

K.S.RANGASAMY COLLEGE OF TECHNOLOGY, TIRUCHENGODE – 637 215
DEPARTMENT OF BIOTECHNOLOGY

ANNUAL REPORT FOR THE ACADEMIC YEAR 2010-2011

The Department of Biotechnology was started in the year 2002, with the primary aim of providing high quality education in Biotechnology from the formative years of bachelor degree to Ph.D., programme to rural people of Tamil Nadu. We are very happy to submit the annual report for the academic year 2010-11 in which the activities of staff members and students of Biotechnology Department are enormous and noteworthy.

1. Vision and Mission of the Biotechnology Department

- * To produce the most competent Scientists, Technologists and Entrepreneurs in Biotechnology.

- * To strengthen the collaboration with National / International level Institutions and Multinational companies through quality of Engineering Education.

- * To transfer the technology to the Entrepreneurs and rural farmers for sustainable agriculture and enhance the revenue generation.

2. Ranking

Biotechnology Department of K.S.Rangasamy College of Technology stands 8th Rank among 280 Private Indian Institutions offering Biotechnology course as per the survey conducted by “Biospectrum Asia Magazine” (Bengaluru). The Department has been ranked third in terms of industry-institute interaction with a score of 37.16. It stood eighth in terms of faculty strength with a score value of 26.71. In terms of placement activities, 7.55 points have been scored. With a score value of 11.13 it stood eighth position in infrastructure development. It puts altogether, its overall ranking to eighth.



3. Offering courses

At UG level : B.Tech., Biotechnology with an intake of 60 students per year

At PG level : M.Sc., Biotechnology with an intake of 60 students per year

M.Tech., Biotechnology (Approval awaited)

4. Staff members

A total number of 24 faculty members are working in the department with various specializations as per the AICTE norms to scatter the knowledge in Biotechnology to the student communities. Among the teaching staff members, there are six of them are pursuing Ph.D., programme. In addition, there are 12 supporting staff members are working in different laboratories including three programmers.

5. Laboratory facilities

There are 13 state-of-art well equipped laboratories in the Department already besides Cancer Biotechnology lab is under progress for its construction. Moreover, it has been proposed to construct Reaction Engineering lab in the academic year.

6. New Instruments purchased

The following six new equipments were procured in this academic year for which a tune of Rs.9,59,450/- was sanctioned by the management.

S.No.	Name of the instrument	Cost Rs.	Place of use in the lab
1.	Water Purification System	1,76,000/-	Immunology
2.	Refrigerated Centrifuge	4,19,510/-	Molecular biology
3.	CO ₂ Incubator	2,56,500/-	Animal cell Line
4.	Shell and tube heat exchanger	66,400/-	Chemical Engineering
5.	Mixed flow reactor	31,540/-	Chemical Engineering
6.	Microwave oven	9,500/-	Immunology
Total amount Rupees		9,59,450/-	--

7. Academic achievement of Faculty

Awards and Honours

7.1. Dr.P.Ponmurugan has received “Best faculty award” for the academic year 2010- 2011 from the Nehru Group of Institutions, Coimbatore.



7.2. Mr.R.Subbaiya has received “Young Scientist Fellowship” from Tamil Nadu State Council for Science and Technology (TNSCST), Chennai in the current academic year in the field of Nanobiotechnology.



7.3. Activities of faculty members during the academic year 2010-2011

S.No.	Name of the faculty member	No. of Papers Published in Journals		Number of Conference attended	Number of Abstracts Published	Number of Workshop attended
		National	International			
1.	Dr.P. Ponmurugan	3	6	5	12	-
2.	Mrs. PuniethaaPrabhu	-	1	1	1	-
3.	Dr.V. Balakrishanan	1	1	3	2	1
4.	Dr.J. Philip Robinson	-	1	1	2	-
5.	Mrs.B.Bagyalakshmi	-	2	2	1	-
6.	Mrs.K. Poongothai	-	2	1	1	-
7.	Mrs.R. Arutselvi	-	-	3	3	1
8.	Mr.R. Subbaiya	-	-	1	1	2
9.	Mrs.B. Kalpana	-	-	1	1	-
10.	Ms.R. Nithya	-	-	2	2	-
11.	Ms.R. Olimathya	-	-	2	2	-
12.	Mr.D. Saravanan	2	-	2	2	1
13.	Ms.K. Manjukurunambika	-	-	2	2	1
14.	Mrs.B. Mythili Gnanamangai	-	2	3	2	1

