

Profile Summary

Dr. Someswar Rao Sagurthi is currently working as an Assistant Professor in Department of Genetics & Biotechnology of Osmania University. Dr.Someswar obtained his Masters in Biotechnology from Jawaharlal Nehru University, New Delhi in 2001 and Post graduate diploma in Bioinformatics the same University in 2002. He received his Ph.D in “Protein crystallography and structural virology” from Indian Institute of Science, Bangalore in the year 2009. He was a Post-Doctoral Fellow-I at Scripps Research Institute, Molecular Biology, San Diego, California, USA from 2009-2010. He was also a Post-Doctoral Fellow-II at The Samuel Roberts Noble Foundation, Department of Plant Biology, Ardmore, OK, USA from 2010-2013. He joined as an Assistant Professor in Osmania University in 2013. He has started his research in Drug Design and Molecular Medicine. His research interests are Protein Crystallography and *Insilico* Drug Designing studies. His dedication towards research is reflected by numerous publications in international journals with high impact factors. He determined three dimensional crystal structures of several proteins which are available in Protein Data Bank. He is not only a successful researcher but an energetic faculty member too. He was a former faculty of Jamia Millia Islamia Central University, New Delhi and faculty of Amity University, Noida, U.P. He is a member of BOS for various institutions. He is appointed as core committee member for Research Development and Consultancy Cell (RDCC), Osmania university. He is a recipient of several awards-CSIR. He got selected for Young Investigators’ Meeting in 2017 and 2018. He is also an associate member of Telangana Academy of Science 2017. He organized conferences, seminars and workshops in the field of Biotechnology. He addressed as a keynote speaker in National and International conferences held by various universities.

Curriculum Vitae

Someswar Rao Sagurthi (Ph.D.)

Assistant Professor

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EDUCATIONAL QUALIFICATIONS

Degree	University	Field of Study	Years
Ph.D.	Indian Institute of Science	Crystallography and Biophysics	2003-09
PGD	Jawaharlal Nehru University	Bioinformatics	2001-02
M.Sc.	Jawaharlal Nehru University	Biotechnology	1999-01
B.Sc.	Kakatiya University	Chemistry, Botany and Zoology	1996-99

POST DOCTORAL RESEARCH - USA

- Mentor: **Prof. Xiaoqiang Wang**, *The Samuel Roberts Noble Foundation*, Department of Plant Biology, Ardmore, OK, USA (**Dec 2010 – Sept 2013**).

Structural studies on root nodulation Lysin kinases and 2 Hydroxyisoflavanone (IFS) proteins from Medicago truncatula. Structure-function studies of Plant viral movement proteins of Tobacco mosaic virus.

- Mentor: **Prof. Vijay Reddy**, *The Scripps Research Institute*, Molecular Biology, San Diego, California, USA (**Oct 2009 – Dec 2010**).

Structural studies (animal viruses) empty capsids of Adenovirus expression EM micrographs construction and cloning and expression and crystallization trials of P1 proteins.

POSITIONS HELD

- **Visiting Faculty**, (Academic session 2002-2003) Department of Biosciences, Jamia Millia Islamia Central University, New Delhi, India.
- **Faculty**, (Academic session 2002-2003) Amity Institute of Biotechnology, Amity University, Noida, Uttar Pradesh, India.
- **BOS**, of the Institution, “St. Anns College for Women” since June, 2015.
- **BOS**, of the Institution, “University college for Women, Koti ” since June, 2015.
- **BOS**, of the Institution, “Mahatma Gandhi University” since April, 2016.

- Appointed as **Core Committee member** for Research Development and Consultancy Cell (RDCC), Osmania University since July, 2016.
- **BOS**, of the Institution, “Department of Genetics”, University College of Science, Osmania University, June 2017.
- **Associate Fellow**, of the “Telangana Academy of Sciences”, Osmania University campus, Hyderabad, Telangana, from 1st July 2017

RESEARCH THESIS

- **Ph. D Thesis:** Structural studies on *Physalis mottle virus* capsid proteins & Stress response proteins of *Oryza sativa* and *Salmonella typhimurium* (Supervisor Professor M. R. N. Murthy, Molecular Biophysics Unit, IISc, Bangalore, India).
- **MSc Thesis:** Cloning and characterization of hemolysin and AbcA genes from *Aeromonas hydrophilla* (Strain AH17). (Supervisor Professor. Aparna Dixit, JNU, New Delhi, India).
- **PGD Thesis:** 1st Exon (CDS) prediction through Markov Models. (Supervisor Professor. Ramaswamy, JNU, New Delhi, India).

