



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI, INDIA

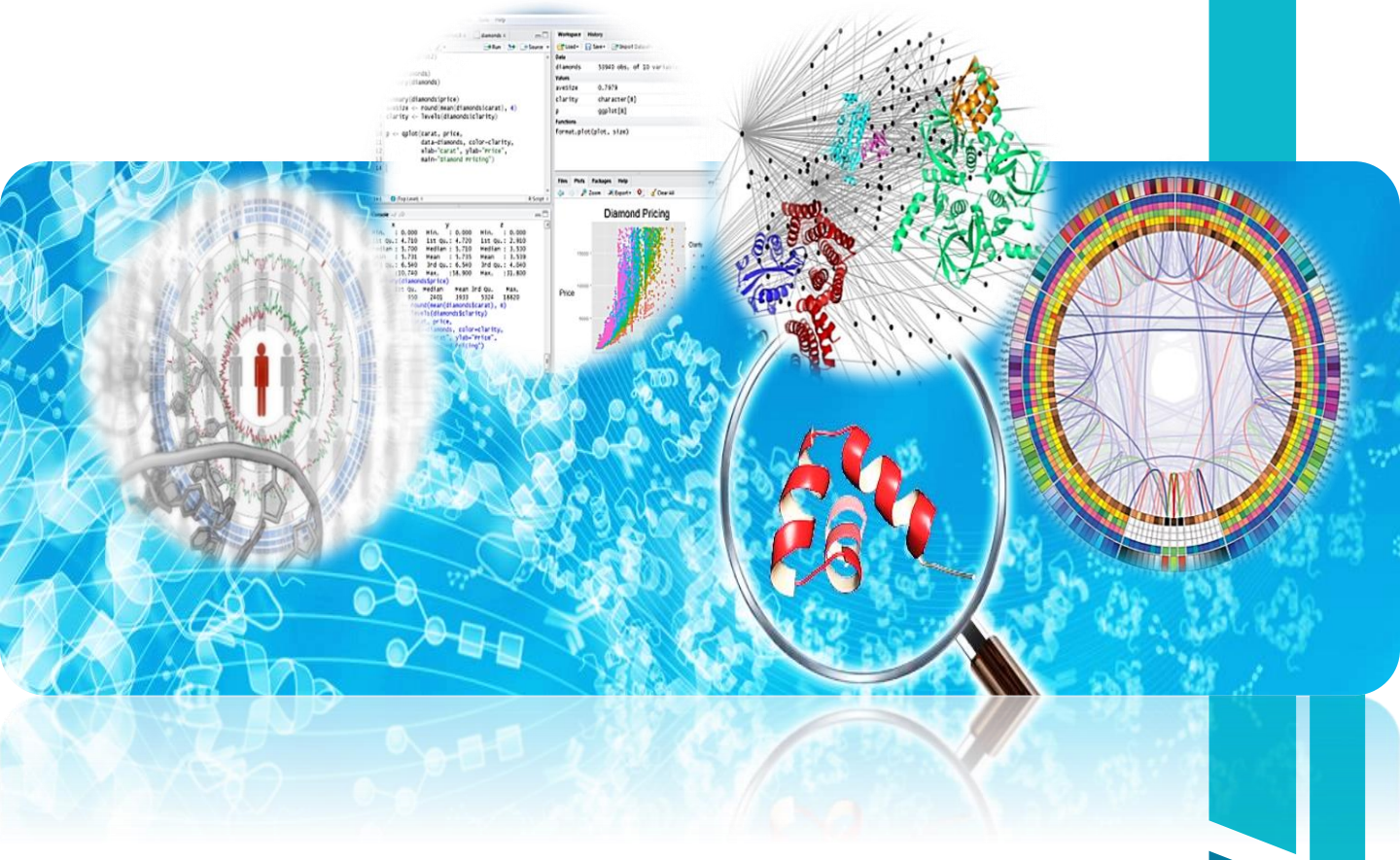
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www.stellamariscollege.edu.in

SMC⁷⁵
since 1947

DEPARTMENT OF BIOINFORMATICS



ABOUT THE DEPARTMENT

The Postgraduate Department of Bioinformatics was instituted in 2002. From 2005-2010 the programme was supported by the Innovative Programme of the UGC, and this enabled the Department to improve its infrastructure and engage in innovative methods of teaching and research. The Master's degree in Bioinformatics offers a strong multi-disciplinary acquaintance to develop computational methods that integrate technologies from science, statistics, and chemistry to handle and process biological data.



The Department has a well-established computer lab with a high-end server and computers with a 24x7 internet facility. Under the DST-FIST Grant-2017, the Department has procured the Schrodinger software, an inclusive platform to address the challenges in pharmaceutical research and to cater to the needs of teaching, research and industrial applications.



The Summer Internship is an integral part of the course at the end of the first year. Students intern in reputed institutions all over the country such as IGIB, RGCB, IBAB, NCBS and IISc. They are involved in the live projects of these Institutes and acquire hands-on experience in handling commercial software, as well as training in work ethics.

