



PSGR
Krishnammal College for Women



DST FIST (PG COLLEGES) Level A



ANNUAL REPORT

2023-2024



KCW has been recommended a grant of Rs.57 lakhs by DST FIST, New Delhi, under PG Colleges (Level A), [Sanction Order Number SR/FST/COLLEGE-/2022/1293], (**Award Letter -Annexure – 1**) aiming towards augmentation of infrastructure and research facilities. The sanctioned amount is shared as 75:25 ratio respectively by DST FIST and the institution, classified as Govt. Aided College. The fund utilization supports modernization of laboratories through acquisition of sophisticated equipment, activities pertaining to Industrial Research and Development (IRD) and Scientific Social Responsibilities (SSR). Inclusive assistance by DST FIST will proliferate the premier status of KCW to cutting-edge level of competency. Two high-end research equipment, High Performance Liquid Chromatography (Agilent Technologies Pvt. Ltd.) and Nano Particle Track Analyser, (Horiba India Pvt. Ltd.) have been procured and installed. The created equipment facilities are phased out for benefitting PG Science Students and Research Scholars of KCW, as well as other institutions. Activities pertaining to IRD and SSR have been carried out as per the agenda submitted to DST FIST, during December 2022, such as organizing workshops on equipment training, offering equipment utility service to analyse samples received from industries and awareness programmes on Anti-Microbial Resistance (AMR) to college students.

The ratio of sanctioned amount is as follows:

75:25 Ratio

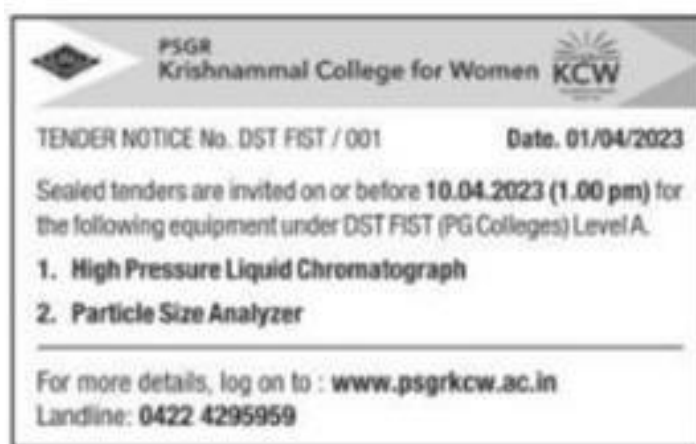
75%	25%
DST FIST Fund	Management Fund
> Equipment - Rs. 37,50,000/-	> Equipment - Rs. 12,50,000/-
> SSR - Rs. 80,000/-	> SSR - Rs. 20,000/-
> IRD - Rs. 80,000/-	> IRD - Rs. 20,000/-
> Maintenance - Rs. 3,75,000/-	> Maintenance - Rs. 1,25,000/-
Total - Rs. 42,85,000/-	Total - Rs. 14,15,000/-

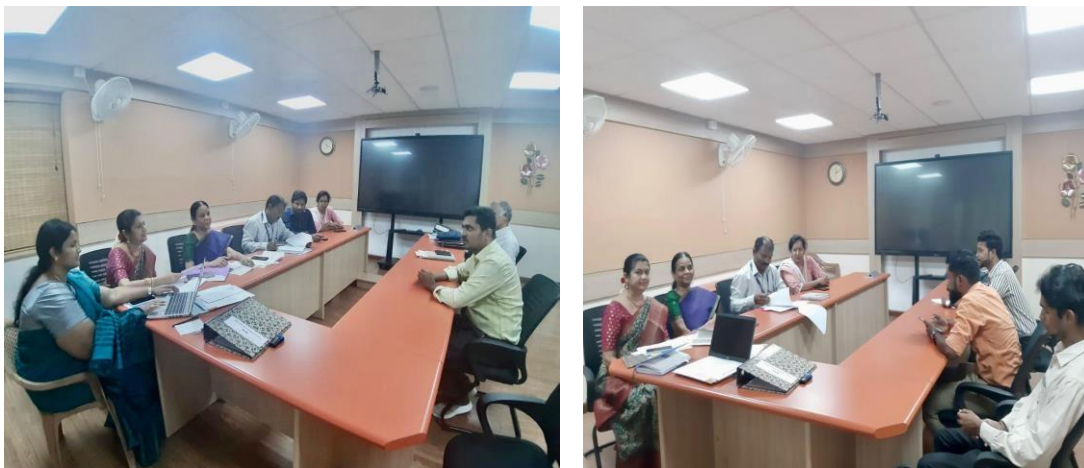
The detailed report, under individual heads is presented herewith.

EQUIPMENT

Equipment Purchase and Installation

An amount of **Rs.37,50,000/-** had been released by DST FIST during March 2023. Following, an advertisement with reference to call for tenders was publicized in the daily newspaper. Technical bids were received from the dealers for the purchase of HPLC and NPTA equipment. Advertisement copy, technical bids release and tender meeting photographs are included for reference.

