

NIRMALA COLLEGE FOR WOMEN (AUTONOMOUS)

COIMBATORE

STAFF PROFILE

NAME : Dr. S. Sivashankari
DESIGNATION : Associate Professor and Head
DEPARTMENT : Bioinformatics
QUALIFICATION : M.Sc., PhD. PGDMBT, MCA
EXPERIENCE : 22 years
AREAS OF SPECIALIZATION : Computational Biology, Drug Designing
E-MAIL : sivashankari@nirmalacollegeonline.ac.in
ACADEMIC QUALIFICATIONS :

DEGREE	YEAR OF COMPLETION	NAME OF THE INSTITUTION	CLASS
B.Sc Biochemistry	2001	Kovai Kalaimagal College of Arts and Science, Coimbatore	First Class with Distinction
M.Sc Bioinformatics	2003	Bharathiar University, Coimbatore	First Class with Distinction
PhD Bioinformatics	2011	Bharathiar University, Coimbatore	Commended

ADDITIONAL QUALIFICATIONS:

DIPLOMA/ VOCATIONAL/ CERTIFICATION	AREA OF SPECIALIZATION	NAME OF THE INSTITUTION/ UNIVERSITY/ AGENCY	YEAR
PGDMT	Microbial Biotechnology	School of Distance Education, Bharathiar University, Coimbatore	2008
MCA	Computer Applications	School of Distance Education, Bharathiar University, Coimbatore	2015

RESEARCH GUIDANCE: NIL

RESEARCH PUBLICATIONS:

INTERNATIONAL:

- [1] S. Sivashankari & P. Shanmughavel, **Comparative genomics - A perspective**, Bioinformation 1(9), 376-378 (2007)
- [2] S. Sivashankari & P. Shanmughavel, **Functional annotation of hypothetical proteins – A review**, Bioinformation 1(8), 335-338 (2006)
- [3] S. Sivashankari & P. Shanmughavel, **A Web Based Data Base for Hypothetical Genes in Human Genome**, International Journal of Computer Applications 14 (4), 10-13, January 2011.
- [4] S. Padmavathy and S. Sivashankari, **Comparative genomics of Two Green algae Oltmannsiellopsisviridis and Pseudendocloniumakinetum** Asia Pacific Journal of Research, 2(8), 189-195, August 2013.
- [5] S. Sivashankari and P. Shanmughavel, **Functional Annotation of Hypothetical ORFs in Chromosome 1 of the Human Genome**, European Journal of Applied Sciences and Technology, Vol 1 (1), 43-49, 2014 <http://www.eujast.org/eujast6.html>
- [6] A book Chapter on **“Drug-DNA Interactions”** in an edited volume book on “Beyond Bioinformatics” by P. Shanmughavel, Pointer Publishers
- [7] S. Sivashankari and P. Shanmughavel, **Functional Annotation of Hypothetical ORFs in Chromosome 2 of the Human Genome**, Texila International Journal of Academic Research, Special Edition
- [8] S. Sivashankari and P. Shanmughavel, **Computational Techniques for the Functional Annotation of Hypothetical ORFs in Human Chromosome 3**, IJSRSET, Vol 2(2), 337-343, 2016
- [9] Amita Paul C, Sivashankari S and Pawlin Vasanthi Joseph, **Study of Cellulase activity in Eisenia foetida used in the degradation of paper waste**, IJSAR, Vol 4(5), 59-65, 2017
- [10] PJ Buvaneshwari, S Antonit Jenifer, D Ramya, C Sharmila, C Dhamayanthi and Sivashankari Selvarajan, **Preliminary Phytochemical screening and GC-MS analysis of Solanum incanum(L.) fruits**, EPRA INTERNATIONAL JOURNAL OF RESEARCH AND DEVELOPMENT 2 (9), 10-21
- [11] Arockiyajainmary M, Muthupriya P, Buvaneshwari P J and Sivashankari S, **In silico analysis of single nucleotide polymorphism (SNP) and structural analysis of proteins involved in vitiligo**, Wide Spectrum Research Journal, 6(8), 49-57
- [12] K Anbarasi, VG Vasudha and S Sivashankari, **Inhibitive and kinetic properties of eco friendly corrosion inhibitor (Cucurbita maxima peel) for mild steel in acid medium**, International Journal of Chemical Sciences, 2(5), 16-21