7.4. Faculty Publication by the faculty members

Name of Author(s)	Title of Paper	Title of Journal	Volume / No	Pages No	Year
Saravanan, G. Ponmurugan, P.	Ameliorative potential of S-allylcysteine on oxidative stress in STZ induced diabetic rats.	Chemico Biological Interaction [Impact factor : 2.435]	189	100-106	2011
Ponmurugan, P. Saravanan, D. Ramya, M.	Culture and biochemical analysis of a tea algal pathogen <i>Cephaleuros parasiticus</i>	Journal of Phycology [Impact factor : 2.27]	46	1017-1023	2010
Saravanan, G., Ponmurugan, P., Senthil kumar,G.P. Rajarajan, T.	Antidiabetic effect of S-allylcysteine: Effect on plasma and tissue glycoproteins in experimental diabetes	Phytomedicine [Impact factor : 2.174]	17	1086-1089.	2010
Saravanan, G. Ponmurugan, P.	Beneficial Effect of S-allylcysteine (SAC) on blood glucose and pancreatic antioxidant system in diabetic rats.	Plant Foods and Human Nutrition [Impact factor : 2.016]	65	374–378	2010
Poongothai, K. Ponmurugan, P. Syed Zameer Ahmed	A Comparative study of antibacterial potential and phytochemical analysis between field grown and tissue cultured plant - <i>Solanum xanthocarpum</i> Schrad. and Wendl.	Journal of Pharmacy Research	3	1958-1960	2010
Poongothai, K. Syed Zameer Ahmed Ponmurugan, P Jayanthi, M.	Assessment of antidiabetic and antihyperlipidemic potential of <i>Solanum nigrum</i> and <i>Musa paradisiaca</i> in alloxan induced diabetic rats	Journal of Pharmacy Research	3	2203-2205	2010
Kannan, T. Ponmurugan, P.	Response of paddy (<i>Oryza sativa</i> L.) varieties to <i>Azospirillum brasilense</i> inoculation	Journal of Phytology	8 (6)	8-13	2010
Johnson1, K.M., Anil Kumar, M.R., P. Ponmurugan, Mythili, B.	Ultraviolet radiation and its germicidal effect in drinking water purification	Journal of Phytology	2 (5)	12-19	2010

Johnson1, K.M., Anil Kumar, M.R., Ponmurugan, P.	Degradation of the quality of water during monsoon and the related out break of water borne diseases	Ecology Environment and Conservation	16 (2)	277- 280	2010
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8. Abroad visit by faculty members

Dr.P.Ponmurugan has visited at University of Bonn, Germany to participate Third International conference on “Precision on crop protection” in which a research paper entitled “Evaluation of *Streptomyces* species for the biological control of Rhizome rot disease in Indian turmeric plantations” was presented. Internal travel grant from Department of Science and Technology (DST), New Delhi (File No.: SR/ITS02153/2010-2011) and Tamil Nadu State Council for Science and Technology (TNSCST), Chennai (Ref No.: TNSCST/Travel/VR/14/2010-2011/466 dated 26-08-2010) was sanctioned to him for his abroad visit.



9. Performance of faculty members produced 100 % result

S.No	Name of the Faculty	Year /Sem	Subject Code/Subject Name
1.	Ms.B.Bagyalakshmi	II year / III Sem	08230303C- Microbiology
2.	Dr.J.Philip Robinson		08230403C- Molecular Biology
3.	Dr.P.Ponmurugan	III Year/ V Sem	0830502C- Genetic Engineering
4.	Mrs.Puniethaa Prabhu		08230503C- Bioinformatics
5.	Dr.P.Ponmurugan		08230504C- Bioprocess Engineering
6.	Dr.V.Balakrishnan		08230505C- Enzyme Engineering & Technology
7.	Dr.J.Philip Robinson		08230506C- Plant & Animal Biotechnology
8.	Mrs.R.Arutselvi	IV Year / VII Sem	07230704C- Animal Biotechnology
9.	Mrs.K.Poongothai		07230773E- Cancer Biotechnology
10.	Mr.I.Muthiah		07230784E- Clinical Trial Management
11.	Dr.P.Ponmurugan		BT 1011- Immunotechnology
12.	Dr.V.Balakrishnan, Mr.R.MurugaGanesh	III Year /VI Sem	07230601G- Professional Ethics

