

## Center for Research in Biotechnology

The department is a recognized Centre for Research in Biotechnology under Mangalore University since 2008. It has 3 faculty members, who are recognized Ph.D guides by Mangalore University. It presently has 10 PhD scholars pursuing their doctoral studies since 2011. The Biotechnology Research (Ph.D.) Centre of St Aloysius College was inaugurated by Prof. R K Sridhar of Mangalore University on Monday August 22, 2011. The Department has received major and minor research projects from DBT, DST, BRNS and UGC.



### Program offered:

**Ph.D in Biotechnology** (Mangalore University)

### ADMISSION:

Eligibility and admission as per the regulations of Mangalore University

Please refer for details: <http://www.mangaloreuniversity.ac.in/xampp/phdinfo.htm>

Admission based on entrance test and interview conducted by Mangalore University.

The mandatory course work for PhD is offered at the department.

### Recognized Research Guides under Mangalore University:

**Dr. Smitha Hegde**

**Dr. Asha Abraham**

### The thrust areas of research of the faculty:

- Development of molecular markers to study biodiversity
- Phytoremediation

- Cellular and Molecular aspects of metabolic syndrome, diabetes & cancer
- Isolation, Purification and Characterization of enzymes
- Arbuscular Mycorrhizal Fungi
- Microbial degradation of surfactants
- Food and Nutrition

## RESEARCH LABORATORIES:

**Rondano Biodiversity Research Laboratory**

**Fr. George Albuquerque Cell and Molecular Biology Laboratory**



## ON-GOING RESEARCH PROJECTS OF THE DEPARTMENT

Name of the Investigator	Title of the project	Amount (Rs.)	Funding Agency
<b>MAJOR PROJECTS</b>			
Dr. Asha Abraham	Adrenergic Receptor Subtype Functional Correlation In the Brain and Pancreas of High Fat Simple Carbohydrate Fed C57BL/6J Mice: Implications In Metabolic Syndrome	23,82,000/-	BRNS 2013-2016
Dr. Smitha Hegde	Bioprospecting local ferns for Phytoremediation of heavy and radioactive metals.	23,40,000/-	BRNS 2011-2014

<b>MINOR PROJECTS</b>			
Dr. Melwyn D' Cunha SJ	Occurrence and Distribution of Arbuscular Mycorrhizal Fungi (AM Fungi) in coastal sand dune legume vegetation of Dakshina Kannada in relation to soil and soil parameters' by UGC.	1,90,000/-	UGC 2012- 2014
Dr. Shreelalitha Suvarna	Nutritional Evaluation and determination of Phytochemical activity of members of Cucurbitaceae - A Comparative Study"	Rs.1,74,000/-	UGC 2014-2016
Mr. Sreejesh PC	<i>In vivo</i> comparative study of antidiabetic effect of a <i>Trigonella foenum-graecum</i> Seed (FSE) and Leaf Extracts (FLE) on Alloxan (AXN) Induced Diabetic Wistar Rats"	Rs 160000/-	UGC 2014-2016

### Completed Projects

Name of the Investigator	Title of the project	Amount (Rs)	Funding Agency
<b>Major projects</b>			
Dr. Asha Abraham	Elucidation of the role of Leptin in the regulation of the hypothalamus-pituitary-adrenal axis in metabolic syndrome	10,96,500/-	UGC 2011 – 2014
Dr. Monika Sadananda	Activity mapping in the brain in response to negative and positive stimulation: A study at the behavioural, neural and cognitive levels.	38,76,000/-	DST 2010 - 2013
Dr. Shashikiran & Dr. Melwyn	Radiation induced in vitro mutagenesis in two important ornamental plants: Celosia and Zinnia species 2 years	23,00,000/-	BRNS 2010-2013
<b>Minor Projects</b>			
Dr. Smitha Hegde	Phytoremediation of heavy metals using Brassica juncea and Nephrolepisps	1,80,000/-	UGC 2011- 2013

Ms. SushmaPatrao	Degradation of surfactant in detergent by soil bacteria	1,43,000	UGC 2010- 2012
Dr. SmithaHegde	Application of molecular techniques for genetic diversity studies of traditional cultivars of rice grown in Dakshina Kannada and Udupi districts.	1,00,000	UGC 2007 -2009,
Ms. RakhiBhakta	Development of technology for bio-control of Salmonella in poultry.	1, 25,000	UGC 2011
Ms. Avila D'Silva	Study of egg yolk lipid lowering effect of Avocado fruit extracts	47,000	UGC 2008-2010
Ms. Madhumathi M	Evaluation of oat and chitin biofilm Salmonella to produce IgY by oral administration of hen in poultry	40,000	UGC 2008-2010
Dr. Asha Abraham	Evaluation of the anti tumour effect of fruit rinds of <i>Garcinacambogia</i>	40,000	UGC 2008-2010
Dr. Asha Abraham	Evaluation of the anti diabetic effect of Insulin plant	1,00,000	UGC 2005-2007
Ms. Avila D'Silva	Isolation and characterization of 5` nucleotidase and its inhibitors from Erlich ascites Tumour/carcinoma cells	1,00,000	UGC 2005-2007
Ms. Madhumathi M	Microbial degradation of Xenobiotic compounds	1,00,000	UGC 2005-2007