INVITED KEY NOTE SPEAKERS & GUEST LECTURES

- Delivered a guest lecture “Genome Engineering Technologies : CRISPR/Cas9” at Osmania University College for Women, Koti. on 1st November, 2017.
- Addressed in “International Conference on Biotechnology in Human Welfare” as a keynote speaker conducted by Kakatiya University, Warangal on 7-9th February, 2013.
- Addressed in “International Conference on Advances in Plant and Microbe Research” as a keynote speaker conducted by Acharya Nagarjuna University, Guntur on 6-8th January, 2016.
- Addressed in “New Frontiers in Diagnosis and Management of Genetic Diseases” as a keynote speaker conducted by Institute of Genetics and Hospital for Genetic Diseases, Begumpet, Osmania University on 29-30th January, 2016.

- Addressed in “*Omic Technologies for Better Food and Nutrition*” (OTBFN-2016)” as a keynote speaker conducted by Telangana University, Nizamabad on 25th February, 2016.
- Delivered a guest lecture “Bioinformatics” to 4th Semester M.Sc, Biochemistry students, Andhra University on 18-19th March, 2016.
- Delivered a guest lecture “Novel drugs against diabetic secondary complications ” in 83rd Orientation Programme Organized by UGC-HRDC Osmania University on 19th Sep, 2016.
- Delivered a guest lecture “DNA Based Vaccines And Antisense Therapy” to M.Sc, Biotechnology students, Osmania University on 22nd Sept, 2016.
- Delivered a guest lecture to UG and PG students of Life Sciences, in Sujatha Degree and PG college on 19th Nov, 2016
- Delivered a guest lecture on “Benefit of our Life sciences and chemistry” to UG and PG students, in Kavitha Post-Graduate college on Thursday ^{1st} Dec, 2016
- Addressed in “Global Trends in Genetic Diagnostics and Therapeutics" as a Invited speaker conducted by Institute of Genetics and Hospital for Genetic Diseases, Begumpet, Osmania University on 22-23rd February, 2017.
- Participated as a invited speaker in the Two-Day National Conference on “Recent Trends in Systems Biology” organized by Department of Zoology, UGC DSA-1 (SAP-II) held at University College of Sciene, Osmania University on 27th and 28th of March 2017.
- Addressed as a keynote speaker in UGC-SERO, Hyderabad, Sponsored National Workshop on “ Capacity Building in Biology and Allied Sciences on 1st to 3rd April, 2017 at Government Degree College (Men), Department of Biotechnology, Srikakulum.

WORKSHOPS ORGANIZED

- Organized 2 day workshop on “Purification And Biochemical Characterization Of Recombinant Protein”. In CFRD, Osmania University 9&10th November 2016.

CONFERENCES ORGANIZED

- Organized 2 day National Conference on “Molecular insights in Genetics & Biotechnology” In Department of Genetics & Biotechnology, Osmania University 27 & 28th February 2017.

PUBLICATIONS

S.No	Name of The Journal	Auth	Impact Factor	Year	Vol, Page no
1	BMC Letters	7	2.4	2018	10.1016/j.bmcl.2018.11.036
2	Molecular & Biochemical Parasitology	5	2.5	2018	223:37-49.
3	JSM Biology	5		2017	2(2): 1014.
4	Royal Society of Chemistry Advances	8	3.1*	2017	7, 25710-25724.
5	Inflammation	5	2.9	2017	40(2): 566-577
6	European Journal of Medicinal Chemistry	9	4.5*	2016	124, 750-762
7	Bioinformation	9	0.8*	2016	12(3), 124-130
8	Gene	10	2.3*	2016	592, 15–22
9	Royal Society of Chemistry Advances	8	3.1	2016	6, 48324-28
10	Helix	7	1.4	2016	6-7, 748-753
11	Current Pharmaceutical Design	7	3.0	2016	22, 1-13
12	International Journal of Pharma and Bio Sciences	7	(7.1)	2015	6(2): B, 1283-B1296
13	Bioinformation	9	0.8	2015	11(6), 307-315
14	Journal of Structural Biology	5	3.2	2015	189(3), 238-250.
15	Gene	4	2.3	2014	548(2), 256-262
16	Royal society of chemistry Advances	5	3.1	2014	4, 56489-56501
17	Acta Crystallogr D Biol Crystallogr	4	2.1*	2009	65, 724-32.
18	Acta Crystallogr Sect F Struct Biol Cryst Commun	4	0.9	2008	64, 81- 84.
19	Acta Crystallogr Sect F Struct Biol Cryst Commun	5	0.9*	2007	63, 957-960
Total	Impact factor : 39.4				

1.