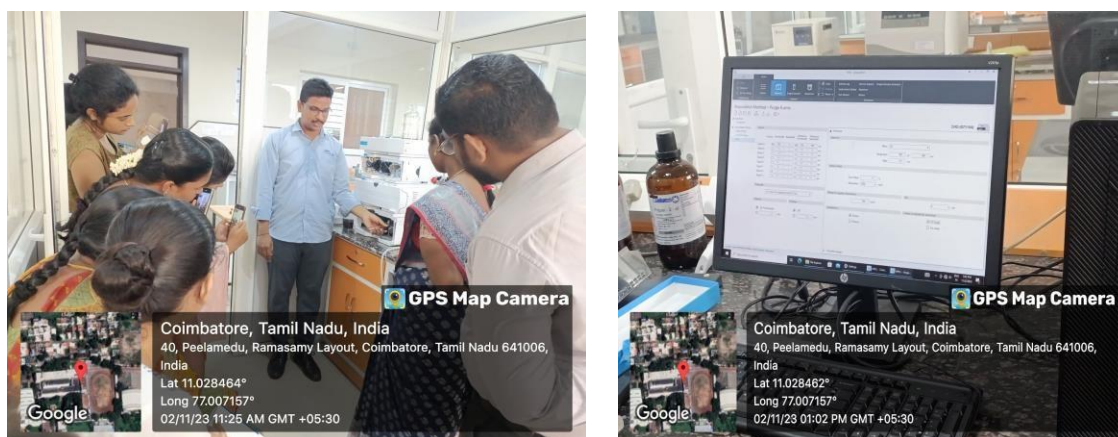




Technical bid opening and technical evaluation meetings

HPLC TRAINING PROGRAMME

A one-day FDP on, “Empowering Educators with Industrial Insights for Advanced HPLC Training”, was conducted for the science faculty members of KCW on 02.11.2023. The flyer and photos with reference to the event are shown below



EXECUTION OF THE PROJECT

A series of monthly meetings were held to discuss the agendas and varied planned activities under different sub-heads of the project. Regular meetings were conducted regarding the planning and execution of IRD and SSR activities.

Minutes of Meetings

The meeting conducted on **06.07.2023** at Dean, Student Affairs Cabin @ 11.00 a.m discussed the execution of SSR (Scientific Social Responsibility) activities. An internal review committee was framed with constituent members as: Dean- Student Affairs, DST-FIST Coordinators and PIG (Project Implementation Group) members. Mrs. Vasandha, Dean, Student Affairs, Dr. N. Muthulakshmi Andal & Mrs. S. Subanya, DST –FIST Coordinators, and department level coordinators (Physics, Chemistry, Botany, Zoology, and Biotechnology) were the team members who attended the scheduled meetings regularly. The team members were addressed about the year wise target of SSR activities pertaining to AMR (Anti-Microbial Resistance) awareness, by the DST FIST coordinators. Action plan regarding the conduct of seminars/webinars, to promote AMR cognizance for the first phase through the created video contents (English and native languages) on AMR was discussed. Each department was assigned to select student ambassadors from science departments of KCW, offer the consciousness about AMR and target four colleges in and around Coimbatore, to screen videos on AMR, distribute pamphlets on AMR alertness, aiming 10,000 student beneficiaries. In this regard, ways and means of organizing social media campaigns and generating feedback responses were planned.

The following points were discussed regarding the SSR activities, during the meeting held on **07.08.2023** at Dean, Student Affairs Cabin (11.00 a.m). Awareness regarding AMR has to be promoted through videos during in-campus events organized by science departments. Zoology department student ambassadors have to offer guidance (regarding AMR) for the identified students of science departments.

The meeting conducted on **12.10.2023** at Chemistry Department Library @ 1.00 p.m focussed on the follow-up of execution of SSR activities, viz screening of AMR videos via seminars and webinars. The ponderings made regarding the SSR activities include: Receiving consent letter/mail/acknowledgement from the colleges being visited by the visiting KCW science departments, followed by promoting responsiveness through AMR videos during in-campus events followed by detailed report submission. Visits to other colleges are to be planned periodically; phased out as 4 or more colleges per science department, targeting 2000 beneficiaries, with sample feedback collection and receipt of due acknowledgement from competent authorities stating the number of beneficiaries. The department level co-ordinators have to mail the reports on SSR - AMR activities (consent letter, program card, geotag photos

and consolidated feedback) after each programme to (dstfist2022-27@psgrkcw.ac.in). Further, deliberations on the execution of IRD activities were made. The departments have to identify 2 industries and mail the details before 30.10.2023 so as to utilize the equipment (HPLC & PSA) service by the chosen industries. A minimum of 4 samples (2 per equipment) have to be mobilized from the identified industries to record their samples" testing. Any specific requirement for sample analyses such as HPLC standards, solvents have to be intimated well in advance to the DST FIST coordinators to facilitate the purchase of the same.

The meeting organized on **06.12.2023** at Dean, Student Affairs Cabin by 12.45 p.m discussed the following: Research publications by the science departments" faculty members with due DST FIST acknowledgement for the period between June -December 2023; number of industries identified to procure samples for completing IRD tasks; number of seminars/webinars completed on AMR and the beneficiary numbers as a part of SSR errands.