13.	Ms.B.Bagyalakshmi		07230602C- Immunology
14.	Mrs.Puniethaa Prabhu		07230603C- Molecular Modeling & Drug Designing
15.	Mrs.K.Poongothai		07230604C- Protein Engineering
16.	Mrs.R.Arutselvi		072306**E- Biotechnology of stem cells
17.	Mrs.S.Anitha		072306**E- Food Science & Technology

10. Conference / Workshop organized by the Department

A National level five days workshop on “Entrepreneurship development programme for biotechnology Graduates” was organized conducted during March 1-5, 2011 in which a total 65 candidates from all over India was participated. Various funding agencies like DRDO, CSIR, MES, New Delhi and DAE, Mumbai sanctioned financial assistance magnanimously to conduct of the workshop successfully. Dr.J.Philip Robinson and Mrs.B.Kalpna acted as the organizing Secretaries of the workshop



10.1. Details of amount Sanctioned from various funding agencies

S.No	Name of the funding agency	Reference Number	Amount sanctioned
1.	Council of Scientific and Industrial Research (CSIR), New Delhi	SYM/5885/10-HRD dated 10 th Nov 2011	Rs.40,000/-
2.	Defense Related Developmental Organization (DRDO), New Delhi	No.ERIP/ER/10-11/C/362/M/01 dated 24 th May 2011	Rs.35,000/-
3.	Ministry of Earth Sciences, New Delhi	MOES/SSWC/79/2010-PC-V dated 24-03-2011	Rs.40,000/-
4.	Department of Atomic Energy, Mumbai	No.2010/17/37/222-BRNS/2656 dated 17-03-2011	Rs.50,000/-

10.2. Students Technical Symposium organized by the Department

In order to enhance research activities among the student communities, 'Miniproject' concept has been introduced in all the semesters to interested Biotechnology students beyond the curriculum. Miniproject works were assessed by conducting intermittent review meetings. The students were asked to present their findings during technical symposium which is held on 15-02-2011. Good projects were awarded with cash prizes along with meritorious certificates.