Adding to the accolades, our students have been selected for MS in Genomics at the University at Buffalo, University of Manchester, Leicester University, University of Cardiff, and Ph.D. in Environmental Bioinformatics, at Taichung University, Taiwan. Students have been placed in various industries like Fabgenics, CIBA-ICAR, Kyvor Genomics, Blackbuck Technologies and many more.

VISION

To be recognised as a distinctive Department, producing an informed community of Bioinformatics professionals with social responsibility and accountability.

MISSION

- To provide insight for students in the field of Bioinformatics
- To prepare the students to handle Big-Data and to provide solutions for human health and welfare
- To empower young women in STEM by providing necessary technological skills in handling biological data, multiomics, drug discovery and clinical research
- To encourage students to start Bioinformatics start-ups and enhance entrepreneurial skills with social concern

Big-Data
Inclusive
Women-in-STEM
Accountability
Technology-driven

Multiomics
Clinical Research
Drug-Discovery
Entrepreneurship
Social-concern

HISTORY OF THE DEPARTMENT

The Department of Bioinformatics, established in 2002, seeks, in addition to teaching a globally relevant curriculum to develop research skills by providing facilities for Bioinformatics computing. We have a State-of-the-Art computational facility to foster interdisciplinary collaborative research in Biological, Chemical and Physical Sciences. We are committed to maintaining the unique quality of a Stella Marian education and continue the tradition of holistic education with a sound value system.

Based on overall academic objectives of the Department and its potentialities the department was considered for financial support for “M.Sc. Bioinformatics” by the UGC- Innovative Program, New Delhi from 2005 to 2010.

The department received the DST-FIST grant in 2017 which supported the procurement of Schrodinger software. This has promoted the department to take up research to the next level and the offers solutions to a wide range of problems faced by researchers.

The Department of Bioinformatics is facilitated with high end computers and servers to perform good research in the field. The lab is also supported with 24 hours internet facility for students to read more research articles which will enrich their minds.

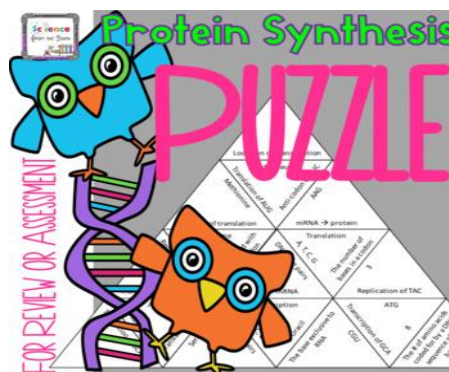
BEST PRACTICES

The best practices of the department are just-in-time teaching, concept mapping, flipped classroom teaching, mastery learning and team based learning. The department is driven by standards of excellence in teaching and research.

Besides the regular online faculty evaluation by the college, the department ensures regular feedback after to reassesses the teaching methodology. Feedback is also sought from the alumni for redesigning of syllabus.

In keeping with the vision of the college for a humane attitude towards students, the mentoring process takes care of the requirements of the students in academic, economic and personal issues. Faculty also take extra measures to motivate students learning through leaderboard activities, solving puzzles, playing protein folding games, etc.

The students are encouraged to explore research projects in a multidisciplinary approach. There is a continued learning opportunities for the faculty to upgrade themselves in the field.



Leaderboard

In no particular order the top contributors are

Mercy stephen

Mariya
Narmadha
Neha
Ananya
Sadhana
Janin
Shangari
Amsaveni



STUDENT CENTRIC PRACTICES

Students have been taught to understand the prevailing challenges in healthcare and are encouraged to understand how a number of Bioinformatics approaches have their antecedents in the fields of Systematics, linguistics, mathematics and statistics in the analysis of molecular data. Students are bestowed with good academic, scholarly, and professional practices.

Student centric Approaches

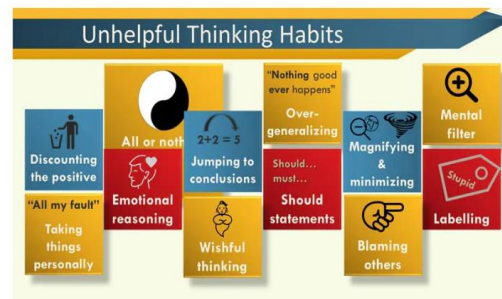
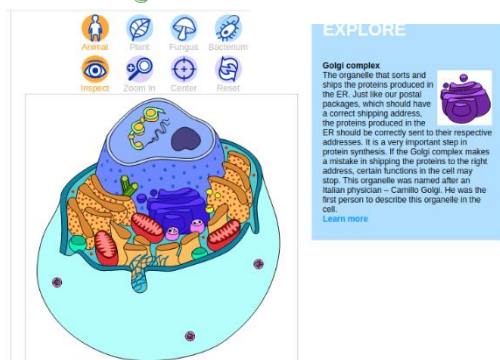
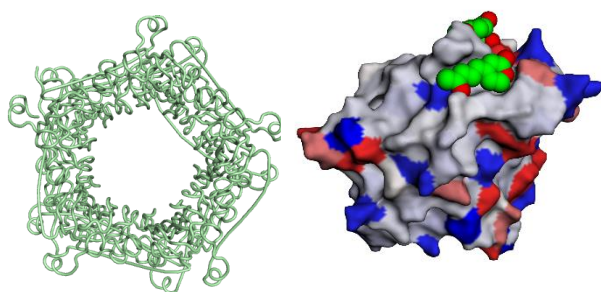
- Project based learning
- Flipped classroom
- Scientific Inquiry based learning
- Case studies and Brainstorming sessions
- Experimental learning
- Model building and simulations