- [13] Priyatharsini. P, Sivashankari S and B. Dhanalakshmi, **Oreochromis niloticus- a biomonitoring tool for assessment of trace metals of Theroor wetland, Kanniyakumari district, India**, International Journal of Engineering Development and Research, Volume 7, Issue 3, 619-625
- [14] Priyatharsini. P, Sivashankari S and B. Dhanalakshmi, **Impact Of Heavy Metals On The Tissues Of Fresh Water Fish Oreochromis Niloticus – A Systematic Approach**, Journal of Emerging Technologies and Innovative Research, Volume 6, Issue 6, 734-747
- [15] S Kulandai Therese, G Geethamalika, S Sivashankari, **Synthesis and biological evaluation of some novel schiff base hydrazide derivatives**, International Journal of Research and Analytical Reviews 6(1), 272-278
- [16] M Arockiyajainmary and S Sivashankari, **Deciphering potential targets in Clostridium perfringens through metabolic pathway analysis**, International Journal of Scientific Research in Science and Technology, 6(1), 432-444.
- [17] Anagha A P, Sivashankari Selvarajan, Sincy Joseph, **Screening of Phyto compounds in Vitex negundo and Clerodendrum infortunatum for anticancerous activity by in silico methods**, Journal of Xi'an Shiyu University, Natural Sciences Edition (2022), Volume 18, Issue 5, 431 -446.
- [18] Vasanth Raj Palanimuthu, Mounika Priya Baskar, Mounika Anaigounder, Aishwarya Shivadharshini Ravishankar, Dhanush Krishnan, Sivashankari Selvarajan, **Development and testing of a simple, economical, and reliable lab-scale static model to study bacterial biofilm using Escherichia coli**, Journal of Xi'an Shiyu University, Natural Science Edition, Volume 17, Issue 08, 78-91.
- [19] Akshaya Gopalakrishnan, Vasanth Raj Palanimuthu, Rajeshkumar Raman, Alin Bose Johnson & Sivashankari Selvarajan. **'Exploration of the effect of Ciprofloxacin against lab-scale static biofilm model of Escherichia coli'**. Neuro Quantology; Nov 2022; 20 (17): 1555 – 1561.
- [20] Monisha Violet. M. J and Kowsika. D Vaishnavi. N, Miruthula. E, Saraswathi Priyanka. N, Dr. Sr. M. Arul Sheeba Rani, Dr. Sivashankari, Marclin Joe Felix. D, Kiruthika. S, **Invitro and Insilico analysis of antioxidant activity of selected medicinal plants**, Journal of Emerging Technologies and Innovative Research, 11(3), J650-J663
- [21] M J Kowsika. D, Dr. Sr. M. Arul Sheeba Rani, Dr. Sivashankari Selvarajan, Dr. Anitha.T, Marclin Joe Felix. D, Kiruthika. S and Monisha Violet, **Biological Evaluation Of Microalgae (Spirulina Platensis) - A Sustainable Livelihood Resource With Unexploited Value**, Acta Biomed, 95(1), 209-223
- [22] C Brita John, Y Subbareddy, M Ravi Chandra, Sivashankari Selvarajan, K Kaviyarasu, S Kulandai Therese, **Studies on the synthesis of compounds with high pharmacological activity using acenaphthoquinone**, Results in Chemistry, Volume 7, 2024, 101530

- [23] Jeeshna MV, Sarga Abhijith, Sivashankari Selvarajan, **Molecular Docking of Linderniaceae Phytochemicals: Aloesin as a lead Glyoxalase I Inhibitor**, 2024, South Asian Journal of Experimental Biology, 14 (6).

PRESENTATIONS IN CONFERENCE:

INTERNATIONAL:

- [1] Presented a paper on **“*In silico* functional annotation of conserved hypotheticals in Human Chromosome 21”** at the 4th Indo-Australian Conference on Biotechnology organized by the Queensland Institute of Medical Research, Brisbane, Australia during 4th May 2007– 7th May 2007.
- [2] S. Sivashankari and P. Shamughavel (2015), **“*In silico* functional annotation of hypothetical ORFs in Human Chromosome 2”** in the TEXILA 2nd INTERNATIONAL SCIENTIFIC E-CONFERENCE, 16th-26th November, 2015

NATIONAL:

