



**PG AND RESEARCH DEPARTMENT OF  
BIOTECHNOLOGY & BIOINFORMATICS**

**HOLY CROSS COLLEGE (AUTONOMOUS)  
TIRUCHIRAPPALLI-2**



**ASSOCIATION ACTIVITIES (2023-2024)**

The anniversary provides an opportunity to look back and reflect on how the years 2023-2024 have advanced in transforming students and preparing them for a bright future. During this academic year, the Department organized various multi-disciplinary activities to benefit the students. The Association activities of the Watson and Crick Club of the Department of Biotechnology and Bioinformatics were inaugurated by **Rev. Fr. Leo Johnson**, Assistant Professor of Visual Communication, Holy Cross College on **6<sup>th</sup> July 2023**. The association office barriers were elected. A chief guest addressed the gathering through his motivational short stories on “Life and real happiness”. The Watson and Crick Club of the department & the DBT-BIF Centre, organized an **online workshop on “Computer Aided Drug Design (CADD)”** for the final year students from **3<sup>rd</sup> to 7<sup>th</sup> July 2023** for Students from Department of Biomedical Sciences Navratchana University, Vadodara, Gujarat via Google Meet. The modules of the workshop included fundamental databases, web servers, software and tools employed in CADD. The students were introduced to the bioinformatics resources in each module with clear explanation of the tools and their applications with deliberate discussions and clarification of doubts. The students were also encouraged to take up workout assignments and mini projects. The five days’ workshop ended with the feedback session from the beneficiaries.

One-day International Scientist meet was organized on **9<sup>th</sup> August 2023**, **Dr. Suresh Mickymaray**, Associate Professor, Department of Biology, Majmaah University, Saudi Arabia gave a lecture on **“Booming infections. What is the need of the hour?”**. The talk was thought-provoking mostly focused on entrepreneurship and its importance in the realm of science, he also shared advancing researches undergone in the field of infectious diseases, updates on the novel treatment strategies against Methicillin resistant *Staphylococcus aureus* (MRSA) bacteria, diagnostic value of real-time PCR and associated bacterial and fungal infection in female genital tuberculosis. An agreement of **MoU between Holy Cross College**

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**(Autonomous) and Annai Theresa Biomedical Training and Research Institute, Trichy** was signed in the meeting.

The final year students of the department were taken on an **education tour to Mysore and Coorg** from **7<sup>th</sup> to 9<sup>th</sup> December, 2023** to visit various places including Mysore palace, Museum, Mysuru Zoo, Golden temple, Elephant caves, Chiklihole Reservoir Coorg. During this trip the students had a one-day visit to Drosophila Genome Resources at Genetics and Genomics Laboratory, University of Mysore. The team of six students of the Department of Biotechnology & Bioinformatics participated in the **National Level SIH- Smart India Hackathon 2023 (SIH1479, Guardians Crew)** held at Pune during 19<sup>th</sup>-23<sup>th</sup> December, 2023. Among the 47,744 ideas submitted to the Ministry of Education's Innovation Cell and AICTE, New Delhi for the National Level Hackathon, SIH 2023, our team has been selected for the **Grand Finale at MIT-ADT University, Pune for the academic year 2023-2024**. The students presented their Innovative Technology product ideas on **'Microbe Trapper'** to provide a Microbial free environment in confined areas of Hospitals. Dr.M.Rajalakshmi, Head, Department of Biotechnology & Bioinformatics and Dr. Sujatha Illagovan, Assistant Professor, Department of Zoology accompanied the students as mentors.

Watson and Crick Club of PG And Research Department of Biotechnology & Bioinformatics, Holy Cross College, Trichy and Prof. Mukesh Doble, Founding Director, Theevanam Additives & Nutraceuts Pvt Ltd., (IIT Madras Research Park), Chennai & Distinguished Professor, Saveetha Dental College, Chennai) jointly organized a **five days hands-on online Faculty Development Programme on "Computer Aided Drug Design (CADD) & Systems Biology"** from **18<sup>th</sup> to 22<sup>nd</sup> December, 2023**. The FDP was inaugurated by **Rev. Sr. (Dr.) Rajakumari. P, Principal, Holy Cross College, Dr. M. Rajalakshmi, Head, Department of Biotechnology & Bioinformatics** in the presence of the distinguished professors **Prof. Mukesh Doble, Prof. M. Michael Gromiha and Prof. S. Parthasarathy and Dr. Radha Arulkumar** as the Resource Persons of the FDP. The technical sessions of the FDP included, Introduction to CADD, Drug likeness properties-data bases, Ligand based drug design-pharmacophore modelling, Quantitative structure activity relations/regression analysis, Target based design-sequence analysis, Docking, Pharmacokinetics analysis, Role of AI in drug design. The final day of the FDP was completed with project presentation from the participants and valediction that marked the successful completion of the FDP.