INNOVATIVE PRACTICES

The faculty adopt innovative practices such as allot group activities, create puzzles, and simulations for the better understanding of concepts. The concept of leader board activities every month to show the involvement of students have been effective in encouraging students to interact and stay motivated.

- Teaching through virtual laboratories
- Adaptive learning
- Computational thinking abilities
- Extensive use of remote labs
- Stealth assessment



OTHER RELEVANT DATA

PROJECTS, CERTIFICATE COURSES, INTERNSHIPS, INDUSTRY TIE-UPS, MoUs,

- DST-FIST Grant in 2017 was granted
- Dr. E. Nandha Devi, former Head, has tapped UGC-Minor research grant, 2017.
- Students Janani, Pavithra K and Antonette Arockiya Mary, of 2018 batch received Student project fund from Tamil Nadu State Council for Science and Technology under the guidance of Dr. E. Nandha Devi.
- Student have done their Internships at reputed institutes such as CSIR, IISC, NCBS, RGCB, IIT- Madras and University of Madras



Faculty Ms. Aishwarya S and Ms. R Sagaya Jansi have been granted with seed grant by the management of Stella Maris College, on the following topics:

- Multiomics and machine learning approaches to combat covid-19.
- Anti Microbial Resistance (AMR) Profiling of Cooum River Microbiome and its Functional Investigation to Combat the Menace – Machine Learning and Multiomics approach.
- Genome wide analysis of secondary metabolite gene clusters from microorganisms in environment and green synthesis of facile silver nanoparticles targeting antimicrobial and anticancer activity: An in vitro and in silico approach.



ज्ञान-विज्ञान विमुक्तये
UGC

University Grants Commission

The Department of Bioinformatics organized a webinar on “Computational Perspectives in handling Biological Data” on 21 May, 2020 from 2.30.pm to 4.00 pm IST. The first session was on “Applications of Next generation sequencing technologies in clinical diagnostics” by Dr. N. Murugan, Scientist, Lifecell Pvt Ltd, Chennai. The session gave an insight on NGS data analysis and the various applications of it to biological sciences. The second session was on “Informatics for Biologists” by Pankaj Mishra, Researcher, University of Friburg, Germany, Founder and CEO of Medgenera. The resource person explained the various tools, databases and execution of R and Python scripts to analyse genome data. A total of 81 participants attended the webinar. After each session the participants had their doubts clarified from the presenters.

The Department of Bioinformatics has organized a Poster Competition on related themes of CoVid-19. Different topics were assigned to each category of the students and the topics included (1)COVID-19: A road map of Genes in corona virus – UG students; (2)COVID-19: Rolling updates on corona virus disease at the genomics level - PG students and (3)COVID 19: Impact of Bioinformatics in diagnostics and treatment – Research Scholars

The Department of Bioinformatics organised a hands on workshop on Metagenomics, for PG students. Dr. Millner Kumar, Proprietor Black buck technologies delivered the key note address and Ms. Suganya N, Project fellow, ICAR- CIBA, delivered the hands on practice session on March 3, 2020

The Department of Bioinformatics in collaboration with CRIST, Biotechnology, Physics, Chemistry Workshop on “Analytical Instrumentation Techniques” during 25-27, February 2020

The Department of Bioinformatics in collaboration with DST- FIST organised a Workshop on “Drug Design and Discovery with Schrodinger” by Dr. Vinod, Application Scientist, Schrodinger, Bangalore on February 5 and 6, 2019 for I and II M.Sc., Bioinformatics students.

The Department also organised a Workshop on “NGS Data Analysis” by Sahil Sethi, Bioinformatician and Data Engineer, Pine Biotech- Big Biomedical Data Analytics, New Orleans, USA on 11 September 2018. The Department of Bioinformatics organised a guest lecture on “Avenues in Bioinformatics” by Dr. Girinath Pillai, CEO, Zastr Innovations, Bangalore on 31 July 2018.

The Department organised an International conference on lead optimization and candidate selection, on October 30, 2017. Dr. Girinath Pillai, CEO, Zastr Inovations, Bangalore and Dr. Nick Foster, CEO, Optibrium, UK were the keynote speakers.

