

Dr. B. R. Ambedkar Center for Biomedical Research

University of Delhi, Delhi 110007

The Center

Dr. B.R. Ambedkar Center for Biomedical Research (ACBR) came into existence in March 1991 with the foundation stone laid by the then Hon'ble Prime Minister of India Sh. Chandra Shekharji, on the



occasion of the birth centenary of Baba Saheb Dr. B.R. Ambedkar. The mandate of the Centre is high quality postgraduate education and research in Biomedical Sciences. The institute also has provision for doctoral and postdoctoral training to young scientists at the start of their research career to gain the skills and insights in frontier areas of biomedical sciences. During the last two decades the center has grown to have strength of 220 comprising faculties, students, Ph.D scholars and supporting staff.

The Faculty

ACBR has core faculty in the field of Chemistry and Biology, thus facilitating research and teaching in interdisciplinary areas in Biomedical Sciences. The areas of research pursued by the faculty encompasses molecular pathology of infectious diseases, Molecular Oncology, Gene Regulation, Molecular Genetics, Medicinal Chemistry and Natural Product Chemistry, Drug Discovery and Drug Designing, Bioinformatics and Molecular Microbiology and Immunology. The research currently underway in each of the laboratories at ACBR Neuropharmaceutical chemistry, Protein chemistry and Genetics is outlined under the faculty profile in subsequent pages.

Collaborations

To promote scientific discourse among investigators and students, ACBR has developed active collaboration with several neighboring Institutes such as; Institute of Genomic and Integrative Biology (CSIR), Institute of Nuclear Medicine and Allied Sciences (INMAS), Defense Institute of Physiology and Allied Sciences (DIPAS) ,V.P. Chest Institute (VPCI), Institute of Cytology & Preventive Oncology (ICMR) and All India Institute of Medical Science(AIIMS) including other science departments of the University and other research Institutes and Medical Organizations in

Delhi and through these collaborations all are mutually benefited while maximizing the national resources.

The scientists and academicians from these institutions actively participated in teaching activities and/ or in formulation of courses at the time of syllabus revision in 2009. In fact, one such course viz, Radiation Biology is being handled by faculty from INMAS since several years. The Center has benefitted very much by the inputs especially in the subjects for which there were/are no core faculty at the Center, like radiation biology, pharmacology, toxicology, biostatistics and biomathematics and clinical research in addition to hands-on-training in laboratory Medical techniques.

Research Facilities at ACBR

The ACBR is fully equipped with latest state of art scientific instruments which include 400 mHz NMR (Bruker), FACS (BD Biosciences), FT-IR, Circular Dichroism Spectrophotometer (CD), HPLC, GLC, UV-Vis-Spectrophotometers, LCMS-Qstar XL (Applied Bio Systems), Fluorimeter, Gel documentation system, Real Time PCR, Phosphoimager, FACS, NMR, Confocal Microscope, Mammalian and Bacterial Cell Culture Facility, PCR machines, Olympus compound microscope etc. The Animal House facility supports the Center's animal based research through a comprehensive program of animal care and the toxicological research. The Center has a Conference Hall for lectures, symposia and other academic activities.



Flow Cytometer



400 MHz-NMR

The Center has Bioinformatics Facility to carry out Bioinformatics and in silico modelling for Protein & Drug Designing in University of Delhi which is supported by Department of Biotechnology (DBT).

Titles of Degrees offered and courses taught, with year when the course was approved.

