

# RESEARCH SUPPORT

## *List of Ongoing Research Projects*

### Department of Mathematics:

Sl.No.	Investigator(s)	Funding agency	Field of work	Amount (Rs.)	Period
A	Dr. Indra Rajasingh	DST SR/S4/MS: 494/07	Graph Theory	10,42,580	2009-2012
B	Dr.R.Bharati(Retd)	UGC F 38- 120/2009 (SR)	Graph Theory	5,73,800	2010-2013
C	Dr. A. Albert Muthumalai , Dr. Indra Rajasingh	DST SR/S4/MS: 595/09	Graph Theory	10,03,800	2010-2013

### Department of Physics:

Sl.No.	Investigator(s)	Funding agency	Field of work	Amount (Rs.)	Period
A	Dr.P. Sagayaraj	DST	Investigation on highly efficient nonlinear optical bimetallic thiocyanates and their lewis base adducts - the future materials for compact blue-violet laser	33,75,000/-	2008-2011
B	Dr.P. Sagayaraj	UGC	Investigations on highly efficient terahertz (THz) generating ionic organic NLO crystals of DSAS, DSMAS and DSMOS	8,50,800/-	2010-2013
C	Dr. S. Jerome Das	DAE - BRNS	Synthesis and characterization of Metal Oxide Nano Materials for Industrial Applications	15,57,750/-	2008-2011
D	Dr. J. Madhavan	UGC	Crystal growth	7,75,800/-	2008-2011

**Department of Chemistry:**

Sl.No.	Investigator(s)	Funding agency	Field of work	Amount (Rs.)	Period
A	V. Alexander	DRDO	Magnetic Resonance Imaging	73 lakhs	2009- 2010
B	V. Alexander	DST	Bimodal nanodot imaging probes for MRI	35 lakhs	2009- 2012
C	Dr. J. Judith Vijaya	DST	CATALYSIS	15 lakhs	2008-2011
D	Dr. J. Judith Vijaya	UGC	PHOTOCATALYSIS	8 lakhs	2010-2013
E	Dr. K.S. Nagaraja	BRNS	SiC thin film	22,79,100	2009-2011

**Department of Plant Biology and Plant Biotechnology:**

Sl.No.	Investigator(s)	Funding agency	Field of work	Amount (Rs.)	Period
A	Dr. R. Ravindhran	UGC	Identification, detection and purification of Watermelon Bud Necrosis Virus (WBNV) in Watermelon.	1,70,000/-	2009 – 2011
B	Dr. Jeyajothi	UGC	<i>In vitro</i> screening of antimicrobial activity of crude extract from <i>Cassia senna</i> and <i>Cassia auriculata</i> .	50000/-	2009 – 2011

## Department of Advanced Zoology and Biotechnology:

Sl.No.	Investigator(s)	Funding agency	Field of work	Amount (Rs.)	Period
A	Dr. P. Venkatesan	DST – Seed division	Vector control	Budget awaited	2010-2012
B	Dr.M.Selvanayagam	DAE-IGCAR	Studies on the coastal ecosystem at Kalpakkam with special reference to Biodiversity and productivity for four years from 2008-2012	37,59,800	2008-2012
C	Dr.M.Selvanayagam	DAR-IGCAR	Baseline health profile of Aquatic organisms in Kalpakkam Environment and assessment of DNA damage from IGCAR, for three years from 2008-2011	16,28,400	2008-2011
D	Dr.M.Selvanayagam	DAE-IGCAR	Coordinator for the DNA Club of Tamil Nadu Region. Supported by the Department of Biotechnology, Govt. of India, New Delhi	51,17,000	2009-2012
E	Dr.M.Selvanayagam	DAE-IGCAR	Stuies of the biodiversity of lakes at DAE complex	47,45,000	2010-2014
F	Dr. S. Vincent	Department of Information Technology, New Delhi	Online Prediction and Emergency Response Management of Vector borne diseases ( <i>Chikungunya and Dengue</i> ) and Swine Flu for Urban and Rural Areas of Tamil Nadu State Using Customized Web based GIS application.	64,80,000	2010-2012
G	Dr. S. Vincent	Ministry of Earth Sciences	Ecosystem Modelling approach to generate habitat suitability for some endemic and rare fish species in estuaries of the east coast of Tamil Nadu.		2009-2012

Sl.No.	Investigator(s)	Funding agency	Field of work	Amount (Rs.)	Period
H	Dr. S. Vincent	Ministry Of Environment And Forests, New Delhi	Effect of Heavy metal pollutants on the induction of bio-marker protein, Metallothionein in the selective edible organisms of the coastal areas of Tamil Nadu.	15,34,347	2008-2011
I	Dr. S. Vincent	Indira Gandhi Center for Atomic Research, Kalpakkam	Studies on Extracellular Polymeric Substance Excluded by Radiation Resistant Bacteria for the Purpose of Heavy Metal Detoxification and Bioaggregation.	10,00,000	2009-2012
J	Dr. S. Vincent	NRDMS Division, Ministry of Science and Technology, New Delhi	Spatial Distribution of Genetic Diversity of Traditional Farmers Varieties- A Pilot Study from Nagapattinam District of Tamil Nadu.	13,80,050	2009-2011
K	Dr. S. Vincent	University Grants Commission, New Delhi	Effect of heavy metal pollutants on the induction of metallothionein in selected species of edible fishes.	6,02,600	2007-2010
L	Dr. S.S.Jayaraj	UGC	Invertebrate Immunology	4,82,400	2009-2014
M	Dr. S. Athikesavan	UGC	Toxicology in Ennore	5,80,618	2009-2014