The Department organises workshop every year to the UG students of Chemistry, Zoology and Botany, during the months of February/ March to create an interest to the undergraduate students in Bioinformatics.

OTHER RELEVANT DATA OUTREACH PROGRAMMES (SAP)

Since 2014, the concept of our SAP is Child welfare and the Department has organised School visits every year with a theme focused on the challenges and demand at instance. The students learned valuable lessons during these visits. Some of the outcomes of the SAP programmes as stated by the students were:

- Acquired learning to channel their thoughts and come up with creative ways to implement them. The students gained more confidence in engaging young children, and differently abled children.
- Acquired understanding to be more patient with others and learning the importance of service to society.
- Gained a sense of community,
- Perceived a control at community level
- Critical awareness of the world and taking action for change.
- Enhanced the academic skills, leadership qualities, self-confidence, communication skills, managerial skills, and responsibilities toward the underprivileged children



2015 - Aikya School, Raja Annamalaipuram, Chennai

2016- Vidyodaya Matriculation Academy for Girls, T.Nagar, Chennai & Aravind Foundation, KK Nagar, Chennai

2017 - Church Park Matriculation School, Anna Salai, Chennai

2018-Childrens Garden, Mylapore, Chennai

2019 - Chennai Middle School, Purasaiwalkam, Chennai

OTHER RELEVANT DATA

FACULTY AND STUDENT AWARDS/ ACHIEVEMENTS

Aishwarya S, faculty received “Hargobind Khorana Young Scientist in Bioinformatics”, award by Bose Science Society, Tamil Nadu State Research Organisation, a Unit of DST on 15th September 2018.

Ms. Swarna Surya S, Ms. Meena R, Ms. Bhakiya Lakshmi R and Indhuja S of I M.Sc., Bioinformatics won first place in mime and Ms. Varsha M won first place in poster presentation in Micromatsuri 2018, organized by Department of Microbiology, DG Vaishnav College on September 12, 2018. Ms. Swarna Surya S also won third place in Republic day dance at Marina on January 26, 2019.

Ms. Arshiya Begum G and Ms. Evangeline Shantha R of II M.Sc., Bioinformatics won first prize in Quiz in the National Seminar on “Computer Tools for Next Generation Sequencing and Biomedical Data Analysis” organized by the DBT Bioinformatics Centre and Department of Bioinformatics, Bharathiar University, Coimbatore on February 8, 2019.

Ms. Charu Meena Harikrishnan and Ms. Harini Balasubramanian of II M. Sc., Bioinformatics won the Best e-Poster award in the International Conference "HORIZON 2019: The epitome of Biomedical Research" organised by Saveetha Dental College and Innoscience research, Malaysia, held on February 28 – March 1, 2019.

Ms. Varsha M and Ms. Priyanka I of II M.SC., Bioinformatics secured second place in Poster presentation competition on “Gender Neutral Management Practices” on 29 August 2019 held at D.G Vaishnav College on the occasion of International Women’s Equality Week.

Ms. Tina Darsheni, Ms. Idaa Josphine and Ms. Priyadharshini of I M.Sc., Bioinformatics, won third prize at quiz - Karyon 2019 in “Answer or hands down” on 4 February 2020 competition organised by Loyola College, Chennai.

OTHER RELEVANT DATA

FACULTY AND STUDENT PUBLICATIONS

Ms. R. SAGAYA JANSI

Title of the Paper	Journal	Year of Publication	Additional Information
Evaluation of Cu-MgFe ₂ O ₄ spinel nanoparticles for photocatalytic and antimicrobial activates.	Journal of Physics and Chemistry of Solids	24 February 2021	Impact Factor: 3.442
Integrated approach in LDPE degradation – An application using Winogradsky column, computational modeling, and pathway prediction.	Journal of Hazardous Materials	15 June 2021	Impact Factor: 9.038
From genomes to molecular dynamics – A bottom up approach in extrication of SARS CoV-2 main protease inhibitors.	Computational Toxicology 2021, 18, 100156.	January 2021	Impact factor 0.997
Emerging paradigms of viral diseases and paramount role of natural resources as antiviral agents	Science of the Total Environment	October 2020	Impact Factor - 6.551
India to Global Epidemiological status on COVID-19: An Update on Genomic Origin & Phylogenetic study on SARS-CoV2.	Epidemiology International Journal. 4(3): 000150.	June 2020	ISSN: 2639-2038 (2020).
Epitope-Based Peptide Vaccine Design Against Nuclear Protein EBNA3C of Epstein - Barr virus: An Approach to Treat Multiple Sclerosis.	Research & Reviews: A Journal of Life Sciences; 9(1): 62–72p.	2019	-

