

Dr. Santosh Kumar H. S.

ASSOCIATE PROFESSOR



Objective

Passionate Biochemist turned Bioinformatician. In pursuit of excellence with constant learning of new things, yet fascinated by miracles of biology.

Contact information

 +91-916-480-7211  sk.genesan@gmail.com
 Shankaraghatta, Karnataka  www.kuvempu.ac.in
 @genes4san  Santosh Kumar

Education

2016	Ph.D in Biochemistry, Department of Biochemistry, Kuvempu University. Thesis: "Genome wide analysis of human WD protein repertoire"
2005	Distance Learning Course In Intellectual Property Rights, WIPO, Geneva.
2004-2005	Diploma in Computer Networking and Hardware, Nexus Computers, Madurai
2004-2005	Advanced Diploma in Bioinformatics Centre of excellence in Bioinformatics, School of Biotechnology, Madurai Kamaraj University, Madurai. Project Dissertation: "Physical mapping of pathogenesis related proteins in <i>Oryza sativa</i> cv. Nipponbare" Advisor: Dr. K. Veluthambi
2002-2004	MSc in Biochemistry, Department of Biochemistry, Kuvempu University. Dissertation: "Protooncogenes" Advisor: Shri. H. K. Ravi
1999-2002	DVS College of Arts and Science, Shivamogga. BSc in Microbiology, Biochemistry, Botany



Research experience	2020- till date	<ul style="list-style-type: none"> • Associate professor, Department of Biotechnology, Kuvempu University, Shankaraghatta – 577451
	2006-2020	<ul style="list-style-type: none"> • Assistant Professor, Department of Biotechnology, Kuvempu University, Shankaraghatta – 577451
	2006	<ul style="list-style-type: none"> • Scientist, Assay Biology Group, Connexious Life Sciences Pvt. Ltd. JP Nagar 3rd Phase, Bengaluru.
	2005 – 2006	<ul style="list-style-type: none"> • Senior Research Fellow, Virology Laboratory, Division of Plant pathology, Indian Institute of Horticulture Research, Bengaluru

Teaching experience	2020 – till date	<p>Associate Professor, Department of Biotechnology, KUVEMPU UNIVERSITY, JNANASAHYADRI, SHANKARAGHATTA</p> <ul style="list-style-type: none"> • Taught Post Graduate Biotechnology and Bioinformatics programs. • Revised the syllabus to meet accreditation standards <p>Doctoral students (pursuing)</p> <ol style="list-style-type: none"> 1. Smt. Jayashree C. S. 2. Shri. Vinay Kumar A 3. Shri. Shridhar K 4. Kum. Deepthi S
	2006-2020	<p>Assistant Professor, Department of Biotechnology, KUVEMPU UNIVERSITY, JNANASAHYADRI, SHANKARAGHATTA</p> <ul style="list-style-type: none"> • Taught Post Graduate Biotechnology and Bioinformatics programs. • Revised the syllabus to meet accreditation standards

Honors and awards	2004	DBT Scholarship to study Advanced Diploma in Bioinformatics
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Publications:

Books Articles:

1. "Biodiversity and Bioinformatics" in Biodiversity Monitoring and Utilization edited by B. B. Hosetti & K. L. Naik. Eastern Book Corporation publications.
2. "Frontiers in current aspects of antimicrobial peptides from insects and their therapeutic perspectives" in Futuristic Trends in Biotechnology. IIP Proceedings publications.

Journal publications (Significant ones listed below)

complete list can be found at <https://scholar.google.com/citations?user=MY9I-gQAAAAJ&hl=en>



