displacement parameters of homologous proteins: Conservation of dynamics, V.M.S. Lenin, S.Parthasarathy and M.R.N.Murthy (2000), *Curr. Sci., 78, 1098-1105.*

70. Correlating dynamics to conformational properties: An analysis of Atomic Displacement Parameters (B-values) in high-resolution protein structures
S.Parthasarathy and M.R.N.Murthy (2000), *Curr. Sci., 78, 1123-1126.*

71. Protein dynamics by X-ray diffraction: An analysis of Atomic Displacement Parameters (ADP), B-values, S.Parthasarathy and M.R.N.Murthy(2000), Proc. Indian National Science Academy, Section B66, 239-264

2001

72. Structural studies on the empty capsids of Physalis mottle virus.
S.Sri Krishna, M.Sastri. H.S.Savithri and M.R.N. Murthy (2001),
J. Mol. Biol. 307, 1036-1047.

73. Variability of calcium binding to EF-hand motifs probed by electrospray ionization mass spectrometry, Anu K. Moorthy, B.Gopal, S. Kumar Singh and M.R.N.Murthy(2001), J. Am. Soc. Mass Spectrometry, 12, 1296-1301.

74. Conformation and structural transitions in the EF-hand of calmodulin: Evidence for gene duplication, Anu K. Moorthy and M.R.N.Murthy (2001),
J. Biomolecular Structure and Dynamics, 19, 47-59.

2002

75. A molecular switch in the capsid protein controls the particle polymorphism in an icosahedral virus. G. L. Lokesh, T. D. S. Gowri, P. S. Satheshkumar, M.R.N. Murthy and H. S. Savithri (2002), Virology, 292, 211-223.

76. Evidence for recombination among the Tomato Leaf Curl Virus Strains / Species from Bangalore, India.. Kirthi Narayanaswamy, Shubha P Maiya, M. R. N. Murthy and H. S. Savithri (2002), Arch.Virol, 147, 255-272.

77. Determination of the structure of the recombinant T=1 capsid of sesbania mosaic virus, V. Sangita, S. Parthasarathy, S. Toma, G.L. Lokesh, T.D.S. Gowri, P.S. Satheshkumar, H.S. Savithri and M.R.N. Murthy (2002), Current Science, 82, 1123-1131.

78. Structure of *Plasmodium falciparum* triosephosphate isomerase-phosphoglycolate complex in two crystal forms: characterization of catalytic loop in open and closed conformation in the ligand bound state, S.Parthasarathy, H.Balaram, P.Balaram and M.R.N.Murthy (2002).
Biochemistry, 41, 13178-13188.

79. Structures of Plasmodium falciparum triosephosphate isomerase complexed to substrate analogues: observation of the catalytic loop in the open conformation in the ligand-bound state.
S.Parthasarathy, H.Balaram, P.Balaram and M.R.N.Murthy (2002).
Acta Cryst, D58, 1992-2000.

80. Cloning, expression, purification and preliminary X-ray crystallographic studies of 2-methylisocitratelyase from *Salmonella typhimurium*
D.K.Simanshu, P.S.Satheshkumar, S.Parthasarathy, H.S.Savithri and M.R.N.Murthy (2002), Acta Cryst. D58, 2159-2161.

81. Determination of the structure of the recombinant T = 1 capsid of Sesbania mosaic virus
V.Sangita, S.Parthasarathy, S. Toma, G.L.Lokesh, T.D.S.Gowri, P.S.Satheshkumar, H.S. Savithri and M.R.N.Murthy (2002), Current Science, 82, 1123-1131.

82. Evidence for recombination among the Tomato Leaf Curl Virus Strains/Species from Bangalore, India, Kirthi Narayanaswamy, Shubha P Maiya, M. R. N. Murthy and H. S. Savithri (2002), Arch.Virol, 147, 255-272

83. Cloning, expression, purification and preliminary X-ray crystallographic studies of 2-methylisocitratelyase from *Salmonella typhimurium*, Dhirendra K. Simanshu, P.S.Satheshkumar, S.Parthasarathy, H.S.Savithri and M.R.N.Murthy (2002) Acta Cryst. 2002, D58, 0 1-3.