OTHER RELEVANT DATA

FACULTY AND STUDENT PUBLICATIONS

Ms. S. AISHWARYA

Article name	Journal name	Year	Impact factor
Structural, functional, resistome and pathogenicity profiling of the Cooum river.	Microbial Pathogenesis	March 2021	2.9
Metabolic and molecular modelling of zebrafish gut biome to unravel antimicrobial peptides through metagenomics.	Microbial Pathogenesis	February 2021	2.9
Repurposing potential of Ayurvedic medicinal plants derived active principles against SARS-CoV-2 associated target proteins revealed by molecular docking, molecular dynamics and MM-PBSA studies	Biomedicine and Pharmacotherapy, 137 (2021) 111356,	January 2021	6.52
From Genomes to Molecular Dynamics - a Bottom Up Approach in Extrication of SARS CoV-2 Main Protease Inhibitors	Computational Toxicology	January 2021	0.91
Extrication of the Microbial Interactions of Activated Sludge Used in the Textile Effluent Treatment of Anaerobic Reactor Through Metagenomic Profiling	Current Microbiology, Springer	May 2020	2.1
Computational gene expression profiling in the exploration of biomarkers, non-coding functional RNAs and drug perturbagens for COVID-19	Journal of Biomolecular Structure and Dynamics,	November 2020	3.4
MicroRNAs in oral fluids (saliva and gingival crevicular fluid) as biomarkers in orthodontics: systematic review and integrated bioinformatic analysis	Progress in Orthodontics	May 2021	1.8
Anti-COVID-19 terpenoid from marine sources: A docking, admet and molecular dynamics study	Journal of Molecular Structure, Elsevier	October 2020	3.19

Subtilisin An Eminent Microbial Product As A Potential Skin Care Regulator Of Melanogenesis –A Paradigm Synchronized With In Vitro / In Silico Approach	Journal of microbiology, biotechnology and food sciences,	December 2020	0.91
Computational Profiling of Noncoding RNAs – Viable targets and Restorative candidates of Influenza Viral Infection with Bioconductor packages	Asian Journal of Biological and lifesciences	March 2020	-
An In silico study of lignans as selective estrogen receptor modulators to treat viral infections	International Research Journal of Biological Sciences	2019	-
Epitope-based peptide vaccine design against nuclear protein EBNA3C of Epstein Barr virus an approach to treat multiple sclerosis	Research & Reviews: A Journal of Lifesciences	2019	-
Restorative Strategy to instate phytomedicine as formulated natural Selective Estrogen Receptor Modulators [SERM] - a key to restore women health,	Book Series: Innovations in Agricultural and Biological Engineering, Apple Academic Press Inc	October, 2018	Book Chapter

Dr. M. SHARANYA

Book Chapter: Title “Fungal Siderophores: Prospects and Applications”	Fungal Siderophores – From Mineral-Microbe Interactions to Anti-pathogenicity	January 2021	Springer Publications
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FACULTY AS RESOURCE PERSONS AND EXPERTS

Ms. Aishwarya, S faculty delivered a lecture on “Structure based drug designing and molecular docking” at CSIR-Summer research technology programme, Group 5 on 2 August 2020.

DEPARTMENTAL ACTIVITIES 2014-2015

The Department of Bioinformatics organized a Workshop in “Bioinformatics – Applications and Current Approaches” from 10 to 13 February 2015 supported by the DBT, under the Star College Scheme for the undergraduate students.



S. Preethi of II M.Sc. Bioinformatics was selected to present her summer internship project on “A Study of Molecular Interaction of *Perillafrutescens* for the therapeutic usage in diabetes by an Insilico method” at the International Conference on Intelligent Biology and Medicine 2014, San Antonio, Texas, USA.

Gowri Geetanjali of I year M.Sc. was certified as a Personality Development & Memory Skills Trainer by Adhira - Life Skillz Academy, Chennai.

The second year students accompanied by two faculty members of the Department of Bioinformatics participated in the 2014 NextGen Genomics and Bioinformatics Technologies (NGBT) Conference, NIMHANS, Bangalore, hosted by SciGenome Research Foundation (SGRF), National Institute of Mental Health and Neuro Sciences (NIMHANS) & Institute of Bioinformatics (IOB) from 17 to 19 November 2014.

The faculty and students of the Department of Bioinformatics participated in the International Conference on “Stem Cells and Regenerative Medicine”, organised by NCRM-NICHIE, Chennai on 11 October 2014. Susan Maria Moses from first year M.Sc., Bioinformatics, presented a poster on “Pluripotent Stem Cells and Parkinson’s Disease”.

First and second year students attended the National Seminar on “Developments, Challenges and Opportunities in Biosciences” conducted on 27 and 28 August, 2014 at Dr. MGR Janaki College of Arts and Science for Women. B. Gowri Geetanjali and Ms. Susan Maria Moses won the first place in quiz. B. Gowri Geetanjali won first place in ‘Just a Minute’.