Details of Miniproject winners

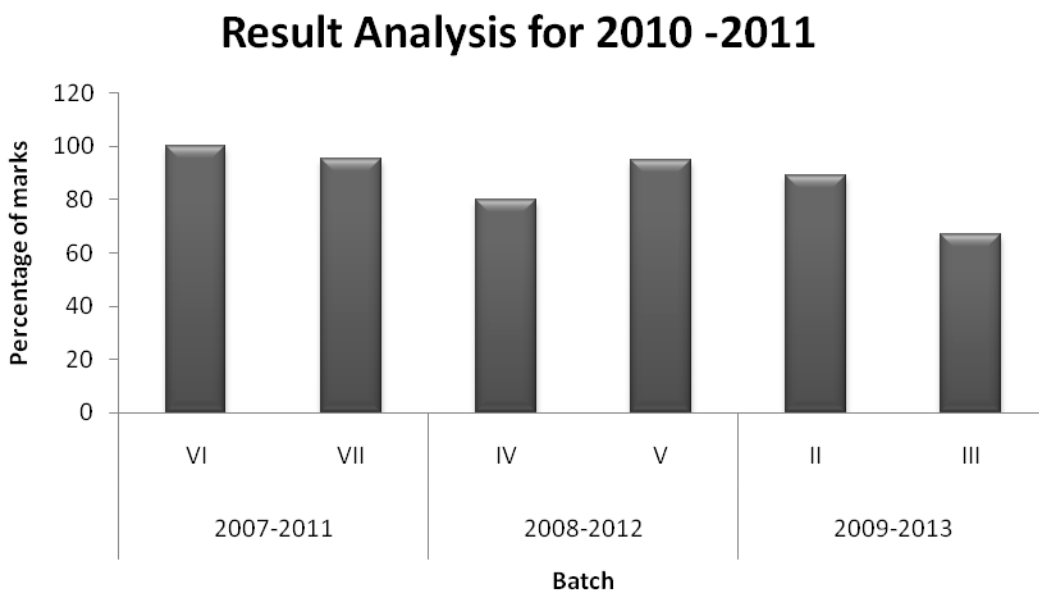
S.No	Students Name	Class	Title of the Miniproject	Prize
1.	Jyoti Prasad kakati	III B.Tech., (BT)	Production of polyhydroxyalkanoate, a biodegradable plastic from novel bacterial strains isolated from textile and sugar mill effluent	1 st Prize (Rs.2500)
2.	K. Yuhendhara Prabhu	III B.Tech., (BT)	Biological control of <i>Poria hypolateritia</i> the causative organism of red root disease in tea plants by actinomycetes	2 nd Prize (Rs.2000)
3.	S.E.Jeeva	IV B.Tech., (BT)	Biochemical and Physiological analysis in transgenic tobacco with antifreeze protein.	3 rd Prize (Rs.1500)
4.	P.Suresh N.Ramachandran A.Sriram R.Muthu Saranji	II B.Tech., (BT)	Comparative studies of antimicrobial activity of leaves of <i>Curcuma longa</i> with its rhizome and different medicinal leaf extracts	4 th Prize (Rs.1000)
5.	K. Hemalatha	III B.Tech., (BT)	Biocontrol of <i>Cercospora theae</i> using microbial consortia extracts	5 th Prize (Rs.750)

Class Toppers

S.No	Year	Name of the student
1.	2007-2011 batch	P.Ardra, R.Mukil, Amina Hamsa
2.	2008-2012 batch	J.Rita Evelynne, K.Hemalatha & Adeena Ane Joel K.Jeeva Kavya
3.	2009-2013 batch	S.M.Brindha Shree, O.B.Asathy, R.Aadhitya

11. Achievements of students

11.1. Academic results



11.2.

12. Participation in Conferences by the students

A large number of students participated in various Symposia, National and International Conferences and have won several prizes and cash awards.

S.No	Name of the student	Place	Award/Prize
1.	P.Guhan Kumar	Bannari Amman College, Sathyamangalam.	II prize in Poster Presentation
2.	Gaanappriya Mohan	Erode Sengundar Engineering College, Erode Kongu College of Engineering, Perundurai, Erode	I prize in Oral Presentation. I prize in Oral Presentation
3.	K.Hemalatha	Bannari Amman College, Sathyamangalam.	I prize in Poster Presentation
4.	P.Suresh, N.Ramachandran, R.Muthu Saranji	Muthayammal College of Arts and Science, Rasipuram Kongu College of Engineering,	II prize in Oral Presentation. I prize in Oral

	A.Sriram	Perundurai, Erode. Pavendar Bharthidasan College of Engineering, Trichy.	Presentation. I prize in poster Presentation.
5.	S.M.Brindha Sree C.Monica	Erode Sengundar Engineering College, Erode Coimbatore Institute of Technology, Coimbatore Muthayammal College of Arts and Science, Rasipuram.	I prize in Technical Quiz II prize in Poster Presentation III prize in Oral Presentation.