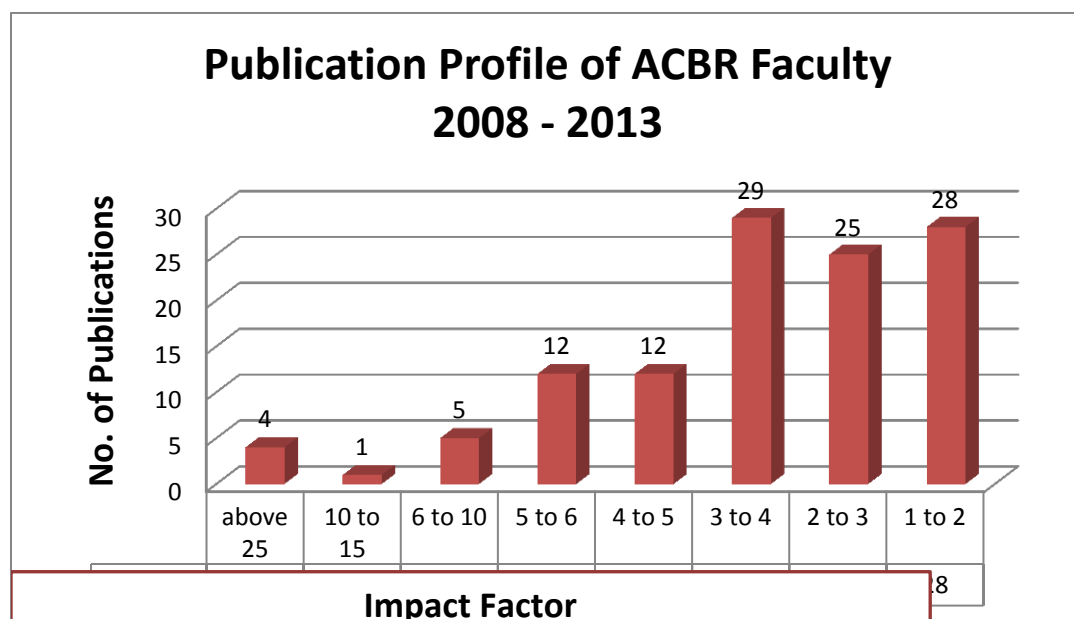
- M.Sc. Programme in Biomedical Sciences.
- Ph.D. Programme in Biomedical Science

Ph.D. Completed in Last Five years (2008-2013)

- Ph. D. Students (last 5 yrs) Completed : 59, Ongoing : 48
- M.Sc. Students (last 5 yrs) Completed approx. 210, continuing 76

Significant publications by the faculty (Last Five Years).

No. of publications = 212 (Last Five years)



- Total Number of Publications = 451 (Scopus)
- Chapters in Books = 10
- Citation Index - range / average (scopus) Total = 6292
 - Prof. B. C. Das = 2441 (BCD),
 - Prof. Vani Brahamachari = 385 (VB),
 - Prof. Daman Saluja = 611(DS),

Prof. K. Natarajan	= 1466 (KN),
Dr. P. M. Luthra	= 198 (PML),
Dr. Madhu Chopra	= 176 (MC),
Dr. Ajay Yadav	= 319 (AY),
Dr. Anju Katyal	= 326 (AK),
Dr. L. R. Singh	= 125 (LRS),
Dr. Manisha Yadav	= 340 (MY),
Dr. Manisha Tiwari	= 122 (MT),
Dr. Kamna Srivastava	= 43 (KS)

- **H-index**

27 (BCD), 12 (VB), 13, (DS), 14 (KN), 8 (PML), 9 (MC), 7 (AY), 12(AK), 8 (LRS), 9 (MY), 6 (MT), 3(KS)

LIST OF IMPORTANT PUBLICATIONS

Name of the Faculty	Research Output in terms of	Important Publications	Impact Factor
	No. of Publications in SCI Journals		
Prof. Daman Saluja	23	1. PLoS One. (2011) 6(10): e26156. 2. J Biochem. (2010), 147(5):625-32. 3. J Cell Mol Med. (2009); 58: 867-73	4.41 5.155 5.9
Prof. Vani Brahmachari	18	1. PloS ONE (2013) 21, 8, e67217. Print 2013.In press) 2. Nucleic Acids Res. (2012) doi: 10.1093 / nar / gks665. 3. RNA Biol.(2012) 9(3): 351-60.	4.77 7.83 5.59
Prof. K. Natarajan	8	1. J. Biol. Chem. (2012), 287, 11108. 2. Immunol. Cell Bio. (2011), 89: 786-791 3. J. Immunol. (2010), 184: 5444-5454	5.3 4.0 5.5
Dr. P. M. Luthra	14	1. AminoAcids (2012), 43,1451 2012, 2. Bioorg. Med. Chem. (2013), 21, 6077 3. European J. Med Chem. (2010) 45, 5031	4.0 3.0 3.5
Dr. Madhu Chopra	13	1. J. of Colloid interface sci., (2013) 2. ChemBioChem. (2012) 13, 282-92. 3. Metallomics (2009) 1, 409-417	3.17 3.94 4.099
Dr. Anju Katyal	26	1. Nanotech. Biol.Med.(2013) 9(4), 492-503. 2. Col. And Surf.B: Biointer (2013)_107, 235-244. 3. Proteomics (2012) 12(12), 2036-2044.	6.692 3.456 4.505