DEPARTMENTAL ACTIVITIES 2015-2016

The Department of Bioinformatics organized a workshop on “Bioinformatics- Applications and Current Approaches” from 22-26 February 2016, supported by DBT, under the Star College Scheme for the undergraduate students. Dr. Basant Kumar Tiwari, Head of the Centre for Bioinformatics, Pondicherry University, was the keynote speaker.

The department organized a workshop on “Bioinformatics Tools and Applications” from April 18 to 22, 2016 for the UG students.



The Department of Bioinformatics received the DST- FIST project in September, 2015 under which Schrodinger software was procured.

Susan Maria Moses of II M.Sc., Bioinformatics and Madhana Priya. N of I M.Sc., won first place in Poster Presentation at the ‘National Seminar on Innovations in Bioresearch-Publish and Relish’ organized by Dr. MGR Janaki College, Chennai on 15 September 2015.

B. Gowri Geetanjali of II M.Sc., Bioinformatics won first place in Debate at the Inter-collegiate contest GENOTSAV’15 organized by Loyola College.



The students won first place in the Inter Collegiate cultural, Micromatsuri 2016 at D. G. Vaishnav College, Chennai.



First year students, A. Cathrine Jenitta and S. Madhumathi, participated and won first place in Bio-Cartooning, second place in Art Out of Waste in the Inter-collegiate contest GENOTSAV’15 organized by Loyola College.

DEPARTMENTAL ACTIVITIES 2016-2017

S. R. Aparna, of first year M.Sc. Bioinformatics, won the “Best Paper Presentation Award” for the paper titled “Computational Identification of miRNAs in the plant Panaxginseng”.

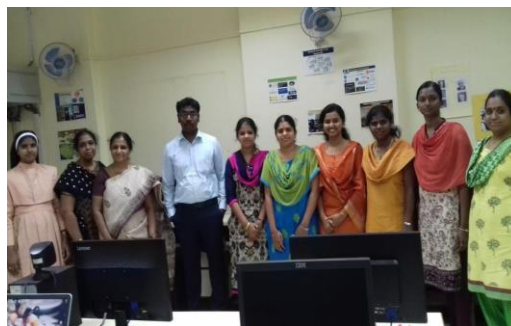
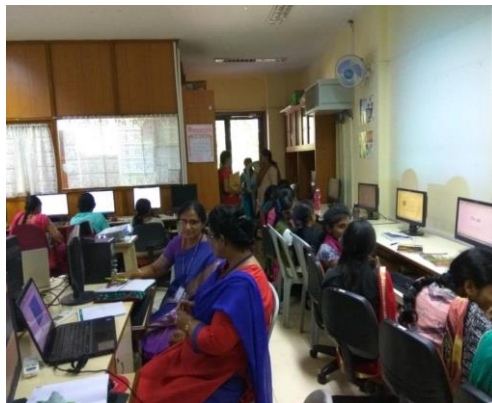


N. Madhana Priya and N. Keerthana, of second year M.Sc. Bioinformatics, won the first place in Paper Presentation at the intercollegiate cultural “Micromatsuri 2016” held at D. G. Vaishnav College, Chennai.

P. N. Suganya and J. Pappa Alpha Judy of second year M.Sc. Bioinformatics, won the first place in Poster Presentation at the intercollegiate cultural “Micromatsuri 2016” held at D. G. Vaishnav College, Chennai. They also won the overall championship.



The Department of Bioinformatics in collaboration with DST- FIST organised a Workshop on “Drug Design and Discovery with Schrodinger” by Dr. Vinod, Application Scientist, Schrodinger, Bangalore for faculty of SMC and other colleges.



DEPARTMENTAL ACTIVITIES 2017-2018

The Department of Bioinformatics had the privilege of hosting the Chennai chapter International One-day workshop on “Lead Optimization and Candidate Selection” organised jointly by Department of Bioinformatics, Stella Maris College and Zastra Innovations, Bangalore and Optibrium, Cambridge, UK on October 13 2017. Dr. Nick Foster, Head of Commercial Operations, Optibrium, UK delivered the keynote address.



Ms. E. Nandha Devi, Head Department of Bioinformatics attended the “Summer Leadership Program” at Trinity Western University, Langley, British Columbia, Canada from July 17-27 2017. She also attended and presented poster at the International Conference on “Biological Applications of Nanoparticles – ICON-BIO 2017” organised by IIT Chennai on December 4-5 2017 and won second place in paper presentation at the International Conference on “Biosciences & Bioinformatics” organised by Bharathiar University, Coimbatore from December 14-16 2017.

The students of II M. Sc., Bioinformatics Ms. Jamuna D and Ms. M. Benita Nancy Mary won third place in poster presentation for the topic “Prevention is better than cure” at the Loyola Cultural organised by the PG Department of Medical Lab Technology on December 14 2017.

The students of I. M. Sc., Bioinformatics won the overall championship trophy for participating in various events at the National Seminar on ‘Biotechnological Approaches Towards Sustainable Future-Technosaviour 2018’ conducted by D.G Vaishnav College, Arumbakkam on 28 February 2018.