13. Implant Training attended by the students

S.No	Name of the student	Topic of Training	Place of Training
1.	D.Vaishnu Devi R.P.Janani, R.Subhaharshni and J.Rajani Sowparnika.	Molecular Biological Techniques	Biologic Research Center, Coimbatore
2.	P.Nandhini, G.Jayanthi, S.Srivardini, P.Monisha, and S.Saranya	Molecular Biological Techniques	Armats Biotech Training & Research Institute, Chennai.
3.	R.Jayashree, A.Aadhithya D.Gayathri, R.Gugapriya and S.Abirami	Bioinformatics Tools	Sri Sai's Bioscience and Bioinformatics, Coimbatore.
4.	G.Ranjeetha, G,Bharath, G.Pradeep Kumar, V.Suriya Kanth, S.N.Gowtham Hari Narayana, J. Ebenezer Samuel King and S.Kirubakaran	Training on Gelatin Production	Sterling Biotech, Ooty

5.	M.Mithirai, R.Nandhini, K.Nithya, M.Maheshwari and R.Kavya Divya	Training on solid waste management	Hanjer Biotect. Ltd, Salem
6.	Adeena Anel Joel	Training on HPTLC	M.S.Swaminathan Research Institute, Chennai
7.	Sabreen Bibiana	Clinical Trial & data Management	KG Hospitals, Coimbatore

14. Extra curricular achievements

S.No	Student Name	Award/Prize
1.	P.Suresh T.T.Akhil	I Prize in Quiz held at Dept. of Mechatronics K.S.R.CT
2.	A.Sriram R.Muthu saranji	II Prize in Quiz held at Dept of Mechatronics K.S.R.CT
3.	A.Sriram	NCC Camp (CATC) – I place in firing.
4.	R.P.Janani	1. Volley Ball – III place in zonal conducted at K.S.R.C.T. 2. Winner in Volley ball tournament, Mullai Nagar, Namakkal.










15. Placement details



**Clippings recorded
during campus
Interviews**




Name of The Student		Name of the Company
	N.Ayubkhan	Tata Consultancy Services Limited 185/188 Lioyds Road Chennai -600 086
	S.Charupriya	Tata Consultancy Services Limited 185/188 Lioyds Road Chennai -600 086
	R.S.Narmadha	Tata Consultancy Services Limited 185/188 Lioyds Road Chennai -600 086
	P.Vinothini	Tata Consultancy Services Limited 185/188 Lioyds Road Chennai -600 086
	P.Guhankumar	SSS Bioprime Technology, Chennai No.30, New No.2, I Block Ii Nd Floor, Dr. C.M. Complex Anna Nagar East, Chennai -600 102.
	M.Suganya	SSS Bioprime Technology, Chennai No.30, New No.2, I Block Ii Nd Floor, Dr. C.M. Complex Anna Nagar East, Chennai -600 102.
	S .Asir Bradley	BrainWave Biosolutions Limited Plot No. 33, Meerlan Towers -3rd Floor Hanumantha Rao Road, Balaji Nagar, Royapettah Chennai 600 014, India
	B.Neelavathi	BrainWave Biosolutions Limited Plot No. 33, Meerlan Towers- 3rd Floor Hanumantha Rao Road, Balaji Nagar, Royapettah Chennai 600 014, India


	S.Vahidhabanu	BrainWave Biosolutions Limited Plot No. 33, Meerlan Towers- 3rd Floor Hanumantha Rao Road, Balaji Nagar, Royapettah Chennai 600 014, India
	K. Arthi	Zifo Technologies Private Limited 21A, Anna Salai Littlemount Saidapet, Chennai 600 015.
	Jiby James	Zifo Technologies Private Limited 21A, Anna Salai Littlemount Saidapet, Chennai 600 015.
	A.Mohammed	Zifo Technologies Private Limited 21A, Anna Salai Littlemount Saidapet, Chennai 600 015.
	S.Sasikumar	Mahendra Next Wealth IT India Pvt. LTD. Mahendhirapuri, Mallasamudram Thiruchengode (Tk). Namakkal – 637 503. Tamilnadu , India.
	A.Velan	Stann Biomedical Engineering Coimbatore -46
	V.Mala	JSS BIOSUCCESS (P) LTD 15/41, Sri Lakshmi Nagar, Hinduathan Arts College Road Sowripalayam (Post) Coimbatore – 28
	N.Santhiya	JSS BIOSUCCESS (P) LTD 15/41, Sri Lakshmi Nagar, Hinduathan Arts College Road Sowripalayam (Post) Coimbatore – 28
	T.Vidhyasri	JSS BIOSUCCESS (P) LTD 15/41, Sri Lakshmi Nagar, Hinduathan Arts College Road Sowripalayam (Post) Coimbatore – 28