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1. Rudresh HS, Divyashree T, Yathisha NS, Dwarakanath V, **Santosh Kumar HS**, Sharathchandra RG. **Comparative analysis of desiccation tolerance in Oosporangium elegans and Mickelopteris cordata**. Vegetos. 2023 Jul 10:1-3.
 2. Ashok AK, Gnanasekaran TS, **Santosh Kumar HS**, Srikanth K, Prakash N, Gollapalli P. **High-throughput screening and molecular dynamics simulations of natural products targeting LuxS/AI-2 system as a novel antibacterial strategy for antibiotic resistance in Helicobacter pylori**. Journal of Biomolecular Structure and Dynamics. 2023 May 5:1-6.
 3. Sunil SV, **Santosh Kumar HS**, Pramod SN, Prabhakar BT, Naika MB, Thippeswamy TG, Niranjana P. **Characterization and biochemical activities of novel functional antimicrobial peptide (AMP) from Trichogramma chilonis**. Biomedicine. 2022 Nov 14;42(5):887-97.
 4. Gollapalli P, Selvan GT, **Santosh kumar HS**, Ballamoole KK. **Functional insights of antibiotic resistance mechanism in Helicobacter pylori: Driven by gene interaction network and centrality-based nodes essentiality analysis**. Microbial Pathogenesis. 2022 Oct 1;171:105737.
 5. **Santosh kumar HS**, Kumar SR, Kumar NN, Ajith S. **Molecular docking studies of gyrase inhibitors: weighing earlier screening bedrock**. In Silico Pharmacology. 2021 Dec;9(1):1-0.
 6. Ramesh, Poornima, Jayashree Honnebailu Nagendrappa, and **Santosh Kumar Hulikal Shivashankara**. "Comparative analysis of Rosetta stone events in Klebsiella pneumoniae and Streptococcus pneumoniae for drug target identification." Beni-Suef University Journal of Basic and Applied Sciences 10, no. 1 (2021): 1-11.
 7. Nallabothula, Triveni, **Santosh Kumar Hulikal Shivashankar**, and Shyam Kumar Vootla. "Nuclear polyhedrosis virus-induced proteomic changes in Antheraea mylitta." Physiological Entomology 46, no. 2 (2021): 119-127.
 8. Sunil, S. V., O. Z. Kerima, **Santosh kumar HS**, B. T. Prabhakar, S. N. Pramod, and P. Niranjana. "In Silico Characterization of a Transcript Code Based Screening of Antimicrobial Peptide from Trichogramma chilonis." International Journal of Peptide Research and Therapeutics 27, no. 4 (2021): 2861-2872.
 9. Nallabothula, Triveni, Nagashree Krishna Avabhrath, **Santosh Kumar Shivshankar Hulikal**, and Shyam Kumar Vootla. "PI3K-Akt pathway mediated antiviral mechanism in silkworm Antheraea mylitta." VirusDisease 31, no. 3 (2020): 349-356.
 10. **Kumar, Hulikal Shivashankara Santosh**, Vadlapudi Kumar, Sharath Pattar, and Sandeep Telkar. "Towards the construction of an interactome for Human WD40 protein family." Bioinformation 12, no. 2 (2016): 54.

Conference presentations (significant ones listed below):

A complete list can be found at <https://rb.gy/a0ewk>

1. "Horizontal gene transfer: a case study of being a natural tool for pathogenicity among Genome completed streptococcus causing infective endocarditis" at the Asia Pacific Bioinformatics Conference 18th to 22nd January 2010.



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2. "In silico analysis and evaluation of drought responsive genes in pigeon pea by comparing with the cDNA libraries of soybean leaf" at World congress in Biotechnology by the international Omics Group, Hyderabad 21st to 23rd March 2011.
 3. "Dynamical Properties and conformational flexibility of Mycobacterium tuberculosis HSP 60.2 protein: MD simulation and Normal Mode approach" at the Asia Pacific Bioinformatics Conference 18th to 22nd January 2010.
 4. "Non-Linear Flux assessment for Endotoxin Neutralizing Pathways" in international conference on Molecular Medicine – MOLMED – 2012 from 19th to 22nd February 2012 organized by VIT, Vellore, Tamil Nadu.
 5. "Interactome Analysis of Human WD40 Repertoire: Who is Important in Your Family?!" in 83rd Annual Meeting of SBC (I) – 2014 from 16th to 21st December 2014, organized by KIIT University, Bhubaneshwar, ODISHA.
 6. "COX2 INHIBITORS: EVALUATING THE SCREENING BEDROCK" at 38th IABMS SUMMIT, Department of Biochemistry, Mangalore University PG center, Chikka Aluvara
 7. "Molecular Docking Studies of Gyrase Inhibitor: Weighing Earlier Screening Bedrock" International Conference on Affordable Strategies for Health and Environment (ASHE 2019), to be held on May 23-24, 2019 being organized by NMAMIT, NITTE
 8. "Investigation of Rosetta Stone events among few Pneumonias pathogen proteome identifies important virulent proteins "42nd IABMS SUMMIT, organized by KSHEMA and NUCSER, NITTE (Deemed to be University), Mangalore.
 9. "Rosetta stone analysis of Mycoplasma pneumoniae M129 Genome for Drug Target Identification" at 2nd international conference on Environment, Agriculture, Human and Animal Health organized by Rajaram College, Kolhapur, Maharashtra.
 10. "Comparative analysis of Rosetta Stone events in Pneumonia causing bacteria" at 4th International conference on Environmental, Agricultural, Chemical and Biological sciences organized by VOICE and Department of Biotechnology, Srimad Andavan Arts and science college, Trichy, Tamil Nadu.
 11. "Invitro and insilico based approaches towards characterization of A putative Bacteriocin produced from *B. Aminoliquifaciens* strain PgBE240" presented at 62nd International conference on microbes and society: Current Trends and Future Prospects.
 12. "Comparative insilico analysis for identification of unique traits in lifestyle specific secretomes of phytopathogens" presented at 62nd International conference on microbes and society: Current Trends and Future Prospects.
 13. "Need for cheminformatics-based discrimination models for ligands during bioactive compound screening" in IITM-EMBL-EBI Winter school on Reproducible Modelling in systems biology organized by IIT Madras.

