

KONGUANDU ARTS AND SCIENCE COLLEGE
(Autonomous)
Coimbatore-641029



Realms of Research
&
Management Support Service

The Realms of Research encourages the faculty members and students to have elevated research aspects. The main objective of the Realms of Research is to promote research culture among faculty and students. A research scholars' forum helps the researchers to exchange their ideas while doing research and promote interdisciplinary research.

Research Committee headed by Dean of Research and Development which comprises all the heads of the research departments motivate the students and the faculty members to pursue their research in their desired field of research

1. Research Policy:

Policy:

The college has envisaged an elaborate and vibrant research policy, which will imbibe a strong research culture and will integrate it with academics at both student and faculty levels.

The salient features of the policy are given below:

- The staff members are encouraged to submit proposals for funding agencies of both government and non-government sectors like UGC, DST, MoEF, DBT, CSIR, TNSCST etc.
- Staff members and scholars shall be motivated to publish their articles in SCI and SCIE quality journals. Incentives will be given for publications and travel grant will also be provided to present their papers in both national and international conferences.
- Seminars / Conferences/ Workshops will be conducted by inviting eminent scientists and experts from abroad and within the country.
- Periodic research meetings for scholars will be conducted to discuss the recent development in the respective discipline to update knowledge.
- The Management believes in the concept of lab to land and shall encourage the researchers to practice this.
- Intellectual Property Rights (IPR) cell has been constituted to promote and enhance the research innovations and intellectual assets.

Code of Ethics shall be formulated to check Malpractices and Plagiarism in Research:

The institution is committed to produce and promote research of the highest quality, devoid of plagiarism of any sort and other unethical practices while trying to allow academic freedom and innovative thinking. A Publication Ethics Committee (PEC) has been constituted to find out the level of plagiarism.

The Committee Comprises

- Principal
- Dean, Research and Development

- Co-Ordinator, IQAC
- HoD of Respective Departments
- Research guides

Based on the recommendations of Plagiarism Curb Committee, the PEC will authenticate the genuineness of the data.

After getting offered from college Governing Body 'URKUND' software has been purchased and installed it in the Library and Information Centre to check plagiarism.

Consultancy:

Consultancy services are offered through the expertise gained by the faculty members. The revenue generated through this programme is shared in the ratio of 60:40 for institution and concerned staff members respectively.

Memorandum of Understanding:

Any tie-up / MoU signed should have the prior concurrence and approval of the management. Collaborations with various International and National Institutes / Universities shall be proactively followed for the purpose of research and outreach activities.

Faculty members from different departments, collaborating with various National and International level research groups located at different parts of the country will be given assistance and other required facilities.

Linkages:

Linkages shall be established between research strategies and activities at institutional and programme level to enhance knowledge sharing and to promote the research activities at National and International level to generate and to score novel ideas and apply for innovation and value creation

2. Seed Money:

Our Institution has a mission of fostering the promotion of higher education and research along with teaching. The induction of research centers encourages the research activities of the students, faculty members and research scholars. Research and extension activities are the integral components of the curricular and co-curricular activities of the college. Through these research activities, the institution inculcates the society-centric concepts and the welfare of the individual and society in the minds of the learners. Seed money is a flagship venture conceived and primarily hosted for nurturing indigenous ideas and technologies to build an innovation driven ecosystem in a relatively hassle free manner and to open up new avenues for research. In order to achieve these priorities and goals in addition to financial support received from various funding agencies, the college management is very intended to support

new lines of research in terms of providing capital assistance to establish facilities and make them available to the faculty members. A sizable amount in this account is contributed for exploring a wide range of activities or programmes like innovations, startups, travel allowances to participate and present papers in national and international symposium and conferences. The key component includes incentives to faculty members for their quality publications in reputed journals, research projects and for organizing seminars and conferences by getting financial assistance from various funding agencies.