1. Shiva Raju K¹, AnkiReddy S¹, Sabitha G², Siva Krishna V³, Sriram D³, Bharathi Reddy K⁴, Rao **Sagurthi S**⁴. Synthesis and biological evaluation of 1H-pyrrolo[2,3-d]pyrimidine-1,2,3-triazole derivatives as novel anti-tubercular agents **Bioorg Med Chem Lett**. 2018 Nov 17. pii: S0960-894X(18)30903-X. doi: 10.1016/j.bmcl.2018.11.036.
2. Jakkula Pranay, Rahila Qureshi, Atif Iqbal, SR Sagurthi and Insaf A. Qureshi* Leishmania donovani PP2C: kinetics, structural attributes and in vitro immune response. **Mol Biochem Parasitol**. 2018 Jul;223:37-49
3. Aravind Setti, Sanat Kumar C, Naresh B, **Someswar Rao S**, and Smita C. Pawar*, Evaluation of Next Generation β lactam Inhibitors against Penicillinase Producing Methicillin-Resistant Staphylococcus aureus, **JSM Biol (2017)**, 2(2): 1014.
4. D. Ashok, E. V. L. Madhuri, M. Sarasija, S. Sree Kanth, M. Vijjulatha, Malini D. Alaparathi and **S. R. Sagurthi**, Synthesis, biological evaluation and molecular docking of spirofurochromanone derivatives, **RSC Adv.**, (2017), 7, 25710-25724.
5. Madhavi Latha Alasandagutti, Mohd Soheb Sadat Ansari, **S. R. Sagurthi**, Vijayalakshmi Valluri and Sumanlatha Gaddam, Role of IL-13 Genetic Variants in Signalling of Asthma, **Inflammation (2017)** published online 12th July. 40(2):566-577
6. Gudipudi Gopinath, Venu Sankeshi, Shaym perugu, Malini D. Alaparathi, Srinivas Bandaru, Vijay K. Pasala, Prasad Rao Ch, G.L. David Krupadanama, **Someswar R. Sagurthi**. Design and synthesis of chiral 2H-chromene-N-imidazolo-amino acid conjugates as aldose reductase inhibitors. **European Journal of Medicinal Chemistry (2016)**. 124, 750-762. (ISSN: 0223-5234).
7. Malini Devi Alaparathi, Gudipudi Gopinath, Srinivas Bandaru, Venu Sankeshi, Madhavi Mangalarapu, Swetha Sudha Nagamalla, Kota Sudhakar, Anupalli Roja Rani, **Someswar Rao Sagurthi**. Virtual screening of RAGE inhibitors using molecular docking. **Bioinformation (2016)**, 12(3), 124-130. (ISSN 0973-2063) (online) 0973-8894 (print).