Conference papers in proceedings:

1. "Comparative analysis of homologous proteins for specific drug design" at international conference on Current Trends in Drug Design at CDRI, January 2010 Lucknow 2009.
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2. "Molecular docking analysis of novel indole derivatives against essential bacterial cell wall synthetic enzyme-GlmU" at International Conference on Artificial Intelligence and Soft Computing (ICAISC-2021), Akkamahadevi University.2021.
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Invited Lectures: (recent ones listed below)

1. January 2023 - "Bioinformatics – How May I help you?" at Society of Biological Chemists (India), Davanagere Chapter.
 2. January 2020 – ""Methods in Plant Genome Analysis" at skill development workshop on plant and microbial genome analysis, Department of Biotechnology, Tumkur University.
 3. February 2021 – "Bioinformatics – A primer for undergraduates" at Invited Lecture Series, Department of Microbiology, S.R.N.M.N College of Applied Sciences, Shivamogga.
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Research Projects	2023	"Cheminformatics and Virtual Screening of bridged heterocycles for drug repurposing against COVID19" under the scheme Research Grants for scientists/Faculty (RGS-F) grant by VGST-Govt. of Karnataka
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Professional affiliations	2021-2022	Member, Board of examination , Department of Biotechnology, Tumkur University
	2023-till date	Member, Board of examination , Department of Biochemistry, Davanagere University
	2023-till date	Member, Board of Studies , Department of Biochemistry, Davanagere University
	2023- till date	Chairman, Board of Studies , Department of Biotechnology, Kuvempu University
	2014 - 2015	Member, Board of examination , St. Aloysius college, Mangalore
	2004 – till date	Life member , Society of Biological Chemists (India)
	2018 – till date	Life member , Indian Association of Applied microbiologists (IAAM)
	2023 – till date	Life member , Bioinformatics Drug Discovery Society (BIDDS)



Professional service	Feb -2023	Organizer – One day seminar on “ Paradigm and career opportunities in clinical research ” in association with Glaxo-Smith Kline Pvt. Ltd.
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Peer-Reviewed Articles for:

- Int. J. of Biomedical Engineering and Technology.
- Indian Journal of Clinical Biochemistry
- Academia Letters
- BMC Complementary and Alternative Medicine
- BMC Complementary and Alternative Therapies
- Frontiers in Endocrinology
- SN Scientific Reports

Community service	2016 – till date	Public speaker - INSPIRE camps for Scientific motivation in Pre-University students, Sagara Science Forum
	2013-2015	Resource person for orientation program for Pre-University lecturers.

Languages	Kannada	Native language
	Telugu, Tamil	Intermediate listener and speaker.
	Hindi, English	Proficient

Computer skills	Platforms /Operating systems	Windows, Ubuntu 24 LTE, Biolinux 8.0
	Applications	Geneious Pro, Modeller, PyRx, MGLtools, Autodock and Autodock Vina, SeeSAR, FlexX, OSIRIS Datawarrior, JASP, D-chip
	Programming	R.

References	Dr. Vadlapudi Kumar	Professor, Department of Biochemistry, Davanaagere University, Davanagere.
	Dr. Subrata Ghosh	Principal scientist, Transcode Therapeutics. Inc. Boston, USA.
	Dr. Prasanna Kallingappa	Lead, ART and RoGER, Vernon Jansen Unit, University of Auckland. Auckland. NZ