The faculty members as research guides for M.Phil and Ph.D programmes are provided with handsome incentives to enhance and encourage them in their domain field of research. To establish certain strategic initiatives, bio-farming units like vermicompost, aquaculture, and production of single cell protein by culturing the microalgae like *Spirulina*, mushroom cultivation which include both mushroom biomass and spawn production in the college premises. Seed money is very generously disbursed by the college management for handholding assistance to the faculty members for extending and accelerating research, linking the progress milestones from lab to land initiatives. They were strengthened to make research accessible for the betterment and upliftment of societal needs. Planning and implementation for hardening experiment after the successful *in vitro* regeneration of plantlets by employing tissue culture technology separate mist chambers with all inert facilities is also constructed using seed money. For the manufacturing of value added products like biscuits and sweets from minor millets, the seed money is being used.

The beneficiaries prove to be the best in the induction of research activities and the promotion of research skills in students. The college has received Rs. 27, 06, 000 /- for projects from UGC and other related funding Agencies. These ventures supplement the funding requirements of the research scholars to have sufficient research credits to their individual contributions and the promotion of research activities. Seed money for the conduct of seminars and conferences from the college also nurtures the skills of the research scholars and teachers of our Institution and other participant Institutions to cultivate the culture of research in their fields of study. The Institutions' vision of developing the personality of the students in the prospective of future becomes viable through this inevitable practice.

3. International Fellowship:

The constant support of the management and Research Committee of the college facilitates the research programmes for their competent outcome for regional and national development. The insistence and motivation for the faculty members to apply for international

fellowships for the consistent development of their knowledge in research encourages the advanced research activities. These practices of research benefit the development of the researcher as well as the entire department faculty members and students.

The following outcome is expected through this programme.

- To know the recent development in the concerned subjects.
- To update their knowledge in the respective field of research.
- To make transfer of cost effective technology to produce goods and products.
- To apply for more startups and projects in the thrust areas by which the common public benefit.

4. Research Projects:

Faculty members of our college are actively involved in research. Many have received grants for major and minor research projects from various funding agencies like UGC, DST, TNSCST, Inter University Accelerator Centre and Indian Council of Medical Research.

Details of Grants Received from various funding Agencies (June 2022- May 2023)

Funding Agencies	Amount Received (in Rs.)
Indian Council of Philosophical Research (ICPR)	20,000/-
Tamil Nadu State Council For Science And Technology	22,500
Indian Council for Social Science Research	3,20,000
DBT - Star College Scheme	14,00,000
TOTAL	17,62,500/-

MAJOR/MINORPROJECTS

During the Period

Projects	Major/Minor	Students Project	Periodic Lecture	Amount
Completed	1	3	-	Rs 42, 500/-
Ongoing	7	-	1	Rs 30, 13, 000/-
Applied	42	-	-	Rs. 4,84,45,871/-

5. PATENTS

12 Patents have been published and 9 have been granted during the academic year 2022-2023.

6. MEMORANDUM OF UNDERSTANDING

The following MoUs' signed by various departments of our college during the period of report

- Department of Computer Science (A) with Akkam Industrial Training And Research Institute, Coimbatore.
- Dr. S.R. Madhan Shanker with Dr. P. Rajkumar Secretary cum Managing Trustee Green Globe Trust Nalla Thaneer Thottam, Ganapathy, Coimbatore
- Dr. S.R. MadhanShankar with Dr A Sindhu Head-Technical Head & R&D, The Arya Vaidhya Pharmacy (Coimbatore)
- Dr. S.R. Madhan Shankar with Krishnashree Achuthan , Dean, Amrita Vishwa Vidhyapeetham,Coimbatore
- Department of Biotechnology with SASH Medical Coding Academy, Coimbatore
- Dr.G.Youveniya with CarpeDiem Skills, Ms.Apporvalakshmi & Mr.RajNimlesh
- Kongunadu Arts and Science College with KIAS Academy Foundation in Competitive Exams.
- Kongunadu Arts and Science College with 1Corporate Guru, Coimbatore
- Kongunadu Arts and Science College with Entrepreneurship development and Innovation Institute, Chennai and NVS Plasters, Coimbatore.