- [1] S. Sivashankari, P. Shanmughavel and S. Padmavathy. (2013) **Computational Algorithms for the Prediction of Epitopes in Peptide Antigens - A Review**. Proceedings of the National Conference on “Immunoinformatics – An *in silico* aid towards better medicines”, Nirmala College for Women, Coimbatore, October 3rd and 4th 2013.
- [2] Antonit Jeniffer S and S Sivashankari, **“Anti-atherosclerotic activity of 7,3’,4’ Trimethoxy Quercetin from *Solanum incanum* – A molecular Docking approach”** in Nirmala Annual Research Congress ’18 on 4th Dec, 2018.
- [3] Sandy Elizabeth and S Sivashankari, **“*In silico* uncovering of antigenic determinants in Ebola Virus”**, National Seminar on “Advances in Biological Sciences Research” conducted by the Department of Zoology on 19th and 20th September, 2019
- [4] S Sivashankari, **“ICT tools for innovative teaching approaches”** in the National level Seminar on “Quality sustenance and enhancement” organized by IQAC, Nirmala College for Women, Coimbatore on 9th and 10th January, 2020.
- [5] M Arockiyajainmary, P Muthupriya, PJ Buvaneshwari and S Sivashankari, **Deciphering potential drug targets in *Clostridium perfringens* through metabolic pathway analysis**, in the National level seminar on “Current approaches in Proteomics” conducted by Avinashilingam University on 20th December, 2017. Received first prize for the poster presentation.
- [6] S. Antonit Jenifer, D. Ramya, P.J. Buvaneshwari and S. Sivashankari, **“*In silico* analysis of single nucleotide polymorphism (SNP) in human NPTN gene”**, in the National level conference on “Biocheminformatics” at Bharathiar University, Coimbatore. Received second prize for the poster presentation.
- [7] Jisna N and S Sivashankari, presented a paper on **“Epitope Feature Prediction in Pathogenic Bacteria”**, in the National Conference on “Computing platforms for biological big data analytics” organized by Department of Information Technology &

Department of Microbiology, Dr. N.G.P. Arts and Science College, Coimbatore on 5th and 6th February, 2020.

- [8] Mariet George, Bhuvaneshwari PJ and S Sivashankari, presented a paper on **“In silico approaches towards Mirtron identification of *Calotropis gigabtea*.(Linn)”**, in the National Conference on “Computing platforms for biological big data analytics” organized by Department of Information Technology & Department of Microbiology, Dr. N.G.P. Arts and Science College, Coimbatore on 5th and 6th February, 2020.
- [9] Shabiha Nasrin N and S Sivashankari, presented a paper on **“Machine Learning Approaches for the Prediction of Cholesterol Absorption Inhibition”**, in the National Conference on “Computing platforms for biological big data analytics” organized by Department of Information Technology & Department of Microbiology, Dr. N.G.P. Arts and Science College, Coimbatore on 5th and 6th February, 2020 and Received first prize.

PARTICIPATION IN CONFERENCES:

- [1] Participated in a National Conference on “Research & Development in Computational Biology & Bioinformatics” on 29th February and 1st March 2008.
- [2] Attended 4th Indo-Australian Conference on Biotechnology at Queensland Institute of Medical Research, Queensland, Australia from 4th-7th May 2007

PARTICIPATION IN SEMINARS:

- [1] Participated in the **“One day seminar on Quality Education”** for College teachers organized by the Kongunadu Arts and Science College on 30.07.2005.
- [2] Attended the National Seminar on **“Issues and Challenges in Higher Education”** organized by the Kongunadu Arts & Science College on 7th & 8th March 2007.
- [3] Attended National level Seminar “Motif’05” at Bharathiar University on October 6th 2005.
- [4] Attended National Level Seminar on “Frontiers in Bioinformatics” at Bharathiar University on 12th February 2007.
- [5] Attended National Seminar on **“Biodiversity-Status, Conservation and Management”** at Kongunadu arts and science college on Sep 12th & 13th ‘08.

PARTICIPATION IN WORKSHOPS:

- [1] Participated in National level workshop in **‘Structural Bioinformatics’** conducted by Sri Venkateshwara College, Delhi during 20th April 2005-25th April 2005.
- [2] Participated in the TANSCHÉ sponsored Three-Day Workshop on **“Curriculum Development and Evaluation Techniques”** jointly organized by the UGC – Academic Staff College, Bharathiar University and Kongunadu Arts and Science College (Autonomous) Coimbatore from 22.09.05 – 24.09.05.

- [3] Attended International Seminar cum Workshop on “Molecular Modeling and Drug Discovery” 27-28th July 2007 at Bharathiar University

PARTICIPATION IN ORIENTATION PROGRAMME/ INDUCTION PROGRAMME/ SHORT TERM COURSES:

- [1] Attended 21 days “Refresher course in Life Sciences” at Bharathiar University from 6th May 2015 – 26th May, 2016.
- [2] Attended 2 months Summer training programme organized by CSIR through online mode during June 2020 to August 2020.