Dr. Manisha Tiwari	11	1. Eur. J. Pharm. 2. Bioorg. Med. Chem 3. Life sci.	2.52 3.151 2.704
Dr. Ajay Yadav	4	1. New Eng. J of Med. (2011) Feb 17;364(7):627-37 2. J. of Am. Med. Association. (2009);302(3):276-289 3. J. of Am. Med. Association, (2009) ;302(3):261-275	46 31 31
Dr. Manisha Yadav	10	1. Parasite Immunology (2013) Accepted 2. PLoS Pathogen (2010) Sep 23; 6(9), 1 3. Nature Medicine (2008) 14(4): 399-406	2.523 9.34 27.553
Dr. Rajendra Singh	12	1. PLOS ONE (2013) in press 2. PLoS Genet. (2010) Jan;6(1) :e1000807. 3. FEBS J. (2009), 276(20):6024-32.	4.869 14.10 3.03

Patents & Technologies Transferred :

Patents Granted = 2,

Technology transferred = 1

Patents Filed = 14

Commercialization of technology: Kit to diagnose Sexually Transmitted diseases -Prof. Daman Saluja

Prof Daman Saluja and her group at Dr B R Ambedkar Center for Biomedical Research, University of Delhi have designed and established an in-house PCR assay for detection of Chlamydia & Neisseria. The performance of the prototype kit was evaluated against currently used diagnostic methods and has been found to be cost-effective, highly specific, sensitive and user friendly. The research was funded by Department of Biotechnology, Government of India. The prototype kit has been patented in India and is under process for patent in USA.



University of Delhi and Department of Biotechnology, Government of India has signed a Memorandum of Agreement on 6th November 2012 for transfer of technology on 'Development of kit for detection of Neisseria and Chlamydia' to DSS Tech Pvt Ltd. The industry is expected to bring it into the market within the next two years. This is the first

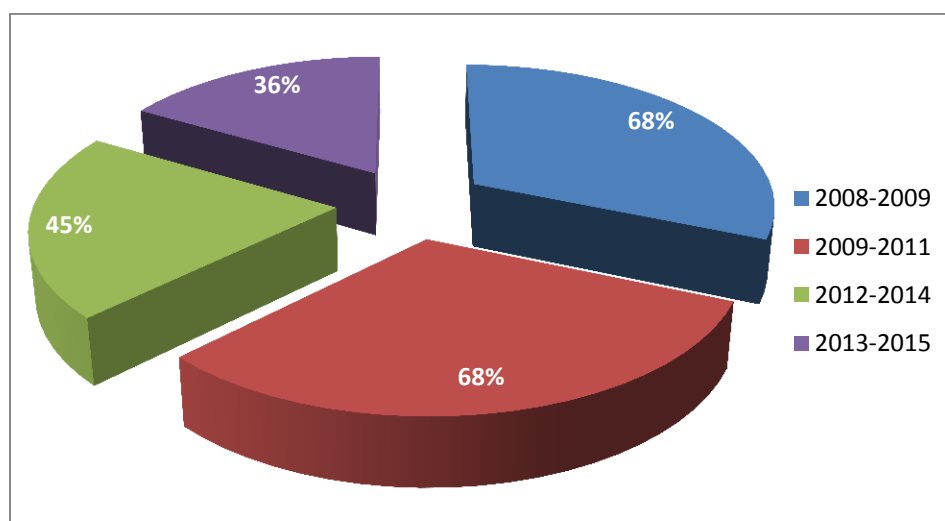
6. Number of students receiving JRF/SRF since 2008.