Memorandum of Agreement (MOA)

- KASC and Salem snacks box entered in to an MOA, wherein the Institution provided necessary space and Infrastructure to setup a stall by the three young Entrepreneurs who are the Alumni of our Institution on 01.08.2022.
- KASC and RASA Management and Recruitment consultancy (Pvt) Ltd entered in to an MOA on 20.02.2023 to organize and integrate placement services for Japanese Language Coaching.

7. Incubation Centre:

Institutions of higher education have the prime responsibility to create and share knowledge disseminating the benefits of research and development. Establishing a conducive environment is a paramount in executing the task and Kongunadu Arts and Science College, Coimbatore has allocated a considerable amount of its resources to establish and maintain an ecosystem for innovations including Incubation centre and other initiatives for creation and transfer of knowledge. The highlight of the commitment is the establishment of KASC i-hub, a centre for research endeavours and exchange. The institution also carries out the responsibility in the following ways:

- An exclusive Research Forum is formulated for the promotion of interdisciplinary research trends and research culture.
- Research aspect promotes for the successful contributions in Lab to Land initiatives.
- Projects are incorporated in UG & PG curriculum.
- Research Committee periodically monitors the research activities of the college.
- The college has developed a successful centre for imparting Research by offering 13 M.Phil and 13 Ph.D programmes in different disciplines.
- The research scholars' meeting provides a space for discussions on the thrust areas of Research.
- An array of research activities including seminars, conferences, symposiums, workshops, hands-on training etc., on relevant research topics throughout the year.
- KASC i-Hub organises and monitors research activities including collaborative ventures, externally and internally funded research projects, and networking departments and organisations in conducting efficient research.
- KASC i-Hub bridges the gap between industrialists, academicians from various industries, knowledge sharing, mentoring and nurturing entrepreneurship skills of the passionate people.
- KASC has established Ministry of HRD's Institution Innovation Council on 21st November 2018.
- About fourteen start-ups have been incubated in KASC i-Hub to promote innovation in the institution through multitudinous modes.
- Kongunadu Research Journal, a multidisciplinary biannual publication by the institution, offers a platform for faculty members, research scholars, and students from renowned national and international institutions to publish their research papers.
- Faculty members are encouraged to pursue research actively as part of the career enhancement scheme.

- Publication of research papers, presentation and participation in seminars and conferences (local, national, and international) by faculty members and students are supported and acknowledged by the institution.
- The institution supports budding research scholars by providing adequate guidance from experienced faculty members, financial concessions, comprehensive infrastructure - the library, laboratories, access to online resources, etc.
- The college has signed MOUs with academic institutions, research centres and industries to facilitate collaborative research efforts.
- An IPR centre has been established to create awareness, and to guide faculty members and students in the process of obtaining patents.

8. Ph.D Details:

The college is giving more importance for research programmes for community development and made remarkable achievements. So far thirteen departments are upgraded as research departments which offer Ph.D programmes. Faculty members having expertise in different discipline are serving as recognized research supervisors.

9. Paper Publications:

Publication of significant number of research articles in various reputed national and international journals is one of the major achievements of Kongunadu Arts and Science College. In the year 2022-2023, 260 articles were published in the various peer reviewed journals.

10. Bibliometrics of the Publications:

- **Total number of Citations in Scopus** **4500**
- **Research papers published in Scopus journals** **106**
- **Research papers published in Web of Science** **72**
- **Total number publications in UGC Care list** **44**
- **Institutional Scopus h-index** **58**

11. Collaborations:

The institution has established collaborative activities to strengthen the efforts of research culture among the faculty members and students. The enriched prototypes of research collaboration enhanced the sense of inter-disciplinary and intra-disciplinary research ventures at national and international level. Research forum paves way for the enrichment of research collaborations with universities, institutions, multinational companies, industries and experts. The passionate research contributions have been promoted the high aspects of research with the contributory and participatory collaborations. The outcome has resulted with the increase in the number of publications with high impact research journals and research projects.