2003

84. Mutation of interfacial residues disrupts subunit folding and particle assembly of physalis mottle tymovirus., M.Uma Shankar, M.R.N. Murthy and H.S.Savithri (2003) J. Biol. Chem., 278, 6145-6152.

85. Mutation of interfacial residues disrupts subunit folding and particle assembly of physalis mottle tymovirus, M.Umashankar, M.R.N.Murthy and H.S.Savithri (2003), J.Biol.Chem., 278, 6145-6152

86 Crystallization and Preliminary X-ray diffraction studies on recombinant diaminopropionate ammonia lyase from *Escherichia coli*, V.Rajaram, J.Rajaganapathi, Farida Khan, H.S.Savithri and M.R.N.Murthy (2003), Acta Cryst D59, 1668-1669.

87. Crystal structure of *Salmonella typhimurium* 2-methylisocitrate lyase(PrpB) and its complex with pyruvate and Mg(2+),.D.K.Simanshu, P.S.Satheshkumar, H.S.Savithri and M.R.N.Murthy(2003), Biochem Biophys Res Commun., 311, 193-201.

88. Interatomic contacts in virus crystals, M.R.N.Murthy (2003), Current Science, 85, 1071-1074

89. Structure of *Plasmodium falciparum* TIM-2-phosphoglycerate complex at 1.1Å resolution
S.Parthasarathy, K.Eaazhisai, H.Balaram, P.Balaram and M.R.N.Murthy (2003)
J. Biol. Chem, 278, 52461-52470.

2004

90. Role of metal ion mediated interactions in the assembly and stability of *Sesbania mosaic virus* T=3 and T=1 capsids., Satheshkumar, P.S., Lokesh, G.L, Sangita, V, Saravanan, V, Vijay, C.S, Murthy M.R.N., Savithri, H.S., J. Mol. Biol. (2004), 342, 1001-1014

91. T=1 capsid structures of *Sesbania mosaic virus* coat protein mutants: Determinants of T=3 and T=1 capsid assembly, Sangita V, Lokesh GL, Satheshkumar PS, Vijay CS, Saravanan V, Savithri HS, and Murthy MRN (2004), J. Mol. Biol., 342, 987-999.

92. Crystal Structure of fully ligated Adenylosuccinate synthetase from *Plasmodium falciparum*
K. Eaazhisai, R. Jayalakshmi, P. Gayathri, R. P. Anand, K.Sumathy, H. Balaram and M. R. N. Murthy (2004), J. Mol. Biol., 335, 1251-1264.

93 Structures of unliganded and inhibitor complexes of W168F, a Loop6 hinge mutant of Plasmodium falciparum triosephosphate isomerase: observation of an intermediate position of loop6.
Eaazhisai K, Balaram H, Balaram P, Murthy MRN (2004)
J Mol Biol 2004 **343**:671-84.

2005

94. Cloning, expression, purification, crystallization and preliminary X-ray diffraction analysis of propionate kinase (TdcD) from *Salmonella typhimurium*, D.K. Simanshu and M.R.N. Murthy (2005), Acta Cryst. Vol F61, 52-55

95. Crystal structures of ADP and AMPPNP bound propionate kinase (TdcD) from *Salmonella typhimurium*: comparison with members of acetate and sugar kinase / heat shock cognate 70 / actin superfamily, Dhirendra K. Simanshu, H. S. Savithri and M. R. N. Murthy (2005), J.Mol. Biol., 352, 876-892.