8. Srinivas Bandaru, Pramod Tarigopula, Jyothy Akka, Vijaya Kumar Marri, Ramesh Kumar Kattamuri, Anuraj Nayarisseri, Madhavi Mangalarapu, Swetha Vinukonda, Hema Prasad Mundluru, **Someswar Rao Sagurthi**. Association of Beta 2 adrenergic receptor (Thr164Ile) polymorphism with Salbutamol refractoriness in severe asthmatics from Indian population. **Gene** (2016), 592, 15–22. (ISSN: 0378-1119).
9. S. Kota, S. R. Meesa, B. Rajesham, B. Bhasker, M. A. Ashfaq, A. A. Khan, **S. S. Rao** and M. Pal. AlCl₃-mediated heteroarylation-cyclization strategy: one-pot synthesis of fused quinoxalines containing the central core of Lamellarin D **RSC Adv** (2016), DOI: 10.1039/C6RA07507J. (ISSN: 2046-20696, vol 6, **48324-48328**)
10. Parveen Jahan, Asra Tabassum Jaffer, Wali Unnisa, Un Mahwish, G Sumanlatha, **S Someswar Rao**, D Sreebhusan Raju. NPHS2 Functional Variant (R229Q) in Primary Nephrotic Syndrome: A Study from South India. **Helix** (2016), 6-7, 748-753. (ISSN No 2277-3495).
11. Srinivas Bandaru, Mallika Alvala, Jyothy Akka, **Someshwar Rao Sagurthi**, Anuraj Nayarisseri, Sanjeev Kumar Singh and Hema Prasad Mundluru. Identification of Small Molecule as a High Affinity β 2 Agonist Irrespectively Targeting Wild and Mutated (Thr164Ile) β 2 Adrenergic Receptor in the Treatment of Bronchial Asthma. **Current Pharmaceutical Design** (2016), 22, 1-13. (ISSN (Print): 1381-6128).
12. Reddy, K.R., Deepika, M.L.N, **Sagurthi, S.R**, K. latha P, Lakshmana Rao, S.S., Rahman, F., and Jahan, P. Polycystic ovary syndrome: role of aromatase gene variants in south Indian women. **International Journal of Pharma and Bio Sciences** (2015), 6(2): B, 1283-B1296. (ISSN 0975-6299).
13. Madhavi Latha Alasandagutti, Meenakshi Ponnana, Ramya Shivangala, Lavanya Joshi, **Somashekar Sagruthi**, Ansari Soheb Sader, Vijaya Lakshmi Valluri, Suman Latha Gaddam. The role of IL-13, IL-4R α cytokine gene variants in atopic and non-atopic asthma, **European Respiratory Journal** (2015), (DOI:10.1183/13993003.congress-2015.PA1085) (Online ISSN: 1399-3003)
14. Nasr A B, Ponnala D, **Sagurthi S R**, Kattamuri R K, Marri V K, Gudala S, Lakkaraju C, Bandaru S, Nayarisseri. A Molecular Docking studies of FKBP12-mTOR inhibitors using binding predictions. **Bioinformation** (2015), 11(6), 307-315. (ISSN 0973-2063) (online) 0973-8894 (print).

15. Madhavi Latha Alasandaguttir, Meenakshi ponnanal, Ramya Sivangalar, Lavanya Joshil, **Sagurthi S R**, MD.Soheb Sadat Ansari, Vijayalakshmi valluri, Sumanlatha Gaddarn. The Role of Il-13, Il-13ru1 Cytokine GeneVariants in Atopic and Non-Atopic Asthma. **International Journal of Innovative Research in Science, Engineering and Technology (2015)**, Volume 3, Special Issue 8, 2379 – 8753. (ISSN (Online): 2319-8753; /; ISSN (Print): 2347-6710).
16. Venu Sankeshil. Gudipudi Gopi, Vijaya Kumar Pasala. Roja Rani A, **Sagurthi. S. R.** The Inhibitory Effect of Aegle murmelos Leaf Extract on Aldose Reductase and its Protective Role in Delaying of Diabetic Cataract. **International Journal of Innovative Research in Science, Engineering and Technology (2015)**. Volume 3, Special Issue, 82347 – 6710 (ISSN (Online): 2319-8753; /; ISSN (Print): 2347-6710).
17. Bangera M, Panigrahi R, **Sagurthi S R**, Savithri H S, Murthy M R, Structural and functional analysis of two universal stress proteins YdaA and YnaF from Salmonella typhimurium: possible roles in microbial stress tolerance. **J. Struct Biol (2015)**, 189(3), 238-250. (ISSN: 1047-8477).
18. Matsa L S, **Sagurthi S R**, Ananthapur V, Nalla S, Nallari P, Endothelin 1 gene as a modifier in dilated cardiomyopathy. **Gene (2014)**, 548(2), 256-262. (ISSN: 0378-1119).
19. Gopinath, G., **Sagurthi, S.R.**, Shyam, P., Achaiah, G., and David, K.G.L. Rational design, synthesis of novel 2-(substituted 2H-Chromen-3-yl)-5-aryl-1H-Imidazole dervivative as anti-angiogenesis and anti-cancer. **Royal society of chemistry Advances (2014)**, 4, 56489-56501. (ISSN: 2046-2069).
20. **Sagurthi, S.R**, Gowda, G., Savithri, H. S., and Murthy, M. R. N. Crystal structure of mannose 6-phosphate isomerase from *Salmonella typhimurium* bound to metal atoms substrate: Implication for catalytic mechanism. **Acta Crystallogr D Biol Crystallogr (2009)**, 65, 724-32. (ISSN: 2059-7983).
21. **Sagurthi, S.R**, Panigrahi, R.R., Gowda, G., Savithri H.S., and Murthy, M.R.N. Cloning, purification, crystallization and preliminary X-ray crystallographic analysis of the mannose 6-phopshate isomerase from *Salmonella typhimurium*, **Acta Crystallogr F Biol Crystallogr (2008)**, F64, 81- 84. (ISSN: 1744- 3091).
22. **Sagurthi, S.R**, Panigrahi R R, Gowda G, Savithri H S, Murthy M R, Cloning, expression, purification, crystallization and preliminary X-ray diffraction