The following Research Collaborations made by the various departments of our college during the period of report are detailed below:

1. Dr. M. Santhoshkumar, Assistant Professor, Department of Biochemistry (UG) made Collaboration with Dr. P.S. Velmurugan Department of Commerce, Central University of Tamil Nadu, Thiruvavur for October 2021- September 2023 which is Funded by MGNCRE.
2. Dr. K. Sowndhararajan Assistant Professor, Department of Botany made Collaboration with Prof. Songmun Kim, Department of Biological Environment, College of Agriculture and Life Sciences, Kangwon National University, Chuncheon, South Korea for 2 years.
3. Dr. K. Sowndhararajan Assistant Professor, Department of Botany made Collaboration with Dr. Ramesh Kumar Santhanam Faculty of Science and Environment, for 1 year.
4. Dr. G. Dhandapani, Assistant Professor, Department of Botany made Collaboration with Dr. Krishnan Vasanth Department of Botany, Bharathiar University, Coimbatore since 2019.
5. Dr. G. Dhandapani, Assistant Professor, Department of Botany made Collaboration with Dr. Amit Roy Assistant Professor & Head, Forest Molecular Entomology Lab, Czech University of Life Sciences, Prague Since January, 2021.
6. Dr. G. Dhandapani, Assistant Professor, Department of Botany made Collaboration with Dr. M. Amutha Senior Scientist, ICAR-Central Institute of Cotton Research (CICR), Regional Station Coimbatore, Since November, 2021.
7. Dr. S. Rajeshkumar, Assistant Professor, Department of Zoology made Collaboration with Dr. P Kumaravadivelu, Chief Scientist ICAR, KVK, Coimbatore from Nov, 2021.
8. Dr. S. Rajeshkumar, Assistant Professor, Department of Zoology made Collaboration with Mr.

K.ManikandakalidasMarutham Bee Form, Nallampalayam, Coimbatore from Nov, 2021

9. Dr. J. Anitha, Assistant Professor, Department of Biochemistry (PG) made Collaboration with Dr. T. Premkumar Research professor, The University College, Department of Chemistry, Sungkyunkwan University, Suwon, Gyeonggi 16419, Republic of Korea for 1 year
10. Dr. K. Kalpanadevi, Associate Professor and Head, Department of Chemistry (PG) made Collaboration with Prof. K. Pandian, Department of Inorganic Chemistry, University of Madras, Guindy campus, Chennai for 3 years
11. Dr. A. Amuthavalli, Assistant Professor, Department of Chemistry (PG) made Collaboration with Dr. P. Shanmugavelan School of Science, Tamil Nadu Open University, Saidapet, Chennai for 3 years.
12. Dr.Narendhirakannan R.T Assistant Professor, Department of Biochemistry made Collaboration with Dr.Sinouvassane Djearmane, UniversitiTunku Abdul Rahman (UTAR), Kampar Campus, Malaysia for 1 year.
13. Dr.N.Mohanapriya, Assistant Professor, Department of Mathematics made Collaboration with Dr. Raul M.Falcon, Department Applied Mathematics I, School of Architecture, Universidad de Sevilla, Spain for 6 months.
14. Dr.N.Mohanapriya, Assistant Professor, Department of Mathematics made Collaboration with Dr.Dafik, CGANT, University of Jember, Indonesia for 6 months.
15. Dr.N.Mohanapriya, Assistant Professor, Department of Mathematics made Collaboration with Dr.Ika Hesti Agustin, University of Jember, Indonesia for 6 months.
16. Dr B Vishnupriya, Assistant Professor, Department of Biotechnology made Collaboration with Dr Vinay Kumar P V, Scientist C, CMTI, Bangalore for 6 months.

11. Linkages:

The linkages have been the parameters for the enhancement of innovative practices of the institutions. The institution establishes hands on trainings, workshops and internship programmes. The current trends of education demand for the exposure of students beyond the curriculum. Practical exposure enriches the intellectual capacity of the students which certainly equips the students in state, national and global contexts. The building of research capacity links the individual to the society in more contributing way. The college promotes national and international linkages with Colleges, Universities and Industries. The industry linkages provide a wide forum for the conduct of research activities in more appropriate way.