Ms. H. Charu Meena, Ms. B. Harini, Ms. R. Reshma, Ms. G.W. Antonet Arokia Rani participated in Treasure Hunt competition and secured the First place, Ms. S. Sabatini Queen and Ms. Mariama Hassane participated in T-Shirt painting competition and won Third place under the topic ‘World in 2020’, Ms. R. Reshma and Ms. R.S. Aarthi participated and won Second place in Quiz competition under the topic ‘Life Sciences’, Ms. H. Charu Meena and Ms. S. Ashikha participated in ‘Splicing’ competition and secured the Third place.

DEPARTMENTAL ACTIVITIES 2018-2019

Ms. S. Aishwarya, Assistant Professor, Department of Bioinformatics received the Hargobind Khorana Young Scientist Award- Bioinformatics, by Bose Science Society, Tamilnadu State Research Organisation, Unit of Department of Science and Technology on September 15, 2018 at Pudukottai, Tamilnadu.

Ms. S. Aishwarya, Assistant Professor, Department of Bioinformatics has Edited a book chapter on "Formulated Estrogen Modulators: A key to restore Women's Health" in the book Plant and Marine based phytochemicals for Human Health, Apple academic Press on October 4, 2018

Ms. S. Aishwarya, Department of Bioinformatics participated in a Workshop on Women in Science Administration and Management, organised by MHRD, India and British Council. Level 1 (26-29 November 2018) at NCBS, Bangalore and Level 2 (9-10 January 2019) at IISER, Pune

Ms. S. Aishwarya, Assistant Professor, Department of Bioinformatics attended the India, EMBO symposium titled "Regulatory epigenomics" organised by European Molecular Biology Laboratory Organisation from March 10 to 13, 2019.



Ms. Swarna Surya S, Ms. Meena R, Ms. Bhakiya Lakshmi R and Indhuja S of I M.Sc., Bioinformatics won first place in mime and Ms. Varsha M won first place in poster presentation in Micromatsuri 2018, organized by Department of Microbiology, DG Vaishnav College on September 12, 2018. Ms. Swarna Surya S also won third place in Republic day dance at Marina on January 26, 2019.

Ms. Arshiya Begum G and Ms. Evangeline Shantha R of II M.Sc., Bioinformatics won first prize in Quiz in the National Seminar on "Computer Tools for Next Generation Sequencing and Biomedical Data Analysis" organized by the DBT Bioinformatics Centre and Department of Bioinformatics, Bharathiar University, Coimbatore on February 8, 2019.

Ms. Charu Meena Hari Krishnan and Ms. Harini Balasubramanian of II M.Sc., Bioinformatics won the Best e-Poster award in the International Conference "HORIZON 2019: The epitome of Biomedical Research" organised by Saveetha Dental College and Innoscience research, Malaysia, held on February 28 - March 1, 2019.



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The Department also organised a Workshop on “NGS Data Analysis” by Sahil Sethi, Bioinformatician and Data Engineer, Pine Biotech- Big Biomedical Data Analytics, New Orleans, USA on 11 September 2018.



The Department of Bioinformatics organised a guest lecture on “Avenues in Bioinformatics” by Dr. Girinath Pillai, CEO, Zastra Innovations, Bangalore on 31 July 2018.



The Department organised workshop on “Awareness to Bioinformatics and its future implications” to the UG students of Chemistry, Zoology and Botany, on February 12, 14 and 15, 2019 respectively.

Ms. M R Janani, Ms. Antonet Arokiarani and Ms. C Pavithra of II M.Sc., Bioinformatics under the guidance of Ms. E. Nandha Devi, Head, Department of Bioinformatics received the Student Project grant from Tamilnadu State Council for Science and Technology.

DEPARTMENTAL ACTIVITIES 2019-2020

The Department of Bioinformatics organised a workshop on “Metagenomics” and the keynote address was delivered by Dr. N. Murugan, Scientist and Manager, Molecular Genetics, Lifecell, Chennai and Ms. N. Suganya, Young Scientist Fellow, CIBA-ICAR, Chennai on 11 March 2020.

A Guest Lecture on “Next Generation Sequencing and Analysis” was rendered by Dr. M. Milner Kumar, Proprietor, BlackBuck Technologies, Chennai on 6 December 2019.

The faculty and students of the department attended workshops and conferences at the national and international level. Ms. Ananya Chinni Krishnan of II M. Sc., Bioinformatics was selected for the MS Programme in Genetics, Genomics and Bioinformatics at Jacobs School of Medicine and Biomedical Sciences, University of Buffalo. She also got offer to pursue MS at the University of Leicester, University of Manchester and Cardiff University respectively.

Ms. Ananya Chinni Krishnan won first place in oral presentation in second national conference on Computational Biology and Medical Biotechnology in Health Care (CBMH-19) on 17-18 September 2019 organised by Department of Bioinformatics, Sathyabama Institute of Science and Technology. She also secured fourth place in the “All India Intercollegiate Military History Quiz” on 21 July 2019 organised by Colours of Glory Foundation, Kotturpuram, Chennai.