96. Structural studies on recombinant T=3 capsids of *Sesbania mosaic virus* coat protein mutants, V. Sangita, G. L. Lokesh, P. S. Satheshkumar, V. Saravanan, C. S. Vijay, H. S. Savithri and M. R. N. Murthy (2005), Acta Cryst. Vol D. 61, 1402-1405

97. Structure of a mutant T=1 capsid of *Sesbania mosaic virus*: Role of water molecules in capsid architecture and integrity, V. Sangita, P. S. Satheshkumar, H. S. Savithri and M. R. N. Murthy (2005), Acta Cryst. Vol D61, 1406-1412

98. The role of arginine-rich motif and β-annulus in the assembly and stability of *Sesbania mosaic virus*, P.S. Satheshkumar, G.L. Lokesh, M.R.N. Murthy and H.S. Savithri (2005) J. Mol. Biol., 352, 447-458

2006

99. Crystal structure of the serine protease domain of *Sesbania mosaic virus* polyprotein and mutational analysis of residues forming the S1-binding pocket
P. Gayathri, P.S.Satheshkumar, K.Prasad, Smita Nair, H.S. Savithri and M.R.N. Murthy (2006), Virology 346, 440-451.

100. Cloning, purification, crystallization and preliminary X-ray crystallographic analysis of the N-acetylornithine aminotransferases from *Salmonella typhimurium* and *Escherichia coli*. V. Rajaram, K. Prasad, P. Ratna Prasuna, N. Ramachandra, S.R. Bharat, H.S. Savithri and M.R.N. Murthy (2006), Acta Cryst. F62, 980-983

101. Crystal structures of *Salmonella typhimurium* biodegradative threonine deaminase (TdcB)and its complex with CMP provide insights into ligand-induced oligomerization and enzyme activation., Dhirendra K. Simanshu, H.S.Savithri and M.R.N.Murthy, J. Biol, Chem. 281, 39630-39641

102. Crystallizaion and preliminary X-ray crystallographic analysis of biodegradative threonine deaminase (TdcB) from *Salmonella typhimurium*, Dhirendra K. Simanshu, Sagar Chittori, H.S.Savithri and M.R.N.Murthy, (2006) Acta Cryst. F62, 275-278

2007

103. Structure of the putative mutarotase YeaD from *Salmonella typhimurium*: structural comparison with galactose mutarotase, Sagar Chittori, Dhirendra K. Simanshu, H.S.Savithri and M.R.N.Murthy, (2007) Acta Cryst. D63, 197-205

104. Structure of triosephosphate isomerase (TIM) from *Methanocaldococcus jannaschii*. P. Gayathri, M. Banerjee, A. Vijayalakshmi, S. Azeez, H. Balaram, P. Balaram and M.R.N.Murthy, (2007) Acta Cryst. D63, 206-220

105. Structure and function of enzymes involved in the anaerobic degradation of L-threonine to propionate, Dhirendra K. Simanshu, Sagar Chittori, H. S. Savithri and M. R. N. Murthy, (2007)
Journal of Biosciences, 32, 1195-1206

106. Structure determination and biochemical studies on Bacillus stearothermophilus E53Q serine hydroxymethyltransferase and its complexes provide insights on function and enzyme memory
V. Rajaram1, B. S. Bhavani, Purnima Kaul, V. Prakash, N. Appaji Rao, H. S. Savithri and M. R. N. Murthy (2007) FEBS Journal, 274, 4148–4160

107. Cloning, expression, purification, crystallization and preliminary X-ray diffraction analysis of universal stress protein F (YnaF) from *Salmonella typhimurium*, Someswar RaoSagurthi, Rashmi RekhaPanigrahi, GiriGowda, H.S. Savithri and M.R.N.Murthy (2007) Acta Cryst. F, Struct Biol Cryst Commun. Nov 1;63(Pt 11):957-60

108. A personal account of virus structure determination at the Indian Institute of Science, Bangalore M.R.N. Murthy (2007) J. Ind. Inst. Sci. 87, 279-299.