PARTICIPATION IN FACULTY DEVELOPMENT PROGRAMMES:

- [1] 26.05.2026 – 30.05.2026: Leveraging Digital Library Resources for Enhanced Teaching and Research organized by Nehru Institute of Technology, Coimbatore
- [2] 02.06.2025 – 06.06.2025: Outcome Based Education, Binary Accreditation & Usage of AI” organized by IQAC, St. Mary’s Centenary Degree College
- [3] 09.06.2025 – 13.06.2025: Generative AI Tool for Smart Teaching, All India Christian Association for Higher Education, India

CONFERENCE/ SEMINAR/ WORKSHOP ORGANIZED:

- [1] Convenor for the National virtual Conference on “**Prevalent and Prospective Paradigms in Machine Learning for Applications in Biology**” held on 24th and 25th February, 2022 at Nirmala College for Women, Coimbatore, sponsored by DBT, New Delhi with financial assistance of Rs. 16,000/-
- [2] Convenor for the National level Conference on “**Futuristic Intricate Stratagems in Computational Genomics**” held on 24th and 25th January, 2019 at Nirmala College for Women, Coimbatore, sponsored by DBT, New Delhi with financial assistance of Rs. 1,00,000/-
- [3] Convenor for the National level workshop on “**The Exploratory Modules in ‘OMICS’ Biology**” held on 14.09.17 and 15.09.17 at Nirmala College for Women, Coimbatore sponsored by DBT, New Delhi, sponsored by DBT, New Delhi with financial assistance of Rs. 1,00,000/-
- [4] Co-convenor for the National level Conference on “**Frontier Contemporary Horizons in Bioinformatics and Computational Biology**” held on 21.01.16 and 22.01.16 at Nirmala College for Women, Coimbatore sponsored by DBT, New Delhi with financial assistance of Rs. 50,000/-
- [5] Co-convenor for the National level Workshop on “**An insight into the computational approaches towards drug discovery**” held on 05.03.15 and 06.03.15 at Nirmala College for Women, Coimbatore sponsored by DBT, New Delhi

- [6] Co-convenor for the National level Conference on **“Immunoinformatics – An insilico aid towards better medicines”** held on 03.10.13 and 04.10.13 at Nirmala College for Women, Coimbatore sponsored by DBT, New Delhi and DST, New Delhi
- [7] Member of Organizing Committee for the National level Workshop on **“Thrust areas in the field of Bioinformatics”** held on 03.10.05 and 04.10.05 at Kongunadu Arts and Science College, Coimbatore

INVITED SPEAKER/ SESSION CHAIR- CONFERENCE/ SEMINAR/ WORKSHOP:

- [1] Delivered a guest lecture on **“Virtual Screening techniques”** in the State level Workshop in Bioinformatics at Tamilnadu Agricultural University, Coimbatore on 20.02.09
- [2] Delivered a guest lecture in **Bioinformatics** for UGC Sponsored career oriented programme in Bioinformatics at KovaiKalaimagalCollege of Arts & Science, Coimbatore on 31st January 2009.
- [3] Delivered 2 Guest Lectures in the 7th State level Seminar **CHEMBIOINFOGRID** at Theivanaiammal College for Women, Villupuram on 26.9.08.
- [4] Delivered 2 guest lectures in **“Molecular Modeling”** and **“Proteomics and Drug Design”** for UGC Sponsored career oriented programme in Bioinformatics at KovaiKalaimagal College of Arts & Science, Coimbatore on 1st September 2008.
- [5] Presented a Guest Lecture on **“Pharmacogenomics”** on 30.08.2005 at Sri Ramakrishna College for Women, Coimbatore, Tamilnadu, India.
- [6] Delivered a Lecture on **“Computer Aided Drug Designing”** on 03.03.2007 in the National Seminar in Bioinformatics conducted by the Department of Bioinformatics, Bharathidasan University, Trichy, Tamilnadu, India.
- [7] Delivered **more than 8** Lectures in the **Refresher Courses in Bioinformatics and Biotechnology** conducted by Academic Staff College, Bharathiar University from June 2003 to till date.
- [8] Delivered a Lecture on **“Computer Aided Drug Designing”** on 31.01.2006 in the State level Seminar in Bioinformatics conducted by the Department of Chemistry, St. Aloysius College, Thrissur, Kerala, India.
- [9] Presented a Guest Lecture on **“Pharmacogenomics”** at CMS College of Science & commerce, Coimbatore, Tamilnadu, India.
- [10] Delivered a guest Lecture on **“Chemoinformatics”, “Applications of Bioinformatics”** at Karpagam Arts & Science College, Coimbatore, Tamilnadu, India.
- [11] Delivered a guest Lecture on **“Biological Databases and applications of Bioinformatics”**, at NGM College, Pollachi, Tamilnadu, India.
- [12] Delivered series of guest lectures on **Bioinformatics** at Anna University, Coimbatore on 26.11.15