Ms. Varsha M and Ms. Priyanka I of II M.SC., Bioinformatics secured second place in Poster presentation competition on “Gender Neutral Management Practices” on 29 August 2019 held at D.G Vaishnav College. Ms. Priyanka I and Ms. Meena of II M.SC., Bioinformatics were selected as Bioinformaticians in BlackBuck Technologies, Chennai.

Ms. Tina Darsheni, Ms. Idaa Josphine and Ms. Priyadharshini of I M.Sc., Bioinformatics, won third prize at quiz - Karyon 2019 in “Answer or hands down” on 14 December 2019 competition organised by Loyola College, Chennai.



DEPARTMENTAL ACTIVITIES 2020-2021

The Department of Bioinformatics organised a webinar on “Computational Perspectives in handling Biological Data” on 21 May 2020. The keynote address was delivered by Dr. N. Murugan, Scientist and Manager, Molecular Genetics, Lifecell Pvt Ltd, Chennai and Mr. Pankaj Mishra Researcher, University of Friburg, Germany, Founder and CEO Medgenera.

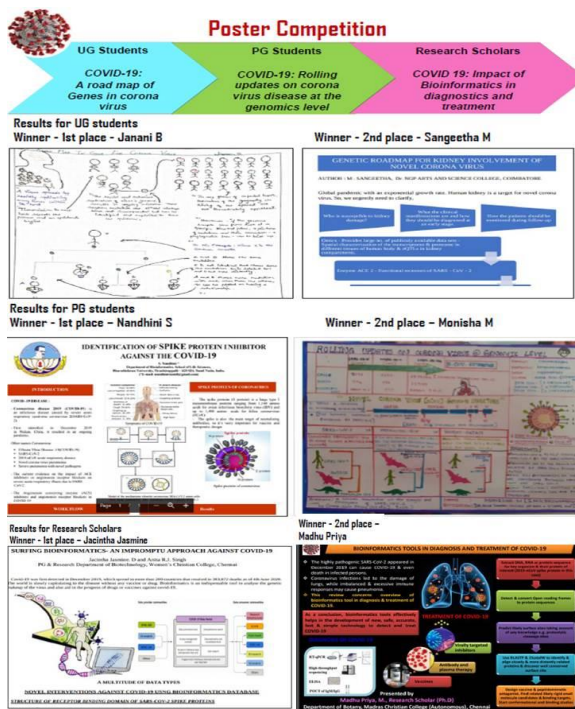
The Department hosted a poster competition on various topics of COVID-19 such as Genes, Genomics, Diagnostics and Treatments for the undergraduate, postgraduate students and research scholars on June 2020. Participants of Stella Maris College, other colleges and Universities presented the posters.

The faculty of the Department attended various national and international workshops and seminars online. Aishwarya S, faculty presented three papers and attended 12 National and 4 International conferences. Dr. Sharanya M., has participated in International Conferences (InCoB2020, UKIERI-SPARC an Indo-UK symposium), Workshop conducted by EMBL-EBI, Workshop to up skill teaching by ASEAN, Australia, as well as a National short-term training program on NGS.

The students participated in several webinars in arenas of Bioinformatics and also attended online various courses on Next generation sequencing analysis, Programming in python and Data sciences.

Ms. R. Sagaya Jansi and Ms. S. Aishwarya and Dr. M. Sharanya received the seed money grant from the college to carry out the research projects.

Ms. R. Sagaya Jansi published five research articles in peer-reviewed international journals indexed in scopus and web of science with a total impact factor of 20.028. Ms. S. Aishwarya published seven research papers in peer-reviewed journals indexed in scopus and web of science with a total impact factor of 14.04. Dr. M. Sharanya published a book chapter in Fungal Biology: Springer Publications.





SWOC Analysis

STRENGTHS

- Interdisciplinary and offers specialisations in many fields including Biotechnology, Statistics, IT, Microbiology, Biochemistry, biophysics and many more
- Infrastructure-well established laboratory with high end Pc's and 24x7 internet facility and increased feasibilities of remote working
- Publications in reputed journals and recipients of minor projects
- Well defined program assessment structure (including goals and outcomes)
- Motivation to carry out independent research
- Possibilities of handling the real world healthcare data such as the covid infections and surveillance

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WEAKNESSES

- Lack of major research grants from external funding agencies
- Campus Placements
- Involvement of alumni and networking capabilities
- MoUs and collaborations with Industry partners

OPPORTUNITIES

- Collaborative research
- Consultancy activities
- To emerge as one of the leading Bioinformatics centre
- Placement opportunities in wider sectors including clinical research, Genomics centre, drug discovery institutions, Pharmaceutical companies
- Acquiring Internship and student projects from reputed companies and research institutions across the nation
- Increased demand for computational services make us to grow in a faster pace

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