In the meeting held on **28.12.2023** at Dean mam"s Cabin @ 12.40 pm the DST FIST coordinators, department level presented the status of SSR and IRD activities as, status of Beneficiaries for AMR awareness (department wise): Physics – 1600, Chemistry – 2100, Botany -200, Zoology – 2100 and Biotechnology-730. The department coordinators were insisted to exercise the targets of pending college visits before January 2024. and make an impact assessment on AMR awareness, targeting the students who participated in the programmes. An overview of the planned workshop on, „Handling of HPLC and NPTA“, during February 2024 was presented, where the discussions made thereafter included: identifying speakers from the equipment suppliers (Agilent and Horiba), mobilizing faculty from other institutions and industry persons (20 members) and providing participation certificates. In general, discussions were made on purchase of chemicals, glasswares and HPLC filters under specified heads.

WORKSHOP

A two-day workshop on, “Equipment Handling (HPLC & NPTA)”, was organized on 06.02.2024 & 07.02.2024 to benefit the science faculty members of other institutions and industries, residing in and around Coimbatore, so as to create an exposure with respect to utilizing the services of the installed equipment.

INDUSTRIAL RESEARCH AND DEVELOPMENT (IRD)

AS per the first-year plan of executing IRD activities, equipment service was offered to industries. In this regard, a total of 22 samples were received from 5 industries and analysed using HPLC and NPTA equipment.

A one-day HPLC retraining programme was organized for science faculty members on 15.07.2024, to analyze the industrial samples, the geotag photos are enclosed.



SCIENTIFIC SOCIAL RESPONSIBILITIES (SSR)

In view of the first-year plan of executing SSR activities, awareness regarding Anti-Microbial Resistance (AMR) had been chosen as the emerging topic and the need of interest. In this regard, domain specific student ambassadors of KCW were identified and trained to create awareness amongst the college students as the first phase of the action plan. Based on this objective, phased execution of the agenda had been planned periodically, wherein a total of 11,300 college students were benefited by conducting varied workshops both as on campus and off campus.

Apart from regular meetings, the smooth execution and functioning of DST FIST (PG Colleges) Level A project was ensured by the institution authorities, through periodic half-yearly and annual review meetings. The minutes are as follows:

Half Yearly Review Meeting – Minutes

Half- yearly institutional review meeting was held on **22.12.2023** at Board Room II @ 11.00 a.m, to assess the progress of DST FIST PG Colleges (Level A) Project, wherein the Project coordinators made a PowerPoint presentation, briefing about the total amount sanctioned, budget plan for 2023-2024, expenditure incurred, unspent balance, equipment installation, training, activities carried out under various heads, publication details acknowledging DST FIST, outcomes and future plans. The review committee members (Secretary, Principal and Research Dean) appreciated the progressive approach of the project and put forth the following feedback and suggestions.

1. Associated Departments shall make use of the budget allotted under Community Oriented Programme for the conduct of AMR seminars under SSR activities
2. Five new industries have to be identified by the associated departments, every year until the completion of the project tenure, for analysing the samples pertaining to HPLC and NPTA equipment, as a part of IRD activities
3. Acknowledging the support of DST FIST in the published articles by all the Science faculty members (as per the circulated format) is insisted as a strong inclusive component of the Project.
4. New faculty members have to be offered training on HPLC and NPTA to strengthen the wider use of the installed equipment

Annual Review Meeting – Minutes

The institutional review meeting was held on 03.07.2024 at Board Room II @ 12.15 p.m , to assess the achievement of first year target of DST FIST PG Colleges (Level A) Project, Project coordinators briefed about the award letter, budget plan for 2023-2024, equipment installation, training, activities carried out under various heads, Utilization certificate and DST FIST acknowledged publications. The review committee members congratulated the coordinators on the successful completion of first year activities of the project and put forth the suggestions as,

1. Two PG students effectively utilize NPTA equipment (Physics, Chemistry, Biotechnology departments) and HPLC equipment (Botany, Zoology, Biotechnology departments) as a part of their final semester project, followed by publishing the work as a research article with due FIST acknowledgement in future. In this regard, a tentative title and work plan has to be mailed by the concerned department FIST coordinators to Principal's mail id before 30th July 2024, after discussing with department heads.
2. Publication of a minimum 20 original research articles by five science departments in Scopus indexed journals with proper acknowledgement of DST FIST PG Colleges (Level A) is insisted as a strong inclusive component of the Project.

OUTCOME SUMMARY:

As a part of execution of DST FIST activities, two equipment as per the award letter (HPLC and NPTA) were procured and installed. An insightful training, followed by retraining for new faculty were offered for science stream members of KCW. IRD and SSR activities were planned, executed as per the agendas submitted to DST FIST. **41** articles were published by science faculty members with due DST FIST acknowledgement. Utilization Certificate and the statement of Expenditures for the recurring and non-recurring grants for the financial year 2023-2024 has been uploaded in the portal.