12.International Students and Faculty Exchange Programmes

- Dr. K. Sowndhararajan, Assistant Professor, Department of Botany, Kongunadu Arts and Science College (Autonomous), Coimbatore has been visited from 07.07.2022 to 18.07.2022 laboratory at Department of Biological Environment, Kangwon National university, Chuncheon, South Korea
- Dr S R Madhan Shankar, Dean Academics, Head of PG and Research Department of Biotechnology have completed an Exchange Program as Visiting Professor from 31.01.2023 to 03.03.2023 at the Faculty of Agricultural Technology, Universitas Brawijaya, Indonesia. He delivered guest lectures in various topics of Environmental Chemistry, Nano Biotechnology, Food Science and Agricultural Biotechnology.
- Prof Dr Mohamad Nurcholis and Prof Dr Wahyunanto Nugroho, Department of Biotechnology, Faculty of Agricultural Technology, Universitas Brawijaya, Indonesia visited as Visiting Professor in PG and Research Department of Biotechnology, Kongunadu Arts and Science College, Coimbatore from 08.03.2023 to 03.04.2023. They delivered 148 lectures to both UG and PG Students on Microbiology, Molecular Biology, Bioprocess Technology and Agricultural Biotechnology.
- Dr. K. Sowndhararajan, Assistant Professor, Department of Botany, Kongunadu Arts and Science College (Autonomous), Coimbatore has been invited for academic research to Kangwon National University, Chuncheon, Republic of Korea to conduct various experiments on perfumery materials effect on human encephalogram from 08.05.2023 to 05.06.2023

13.Research Page Website Link:

<https://kongunaducollege.ac.in/index.php/research-projects>

<https://kongunaducollege.ac.in/publications>

14. Dr. Aruchami Research Foundation:

Vision : To enhance research quality and disseminate the knowledge.

Objective: To motivate the researchers by providing help and support to do their research in better way.

<https://kongunaducollege.ac.in/research-foundation>

15. Kongunadu Research Journal:

Kongunadu Research Journal (KRJ) (ISSN No.: 2349-2694) aims to publish high-quality papers with a specific focus on learning within their specified focus that are accessible and of interest to educators, researchers and academicians. It is a scholarly online, open access, peer-reviewed, interdisciplinary journal focusing on theories, methods and applications in Mathematics, Biology, Science, Technology and other related fields. KRJ invites authors to submit original and unpublished work that communicates current research on these fields.

<https://kongunaducollege.ac.in/research-journal>

16. The Indian Science Congress Association (ISCA):

The Indian Science Congress Association (ISCA) owes its origin to the foresight and initiative of two British Chemists, Professor J.L. Simonsen and Professor P.S. MacMahon. It occurred to them that scientific research in India might be stimulated if an annual meeting of research workers somewhat on the lines of the British Association for the Advancement of Science could be arranged. To achieve this goal, regional chapters for ISCA have been established. Thus at the initiative of Dr. M. Aruchami, then Secretary and Director of Kongunadu Arts and Science College, the Coimbatore Chapter was started in the year, 2008 and he was appointed as Convener of this Chapter. It was inaugurated by *His Excellency, Hon'ble Dr. A.P.J. Abdul Kalam, Former President of India on 03.05.2008 in Kongunadu Arts and Science College premises. Coimbatore Chapter of ISCA* takes efforts to popularize science and foster a scientific temperament among the scientists and researchers by involving them in a series of workshops /seminars /conferences /lectures organized every year, since its inception.

The Coimbatore Chapter has been selected as one among the three chapters all over the nation for ISCA Centenary Celebrations in the year, 2012. Under this credit, the chapter successfully organized and conducted the Southern Regional Science Conference on 'Science

for Shaping the Future of India' on 15th and 16th December 2012 which was held in the premises of Kongunadu Arts and Science College, Coimbatore in a grand manner. Most eminent scientists and scholars took part in the deliberations of the conference. ISCA, Coimbatore Chapter continues its journey in bridging the gap between science and the common man.

ISCA Activities:

<https://kongunaducollege.ac.in/62/isca-activities>