**A workshop cum hands-on training** was organized by the DBT-BIF Centre, Holy Cross College (Autonomous), Tiruchirappalli, for the Post Graduates and Scholars of the Department of Biomedical Sciences, School of Life Sciences, Navratchana University, Vadodara, Gujarat from **11<sup>th</sup> to 22<sup>nd</sup> December, 2023**. The workshop cum hands-on training has live sessions on CADD and Systems biology modules, and its applications on integrating various high-throughput proteomics data to analyze an entire biological system. Seven scholars were trained in phytochemistry and microtechniques, they were taken to the Central Instrumentation Facility, Holy Cross College, and given a demonstration on working in the research instrumentations GC-MS/MS & XRD and Animal House Facility, HCIIC Incubation and Innovation Centre at Holy Cross College was introduced to the students to gain knowledge on incubation centers and 3D printing techniques available at the centre. The workshop also highlighted the importance of innovation, entrepreneurship and Startup concepts by Innovation Ambassadors of the Institution in HCIICT.

**An International Symposium on “Opportunities and Challenges in Biomedical Sciences and Entrepreneurial Development”** jointly organized by the PG & Research Department of Biotechnology & Bioinformatics and **HCC BTECHINFO Alumnae Club of Biotechnology and Bioinformatics**, Holy Cross College, Trichy, was held on **8<sup>th</sup> & 9<sup>th</sup> January, 2024** at Holy Cross College (Autonomous), Tiruchirappalli. The symposium held at Our Lady’s Hall was inaugurated by **Rev. (Sr.) Dr. Rajakumari P**, Principal, **Rev. (Sr.) Dr. Anne Xavier**, Secretary and **Dr. Cecilia Edel Priya**, Director, Morais City Private Ltd, Trichy. **Dr.S.Thangaleela**, *Assistant Professor, Saveetha Institute of Medical and Technical Sciences, Chennai* was awarded with **(Late) Dr.P.Daisy Gold Medal Oration Award** recognizing her outstanding contribution and research excellence in the field of Life Sciences. **Dr. Cecilia Edel Priya** delivered the Keynote address and eight Plenary lectures were delivered by **Ms.S.Leelavathy, Dr.S.Dhevika, Dr.S.Suveena, Ms.Jeba Mercy, Dr.Shanmuga Priya Samson, Dr.Mohana Manoharan, Dr.M.Nishanthini, Dr.A.Anita Roy**. The valedictory session was presided over by **Dr.R.Jasmine Jemimah Jeyanthi**, Associate Professor & Head, Biotechnology & Bioinformatics, Bishop Heber College (Autonomous), Trichy. The invited delegates are the alumnae of the department working in diversified fields of Biotechnology. The International Symposium had technical sessions including a panel discussion and interactive Q&A session with experts and competitive review poster presentation competition that benefited the participants. The participants were presented with the certificates and poster

winner received the trophies and cash prizes as a token of appreciation. The two-days International Symposium had contributions from the alumnae with a sum of rupees fifty thousand and hundred as sponsorship.

On **February 6, 2024** the Watson and Crick Club of PG and Holy Cross College's Research Department of Biotechnology and Bioinformatics hosted a one-day colloquium lecture on **“Start-up and Innovation”** which was organized for the final year students of the department. The Resource Person of the program was **Prof. Mukesh Doble, Former Professor, Department of Biotechnology, IIT-Madras, Founding Director, Theevanam Additives & Nutraceuticals Pvt Ltd (IIT Madras Research Park), Distinguished Professor, Saveetha Dental College, Chennai.** Professor shared his start-up journey in establishing Theevanam Additives & Nutraceuticals Pvt Ltd., a start-up company housed in the Research Park of IIT Madras, committed to introducing innovative products and formulations for the aqua/poultry sector and healthcare. He addressed the gathering about the various funding opportunities provided by Startup India Initiative policies that included Govt. of India grants for Startup that included BIRAC and SBIRI.

The Watson and Crick Club of PG and Research Department of Biotechnology & Bioinformatics, Holy Cross College, Trichy organized an association valediction cum lecture talk on **20<sup>th</sup> February 2024** at Shanthi's Hall on the topic of **“Psychological Needs and Life Lessons”** by **Dr. (Sr.) Cathrine. S,** Counsellor, Holy Cross College, conducted an eye-opening session on the Dissonant and Positive Needs proposed by Sigmund Freud. Throughout the session, the students received appropriate guidance on managing psychological issues that may negatively affect their academic performance. After the talk the association valediction ended with the vote of thanks.