

Research @ ANDC

ANDC's commitment to best research practices is an important contributor that enhances community understanding of the unique role research plays in meeting global challenges in higher education.



One of the greatest strengths of ANDC is the volume and scale of exciting research carried out by its faculty members. The enthusiasm and hard work demonstrated by faculty coupled with exemplary support of the college administration has created a culture that displays seamless integration of teaching and research. Since the last 7-8 years, faculty in the college has been successful in garnering financial support for research from government funding agencies including UGC, DST, DBT, MoEF, ICMR etc. The projects typically of 2-3 years duration help develop state-of-the-art laboratories in the college besides providing students with an exposure to cutting-edge technology in frontier areas of research. The laboratories serve to nurture curiosity for research in the minds of the students wherein some get inspired to pursue doctoral studies by registering with college faculty. The college does ensure that Principal Investigators get wholehearted support – both infrastructural as well as procedural. Faculty can realize their dreams and aspirations with publications in International journals of repute and by being in-sync with the latest in research worldwide.

Commitment towards promoting research as an ingrained culture is evident from the fact that since inception, the College has had 13 major extramurally funded research projects completed and currently five major projects are in various states of progress. The quality of research work done is a testament by

way of a large number of publications every year. Since 1991, faculty has to its credit 271 research papers published in peer-reviewed International and National journals. It is a matter of pride for the College that five of its faculty members have been recognised for independent research guidance for Ph.D. by University of Delhi. Currently, five research scholars are carrying out doctoral studies in the college. In fact, one Ph.D. student has successfully defended her thesis and another is in final stages of submission.

Thus far, research grant of about Rs. 2.5 crores has been received in the college and a total of nine hi-tech research laboratories have been established to pursue advanced scientific research. These include; Biomedical Science Project Laboratory, Chemistry Project Laboratory, Ciliate Biology Laboratory, Cluster Laboratory, Inorganic Chemistry Research Laboratory, Insect Pest & Vector Laboratory, Instrumentation Laboratory (Physical Sciences), Instrumentation Laboratory (Life Sciences) and Microbial Technology Laboratory.

The college envisions bringing research into the classroom to augment regular teaching-learning process. Promoting active participation by students in research projects as a major co-curricular activity, since the last seven years has been an exclusive feature in ANDC. Students and faculty share an adventure of discovery that keeps the laboratories abuzz with relentless and engaging research throughout the year. Some of the endeavours that have helped college build attributes and indoctrinate culture of research amongst the stakeholders are enumerated below.



A. COMPLETED RESEARCH PROJECTS

S. NO.	INVESTIGATOR(S) / DEPARTMENT	DETAILS OF THE PROJECT
1.	Dr. Sunita Hooda (Chemistry)	Characterization and sequence determination of 4-vinyl pyridine copolymers. UGC (1998 – 2001), 01.09 L
2.	Dr. Charu Khosla Gupta (Botany)	Fertilization in podostemaceae: an unresolved problem. DST (2003 – 2006), 10.0 L
3.	Dr. Saumya Saxena (Botany)	Eco-physiological and socio-economic studies on two-selected medicinally important herbs from NCT Delhi region. DST (2004 – 2007), 17.85 L
3.	Dr. Sunita Hooda (Chemistry)	Synthesis and characterization of 2-hydroxyethyl-methacrylate copolymers. DST (2004 – 2007), 09.12 L
4.	Dr. Savithri Singh (Principal)	Development of open and distance learning courses for rural communities in an inclusive manner using an e-authoring, knowledge repository & learning management system platforms. INBAR (2006 – 2007), 08.25 L
5.	Dr. Monisha Khanna (Zoology)	Isolation and characterization of actinomycetes & analysis of their antibacterial potential. MoEF (2006 – 2007), 09.92 L
6.	Dr. Urmi Bajpai (Biomedical Science)	A virtual centre of excellence (CoE) for coordinated research on 'tuberculosis: development of alternate strategies' (multi-institutional project). DBT (2006 – 2008), 24.85 L
7.	Dr. Ram Kumar (Zoology)	Evaluation of the potential of cyclopoid copepod as an effective bio-control agent for the control of disease vectors. ICMR (2008 – 2011), 16.00 L
8.	Dr. Vandana Uberoi, Dr. Sunita Hooda, Dr. Geetu Gambhir (Chemistry)	Fabrication of new polymer sensors for environmental protection. UGC (2008 – 2011), 07.57 L
9.	Dr. Amit Garg, Mr. Vishal Dhingra (Electronics) Dr. Savithri Singh (Principal)	Investigating science hands-on to promote innovation & research at undergraduate level. UGC (2009 – 2012), 10.54 L
10.	Dr. Sarita Kumar (Zoology)	Larvicidal properties of certain botanicals against mosquito larvae – an alternative for mosquito control. UGC (2009 – 2012), 10.96 L
11.	Dr. Arijit Chowdhuri (Physics) (Co-PI)	Development of magnetron source for plasma assisted growth of metal oxide thin films for sensor application. DST (2009 – 2012), 24.72 L
12.	Dr. Shallu Sachdeva (Chemistry) (Co-PI)	One pot and solvent-less synthesis of metalloporphyrins – a green chemistry approach. UGC (2009 – 2012), 09.32 L
13.	Dr. Urmi Bajpai (Biomedical Science)	Cloning and Expression of <i>Mycobacterium tuberculosis</i> genes. CSIR – OSDD (2010 – 2012), 20.0 L

B. ON-GOING RESEARCH PROJECTS

S. NO.	INVESTIGATOR(S) / DEPARTMENT	DETAILS OF THE PROJECT
1.	Dr. Vikrant Kumar (Chemistry)	Metal complexes as anti-cancer agents: Synthesis, characterization & their tumerogenesis evaluation. DBT (2010 – 2013), 16.11 L
2.	Dr. Seema Makhija, Dr. Ravi Toteja (Zoology)	Stress-induced induction of metallothioneins (MTs) gene in ciliates & its use as biomarker to assess environmental pollution. UGC (2012 – 2015), 09.42 L
3.	Dr. Seema Makhija, Dr. Ravi Toteja (Zoology)	A study on heavy metal-induced stress response at cellular and molecular level in ciliates for the development of a potential biosensor. DST (2012 – 2015), 28.0 L
4.	Dr. Monisha Khanna (Zoology)	Extraction and activity analyses of extracellular enzymes from soil actinomycetes. UGC (2012 – 2015), 9.72 L
5.	Dr. Urmi Bajpai (Biomedical Science)	<i>Mtb Mur</i> pathway enzymes: Potential candidates for multi-targeted therapy. CSIR – OSDD (2013 – 2015), 30.38 L