109. Crystal structures of *Salmonella typhimurium* biodegradative threonine deaminase (TdcB) and its complex with CMP provide insights into ligand-induced oligomerization and enzyme activation.
Dhirendra K. Simanshu, H.S.Savithri and M.R.N.Murthy (2007)
J. Biol, Chem. 281, 39630-39641

110. Structural biology of Plasmodial proteins
P. Gayathri, Hemalatha Balaram, M.R.N.Murthy (2007)
Curr. Opin. Struct. Biol. 17: 744 – 754

2008

111. Cloning, expression, purification and preliminary X-ray crystallographic analysis of mannose 6-phosphate isomerase from Salmonella typhimutium.
Gowda, G., Sangurti, S.R., Savithri, H.S. and Murthy, M.R.N. (2008)
Acta Crystallogr Sect F Struct Biol Cryst Commun. 2008 Feb 1;64(Pt 2):81-4

112. Importance of tyrosine residues of Bacillus stearothermophilus serine hydroxymethyltransferase in cofactor binding and L-allo-Thr cleavage: crystal structure and biochemical studies (2008)
Bhavani, B. S.; Rajaram, V.; Bisht, Shveta; Kaul, Purnima;
Prakash, V.; Murthy, M.R. N.; Appaji Rao, N.; Savithri, H.S
FEBS J., 275, 4606-4619

113. Structure of recombinant capsids formed by the beta-annulus deletion mutant - rCP (Delta48-59) of Sesbania mosaic virus. Pappachan A, Subashchandrabose C, Satheshkumar PS, Savithri HS, Murthy MR. (2008)
Virology., 375, 190-196

114. Structure of biosynthetic N-acetylornithine aminotransferase from Salmonella typhimurium: studies on substrate specificity and inhibitor binding. Rajaram V, Ratna Prasuna P, Savithri HS and Murthy MR. (2008)
Proteins: Structure, Function, and Bioinformatics **70**: 429-441,

115. Crystal structures of *Salmonella typhimurium* propionate kinase and its complex with Ap4A: Evidence for a novel Ap4A synthetic activity, Dhirendra K. Simanshu, H. S. Savithri and M. R. N. Murthy, (2008) PROTEINS: Structure, Function, and Bioinformatics Mar;70(4):1379-88

116. Crystal structure of a chimera of human and *Plasmodium falciparum* hypoxanthine guanine phosphoribosyltransferases provides insights into oligomerization
Gayathri, P., Subbayya, I.N., Ashok C.S., Selvi, T.S., Balaram, H., Murthy, M.R.N. (2008) Proteins Str. Func. Bioinfo. 73, 1010-1020

117. Structural and functional studies on a mesophilic stationary phase survival protein (Sur E) from Salmonella typhimurium. (2008)
Pappachan A, Savithri HS, Murthy MR.
FEBS J., 275, 5855-5564

118. Systematic study on crystal-contact engineering of diphthine synthase: influence of mutations at crystal-packing regions on X-ray diffraction quality.
Mizutani H, Saraboji K, Malathy Sony SM, Ponnuswamy MN, Kumarevel T, Krishna Swamy BS, Simanshu DK, Murthy MR, Kunishima N. (2008)
Acta Crystallogr D Biol Crystallogr., 64, 1020-1033.

119. Stacking interactions of W271 and H275 of SeMV serine protease with W43 of natively unfolded VPg confer catalytic activity to protease.
Nair S, Gayathri P, Murthy MR, Savithri HS. (2008)
Virology., 382, 83-90.

2009

120. Structures of mannose-6-phosphate isomerase from Salmonella typhimurium bound to metal atoms and substrate: implications for catalytic mechanism.
Sagurthi SR, Gowda G, Savithri HS, Murthy MR. (2009)
Acta Crystallogr D Biol Crystallogr. 65, 724-732.

121. Detection of the protein dimers, multiple monomeric states and hydrated forms of Plasmodium falciparum triosephosphate isomerase in the gas phase.
Thakur SS, Deepalakshmi PD, Gayathri P, Banerjee M, Murthy MR, Balaram P. (2009)
Protein Eng Des Sel., 22, 289-304.