#### Department of Commerce:

Sl.No.	Investigator(s)	Funding agency	Field of work	Amount (Rs.)	Period
A	A.XAVIER MAHIMAIRAJ	UGC	A STUDY ON SHGS AND THEIR IMPACT ON THE EMPOWERMENT OF WOMEN WITH SPECIAL REFERENCE TO SHGS IN CHENNAI DISTRICT.	51,500/-	2008-2010

### Entomology Research Institute:

Sl.No.	Investigator(s)	Funding agency	Field of work	Amount in lakhs (Rs.)	Period
A	S. Ignacimuthu	DBT-Sci.& Soc	Augmenting the livelihood of women farmers and women through self help group through training on biopesticides and vermicompost production for sustainable agriculture	9.33	2008-2011
B	S. Ignacimuthu	UGC	Development of Insect Resistant <i>Abelmoschus esculentus</i> (Linn.) (Lady's Finger) )	11.21	2009-2012
C	S. Ignacimuthu	CSIR-Emeritus	Identifying antidiabetic principles from <i>Aegle marmelos</i> Corr., A traditional antidiabetic medicinal plant	15.96	2009-2012
D	S. Ignacimuthu	AYUSH	documentation of Local Health Traditions practiced by herbal practioners in three districts of South Tamil Nadu and Encourage them to cultivate medicinal plants to enhance their livelihood	18.71	2010-2012
E	S. Ignacimuthu	ICMR-NIF	Hepatoprotective activity of <i>Wedelia urtaecofolia</i> and <i>Datura metel</i> used by herbal healers	4.69	2000-2010
F.	S. Ignacimuthu	CSIR-OSDD	Open Source Drug Discover System - Isolation and synthesizatoin of anti <i>Mycobacterial tuberculosis</i> compounds from plants	7.36	2010 - 2012

## *Major Research Equipments Available*

### **Instrumentation Center:**

<b>S. No</b>	<b>Equipment details</b>
1	XRD Unit
2	Plasma CVD
3	Liquid Injection CVD
4	TG-DTA
5	AAS
6	$\mu$ P based Gas Chromatograph
7	Vacuum Coating Unit
8	Hybridization Chamber
9	Electrometer – Keithley
10	UV-Visible Spectrophotometer-U2010
11	LCR meter
12	HPLC
13	PCR
14	DNA Sequencer (manual)

## Department of Mathematics

Sl.No.	Equipment details	Funding source
1	Orion Atlas 10EQ-G GoTo Ref. Telescope	UGC(BSR)
2	Toshiba Digital copier	UGC(BSR)

## Department of Physics

Sl.No.	Equipment details	Funding source
1	KEITHLEY-Model 6517A (Electrometer/High Resistance Meter)	DAE - BRNS
2	Muffle Furnace	DAE - BRNS
3	KEITHLEY – Model	DST - FIST
4	Vacuum Coating Unit	DST - FIST
5	Bridgman Apparatus	DST - FIST
6	Laser	
7	Spin Coating Unit	

## Department of Chemistry

Sl.No.	Equipment details	Funding source
1	Varian HPLC Autosampler	DAE 07
2	Leica Epifluorescence microscope	DBT 07
3	CO2 Incubator	DBT 07
4	Martin Christ Lyophilizer and vacuum concentrator	DBT 07

5	Buchi Rotavapor	DAE 08
6	GC Mass spectrometer	DRDO 08
7	Spectrometer with Nanodrop Accessories	DST 09
8	Buchi Flash chromatography and Rotavapor accessories	DST 09
9	Nanonics MultiView 1000 AFM	DRDO 2010
10	CHI 604C	UGC
11	STM	BRNS

## Entomology Research Institute

Sl.No.	Equipment details	Funding source
1	Binocular Dissection Microscope	DOEN
2	Binocular Stereo Microscope	DBT
3	Trinocular Stereo Compound Microscope	UGC
4	Trinocular Stereo Compound Microscope (for cytochemical analysis)	DST
5	Lyophilizer	DBT
6	L7-55 Ultra Centrifuge	GIFT
7	UV-Visible Spectrophotometer-U2010	Indespaten shaften
8	Particle Bombardment Gun with accessories	MacArthur
9	-70°C Deep Freezer	-do-
10	Trinocular Compound Stereo Microscope	DST
11	Leaf Area Meter with Baxall Camera, Light Box and B&W Monitor	DBT
12	Electronic Balance	DBT
13	DNA Sequencer	UGC

14	Gel Documentation	-do-
15	Hybridization Chamber	DBT
16	PCR Machine	UGC
17	HPLC	DST
18	CO <sub>2</sub> Incubator	UGC
19	Inverted Microscope	ERI
20	Eliza Reader	DRDO