analysis of universal stress protein F (YnaF) from *Salmonella typhimurium*.
Acta Crystallogr Sect F Struct Biol Cryst Commun (2007), 63, 957-960.
(ISSN: 2053-230X).

BOOK CHAPTER

Title: **Systems Biology: A New Frontier in Science**, which was included in edited book on '*Plant Biology and Biotechnology - Volume 2: Plant Genomics and Biotechnology*'. (Springer Publication International Book 2015). **S. Someswar Rao***, A. Setti, S. C. Pawar.

HONOURS & AWARDS

- Junior & Senior Research Fellowship (2003-2008) from Council of Scientific and Industrial Research (CSIR), India.
- Winner of the best poster presentation competition. International symposium on “Management of Vector-Borne Viruses” International crops research institute for the semi-arid tropics 7-10 February 2006, Hyderabad, India.
- Third prize for quiz competition in the “National Science Day” 28th February 2002, Jawaharlal Nehru University, New Delhi, India.
- Conducted a conference as a editorial chief “National conference on emerging & re-emerging viral outbreaks in India clinical challenges & management” 2014.
- Acted as a Co-convenor for a conference “New frontiers in Biotechnology Prospects and Challenges”, conducted by University college for Women, Koti.
- Got selected for Young Investigators' Meeting (YIM) March, 2017 in Goa.
- Got elected as Associate Member of Telangana Academy of Science 2017.

CONFERENCE ATTENDED

- Participated in the 38th course of the international school of crystallography, “Structure and Function of Large Macromolecular Assemblies” Erice, Italy on July 9 – 18th 2006.
- Presented the poster titled “Structural studies on *Physalis Mottle Virus*: Structure Component Encapsidating genomic RNA & Top component with out RNA”.
- Participated in “Statistical methods for analyses of complex genetic traits” organized by Osmania University & Indian Statistical Institute on November 18-20th, 2015.

- Attended a conference, 1st Annual Symposium on Structural Biology conducted by “Center of Biomedical Research Excellence (COBRE) in Structural Biology”, Oklahoma, USA.
- Attended a conference, “Drug Discovery & Development, Global Scenario- Indian Perspective” conducted by “National Institute of Pharmaceutical Education & Research”, Hyderabad, India on 21st November, 2015.
- Presented a poster entitled “Rational design and synthesis of novel 2-(substituted 2H-chromen-3-yl)-5-Aryl-1H imidazole derivatives as an anti-angiogenesis and anti-cancer agents” in “Drug Discovery & Development, Global Scenario- Indian Perspective” conducted by “National Institute of Pharmaceutical Education & Research”, Hyderabad, India on 21st November, 2015.
- Attended, One day Orientation Programme on “Research & Consultancy”, conducted by University College of Science, Osmania University, Hyderabad, on 23rd, September, 2015.
- Attended, 44th National Seminar on Crystallography (NSC44) organized by Indian Crystallographic Association (ICA) in Pune July 10-13, 2016.
- Attended, One day workshop on “Intellectual Property Rights, R&D& Innovation in University System”, conducted by CFRD, Osmania University, Hyderabad, on 23st, September, 2016.
- Attended the 9th Young Investigator’s Meeting held at Goa, between 6-10th March, 2017 as a participant.
- Participated in the Refresher Course in Soft Skills for Professional Excellence (ID & MD) Organised from 19-07-2017 to 08-08-2017 by UGC-HRDC, Osmania University, Hyderabad and obtained A grade.
- Participated in the One Day Training Program for Students of Science “Attitude and Skills for Competitive World” on 16th September, 2017 organized by Directorate of Placement Services, OU in collaboration with University College of Science.
- Participated in the Nano3Bio dissemination event entitled “The Future of Chitosans” held on 20th September, 2017 organized by Department of Plant Sciences, School of Life Sciences, University of Hyderabad, Hyderabad, India