	M.Mohammed Asanar	Primus Analytics Pvt. Ltd., Ground Floor, 'M' block, No : 20/12, Anna Nagar East, Chennai, India, 600102
	A. Srinivasan	Primus Analytics Pvt. Ltd., Ground Floor, 'M' block, No : 20/12, Anna Nagar East, Chennai, India, 600102
	S. N. Syed Zahir Hussain	Primus Analytics Pvt. Ltd., Ground Floor, 'M' block, No : 20/12, Anna Nagar East, Chennai, India, 600102
	R. Vignesh	Salem Microbes Pvt. Ltd. Salem 178, Trichy Main Road, Gugai, Salem – 636 006
	E. Narendran	Salem Microbes Pvt. Ltd. Salem 178, Trichy Main Road, Gugai Salem – 636 006


Entrepreneurship Development Programme




	R. Velayutham	Received Rs.36,00,000/- from Central Government under SC/ST Scheme to start his own company to produce Flavoured water at Coimbatore
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List of Students selected for Higher Studies at Abroad






	J. Vignesh	Selected to do his M.S., (Biotechnology) programme at La Trobe University, Melbourne, Australia with a stipend of \$.5000 (Rs.2,50,000/-) per annum
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List of Students Passed in GATE Examination in the Year 2011

	P. Ardra	Cleared GATE Exam in the year 2011 GATE Score : 411 Percentile Score : 92.3 All India Rank : 991
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	B. Bakthavachalam	Cleared GATE Exam in the year 2011 GATE Score : 341 Percentile Score : 87.27 All India Rank : 2097
	P. Guhankumar	Cleared GATE Exam in the year 2011 GATE Score : 316 Percentile Score : 84.33 All India Rank : 2719
	S.E. Jeeva	Cleared GATE Exam in the year 2011 GATE Score : 316 Percentile Score : 84.33 All India Rank : 2719

List of Students Opted for their Higher Studies

	R. Arthi	Opted for Higher Studies (M.Tech., / M.S., / M.B.A)
	Amina Hamza	Opted for Higher Studies (M.Tech., / M.S., / M.B.A)
	Gaanappriya Mohan	Opted for Higher Studies (M.Tech., / M.S., / M.B.A)
	Gowrishankar .G .Ram	Opted for Higher Studies (M.Tech., / M.S., / M.B.A)
	P. Ilansuriyan	Opted for Higher Studies (M.Tech., / M.S., / M.B.A)
	V. Jithesh	Opted for Higher Studies (M.Tech., / M.S., / M.B.A)
	S. Judith Grace	Opted for Higher Studies (M.Tech., / M.S., / M.B.A)
	V. Kiruththica	Opted for Higher Studies (M.Tech., / M.S., / M.B.A)

	K. Krithika	Opted for Higher Studies (M.Tech., / M.S., / M.B.A)
	K. Mohana	Opted for Higher Studies (M.Tech., / M.S., / M.B.A)
	R. Mukhil	Opted for Higher Studies (M.Tech., / M.S., / M.B.A)
	R. Premchandar	Opted for Higher Studies (M.Tech., / M.S., / M.B.A)
	R. Sowmya	Opted for Higher Studies (M.Tech., / M.S., / M.B.A)
	M. Raja Durai	Opted for Higher Studies (M.Tech., / M.S., / M.B.A)
	R. Sundaramoorthy	Opted for Higher Studies (M.Tech., / M.S., / M.B.A)

16. Guest Lectures

Association of Biotechnology Department has organized six special guest lecture programmes successfully to scatter the knowledge in Biotechnology.