M.Sc. Students Qualified CSIR/UGC NET-JRF

<u>Batch</u>	2008-10	2009-2011	2010-2012	2011-2013
UGC NET-JRF	3	05	05	4
CSIR NET-JRF+LS	20	18	16	10
Other competitive exams	-		3	
Total	23 (68 %)	23 (68%)	24(55%)	14 (36 %)

Ph.D. Students Qualified CSIR/UGC NET-JRF/SRF & Others

	2011	2012
UGC NET-JRF+SRF	4+2=06	00+02=02
CSIR NET-JRF+SRF	5+4=9	4+3=07
Others(JRF-SRF)	6+8=14	5+3=8
GATE	---	---
Total	29	17



Performance Index of ACBR (M.Sc.) students at National Level Tests for Ph.D. Fellowships

7. Significant achievement and awards received by students.

M.Sc-Ph.D Combined Degree Program in Biomedical Sciences

M.Sc-Ph.D Combined Degree Program in Biomedical Sciences being an interdisciplinary course we have surveyed the background of students who qualify the admission criteria of the Centre as a reflection of the effectiveness of the selection procedures practiced at the Centre. It is observed that students with various backgrounds at the undergraduate level satisfy the selection criteria. The students of ACBR have consistently performed extremely well at the level of University and National level examinations. .

Almost all the students who complete their Ph.D. at ACBR pursue post-doctoral research in India or abroad. Several students have joined teaching positions at various universities and some have chosen to join pharmaceutical companies as research scientists. ACBR has successfully fulfilled its mandate of human resource development so far and continues to aim higher each passing year.

Following Students showed outstanding performances at various International/National Events

1. **Rishika Kundra M.Sc. 2013: Awarded Dr. Mammohan Singh Fellowship to pursue PhD. In UK**
2. **Rashi arora** (Supervisor Prof. Daman Saluja): First prize for paper presentation at 4th International conference on Stem Cells & Cancer, 19-22 October, 2013 held at Mumbai India
3. **Lubna Wasim** (Supervisor Dr. Madhu Chopra): ACBR Young Scientist award at 34th convention of Indian Association for Cancer Research, Feb 13-16 2013, Delhi
4. **Jhalak Singhal** (Supervisor Prof. K. Natarajan): Best poster presentation award 5th congress on the federation of Immunological societies of Asia Oceana and 39th Annual convention of Indian Immunology Society, March 14-17, 2012
5. **D. Nagarjuna** (Supervisor Dr. Manisha Yadav) Poster Selected for Belgaum-Mumbai prize for best poster in Bacteriology at Indian Association of Medical Microbiology, MICROCON, Nov. 2012 at Lady Hardinge Medical College, Delhi, India.
D.Nagarjuna, Vivek Verma, Sonu Kalshan, Rajni Gaind, Rakesh S Dhanda, Manisha Yadav.

8. Distinguished National/International Awards received by faculty.

Prof. Daman Saluja:

July 2013: Selected and participated in the Khorana Technology Transfer Program at Univ. of Wisconsin-Madison under Indo US science and Tech Forum (IUSTF) (Nominated by Univ. of Delhi)



May 2013: The Biotech Product & Process Development and Commercialization Award' of 2013 by the Honourable President of India

Dr. Manisha Yadav

1. Rapid Grant for Young Investigator Award (RGYI) from DBT, New Delhi. 2012
2. FAST track for Young Scientist Award from DST, India. Dec 2011
3. Maggie Stephens Stiftelse award at Lund University, Sweden. 2010.
4. Oral Presentation for IAMM Junior Best paper award-2012 at Indian Association of Medical Microbiology, MICROCON, Nov 2012 at Lady Hardinge Medical College, Delhi, India.

Dr. Ajay K Yadav

Prof Ramalingaswami Fellow, DST

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