122. Structural and functional studies of Bacillus stearothermophilus serine hydroxymethyltransferase: the role of Asn(341), Tyr(60) and Phe(351) in tetrahydrofolate binding.
Pai VR, Rajaram V, Bisht S, Bhavani BS, Rao NA, Murthy MR, Savithri HS. (2009)
Biochem J., 418, 635-642

123. Biochemical and structural characterization of residue 96 mutants of Plasmodium falciparum triosephosphate isomerase: active-site loop conformation, hydration and identification of a dimer-interface ligand-binding site. Gayathri P; Banerjee Mousumi; Vijayalakshmi A; Balaram Hemalatha; Balaram P; Murthy M R N (2009)
Acta crystallogr **D65**: 847-57.

124. A single point mutation disrupts the capsid assembly in Sesbania Mosaic Virus resulting in a stable isolated dimer.
Pappachan Anju; Chinnathambi Subashchandrabose; Satheshkumar P S;

Savithri H S; Murthy M R N
Virology **392:** 215-21, 2009.

2010

125. Structure and assembly of *Sesbania mosaic virus*.
Savithri H. S. and Murthy M.R.N.
Current Science (2010) 98: 346-352

126. NSs Encoded by Groundnut Bud Necrosis Virus {GBNV-To (K)} is a Bi-functional Enzyme
Lokesh Bhushan, Rashmi Panigrahi, D. Srisathiyanarayanan, M.R.N. Murthy and H. S. Savithri
PLoS One (2010) (in press)

127 .Chittori, S., Simanshu, D.K., Savithri, H.S. and Murthy, M.R.N. (2010) Preliminary X-ray crystallographic analysis of 2-methylcitrate synthase from *Salmonella typhimurium*, *Acta Cryst.*, F66, 467-470

2011

128. Chittori S, Savithri HS, Murthy MR. Crystal structure of Salmonella typhimurium 2-methylcitrate synthase: Insights on domain movement and substrate specificity. J Struct Biol. 2011 Apr;174(1):58-68. Epub 2010 Oct 21. PubMed PMID: 20970504."

129. Revisiting the Mechanism of the Triosephosphate Isomerase Reaction: The Role of the Fully Conserved Glutamic Acid 97 Residue
Moumita Samanta, M. R. N. Murthy, Hemalatha Balaram, and Padmanabhan Balaram (2011)
Chem Bio Chem, 12, 1 – 12.

130. Probing the role of the fully conserved Cys126 in triosephosphate isomerase by site-specific mutagenesis – distal effects on dimer stability
Moumita Samanta, Mousumi Banerjee, Mathur R. N. Murthy, Hemalatha Balaram and Padmanabhan Balaram (2011)
FEBS Journal 278, 1932–1943

131. Crystal structures of open and closed forms of d-serine deaminase from *Salmonella typhimurium* – implications on substrate specificity and catalysis
Bharath, S.R., Bisht, S., Savithri, H.S., and Murthy, M.R.N. (2011)
FEBS Journal
Volume 278, Issue 16, pages 2879–2891, August 2011

132. Cloning, expression, purification and preliminary X-ray diffraction studies of a putative Mycobacterium smegmatis thiolase.

Janardan, N,, Paul, A,, Harijan, R.K,, Wierenga, R. K and Murthy, M.R.N (2011) Acta Crystallogr Sect F Struct Biol Cryst Commun. 67, 817-820. Epub 2011 Jun 30.

2012

133. Structural and Mutational Studies on Substrate Specificity and Catalysis of Salmonella typhimurium D-Cysteine Desulfhydrase
Bharath, S.R., Bisht, S, Harijan, R., Savithri, H.S. and Murthy, M. R. N. (2012)
PLoS ONE. May Issu e36267

134. Crystal Structure of *Escherichia coli* Diaminopropionate Ammonia-lyase Reveals Mechanism of Enzyme Activation and Catalysis
Bisht, S., Rajaram, V., Bharath, S.R., Kalyani, J.N., Khan, F., Rao, A.N., Savothri, H.S. and Murthy, M.R.N. (2012)
JBC Papers in Press, April 13, 2012, DOI 10.1074/jbc.M112.351809