- [13] Delivered guest lecture on **“Structure based drug design and Virtual Screening”** to the students of Department of Chemistry, Nirmala College for Women on 7th January, 2016
- [14] Delivered series of guest lectures on Bioinformatics at Anna University, Coimbatore on 21.11.16
- [15] Delivered a guest lecture on **“Advances in Bioinformatics”** at Mercy College, Palakkad on 14.11.2017
- [16] Delivered a guest lecture on **“PERL Programming”** at Nirmala College for Women, Coimbatore on 17.07.17
- [17] Conducted a Hands-on- training workshop on **“Biopython”** at Nirmala College for Women, Coimbatore on 24.07.17
- [18] Delivered series of guest lectures on **Bioinformatics at Anna University**, Coimbatore on 07.12.17
- [19] Delivered a guest lecture on **“Biopython”** at RVS College of Arts and Science, Coimbatore on 28.02.2018
- [20] Conducted a Lecture cum Workshop on **“Computational Biology”** at RVS College of Arts and Science, Coimbatore on 11.08.18
- [21] Conducted a **Hands-on training in “Bioinformatics”** to the Under graduate students of Zoology, Nirmala College for Women, Coimbatore on 24.09.18 and 25.09.18
- [22] Delivered a series of lectures on **Bioinformatics at Department of Biotechnology, Anna University**, Coimbatore on 06.10.18
- [23] Delivered a guest lecture on **“Apps for Biology-Interdisciplinary Project Ideas”** at PSGR Krishnammal College for Women, Coimbatore on 13.10.18
- [24] Delivered series of **guest lectures on Bioinformatics** at Anna University, Coimbatore on 12.10.19 and 22.11.19
- [25] Conducted a workshop on **“Formulas and graphs in Excel for Applications in Chemistry”** to the PG and research scholars of Department of Chemistry, Nirmala College for Women on 30.08.19
- [26] Served as the Resource person for the one-day Hands on Training in **“Bioinformatics Tools”** at PSGR Krishnammal College for Women, Coimbatore on 31.08.19
- [27] Served as the Resource person for the one-day National level Workshop on **“Prospects of Computational Approaches towards Drug Discovery”** at Anna University, Regional campus on 25.10.2019
- [28] Served as the Resource person for the on-day Hands on Training in **“Molecular Biology”** at the Department of Botany, Nirmala College for Women, Coimbatore on 07.12.19
- [29] Delivered a guest lecture on **“Computer Aided Drug Designing”** through online at Department of Plant Biology, Biotechnology and Bioinformatics at Tamil Nadu Agricultural University, Coimbatore on 20th April 2020.
- [30] Delivered a guest lecture through online on **“Computer Aided Drug Designing”** to the Under-graduate students of Biochemistry and Information Technology, RVS College of Arts and Science, Coimbatore on 28th October, 2020

- [31] Delivered a guest lecture through online on “**Computer Aided Drug Designing**” to the Under-graduate students of Biotechnology, Sri Ramakrishna College of Arts and Science, Coimbatore on 13th November, 2020.
- [32] Served as a resource person for the **workshop on Next-Gen sequencing** organised by the Department of Biotechnology, RVS College of Arts and Science, Coimbatore on 22.07.2024
- [33] Delivered a lecture on the topic “**Advances in Bioinformatics**” in the National Conference on “Abbreviations of Millennium horizons: Advancements in Zoological Explorations” on 7th January 2025.
- [34] Delivered a lecture on the topic “**Integrating AI in Drug Discovery: From Activity Prediction to ADMET Profiling**” in the 7-day International Online FDP on “Emerging Trends in Bioinformatics for Life Sciences” on 30.01.2026

BOOK PUBLICATIONS:

- [1] A Practical Guide to Computer Aided Drug Design
- [2] Knowledge Assessment in Molecular Modelling and Computer Aided Drug Design (MCQ guide)

MEMBER IN BOARD OF STUDIES:

- [1] Bharathiar University, Coimbatore – 2010-2013
- [2] Sri Krishna Arts and Science College, Coimbatore – 2012-2015
- [3] CMS College of Science and Commerce, Coimbatore – 2007-2010

EDITORIAL/ REVIEW BOARD MEMBER:

- [1] Editor of International Journal of Drug Design and Discovery

MEMBERSHIP IN PROFESSIONAL BODIES:

- [1] Life Member, Indian Science Congress Association