S.No	Date	Name of the Resource person	Name of the Topic
1.	27.07.2010	Mr.K.M. Johnson Manager, Eruka Forbs, New Delhi.	Water Pollution Technology and its implementation at New Delhi.
2.	28.07.2010	Mr. Sivaramakrishnan Senior Manager, Summer India Textile, Tiruchengode.	Textile Industry Effluent Treatment in Summer India

3.	09.08.2010	Mr.Sudheer Chivukula Sr. Manager – Quality Control, Biocon Limited, Bangaluru.	Biocon : Role in Biopharmaceutical Industry
4.	04.10.2010	Dr.V.V.Subramanian Algal Biotech Industry, Chennai.	Algal Culture Biotechnology
5.	30.12.2010	Dr. Prakash Vincent Manon Maniam Sundaranar University, Thirunelveli.	Nanobiotechnology
6.	24.01.2011	Dr.S. Venkatesan Asst. Professor, Dept. Of Chemical Engineering, Anna University of Technology, Trichy.	Bio-products Separation using Liquid Membranes Technology

17. Industry –Institute Interaction

16.1. Summer India Textile Pvt. Ltd., Tiruchengode

16.2. Parry Agro tea Industry, Valparai

16.3. UPASI Tea Research Institute, Valparai

16.4. Ponni Sugars, Erode

16.5. Thenarasu Natural Organic Farming, Pollachi

18. Biozoom magazine

An inhouse magazine called “Biozoom” is regularly released by the Department of Biotechnology every semester in which research articles, general articles, jokes, drawings and legendary works are compiled. A total of four issues have been released so far. In the academic year, Biozoom Volume 3, Issue No 1 and 2 have been released.



19. Research forum

In order to enhance the research activities of the staff members and the students, “Research Forum” is introduced and being conducted every fortnight interval for the past two years. All the staff members have been presented their research findings and live discussions were arranged. Recent topics such as Nanobiotechnology, Stem cell Biotechnology, Cancer Research, Bioleaching and Gene manipulation were discussed in detail.

Sl. No	Name of the person	Topic of the Prsentation	Date
1.	Dr.P.Ponmurugan	Nanobiotechnology	07/07/2010
2.	Mrs. R. Arut selvi	Curcumin and cancer	02/09/2010
3.	Mrs. B. Mythili Gnanamangai	Enzyme profile of Birds eye spot disease.	15/09/2010
4.	Ms. Manjugarunambika	<i>Pseudomonas</i> Spp. as biocontrol agent and its application	29/09/2010
5.	Ms. S.R.Saranya	Artemisinin- an antimalarial drug from plant	18/10/2010
6.	Mr.D.Saravanan	Comparison of enzyme produced from of <i>Cephaleurous parasiticus</i> and red rust infected leaves.	10/11/2010
7.	Mrs.K.Poongothai	Studies on effectiveness of allopathic and poly herbal drugs on Glycosylated hemoglobin (GHb) and insulin levels in diabetic patients	08/12/2010
8.	Mrs. B.Kalpana	Synthesis of silver and gold nanoparticles using microbes	22/12/2010
9.	Ms.B.Bagyalakshmi	Antimicrobial properties of selected medicinal plants against pyogenic infection	12/01/2011
10.	Mr. R. Subhaiya	Prevalence of leptospiral antibodies on “PUO” Cases	02/02/2011
11.	Mr. I. Muthiah	Understanding structural activity and relationship of T1R2- T1R3- implications for designing novel non caloric sweetner	18/03/2011
12.	Mr.S.Venkatesa prabhu	Indirect bioleaching of lead from Galena by isolated by <i>Leptospillum ferroxidans</i>	31/03/2011
13.	Mr. G. Ayyappadasan	Study of enzyme produced during the degradation of thermal power effluent	27/04/2011
14.	Mrs. M. Ramya	Biodegradation of pharmaceutical waste by composting	27/04/2011
15.	Mrs. S. Anita	Comparative analysis of soy protein mix with ICDS mix for 1-2 yr children’s	27/04/2011
16.	Ms. R. Parimala Devi	Degradation of oil spills using bacteria	27/04/2011
17.	Mr. R. Arul Vel	Nutraceutical Technology	27/04/2011
18.	Mr. M. Abishek	Isolation, Screening, characterization and determination of B-complex vitamins from different sources of meat	27/04/2011
19.	Ms. R. Nithya	Biochemical Characterization of Grain Mold Resistance in	27/04/2011

		Sorghum (<i>Sorghum bicolor</i> (L.) Moench) and Induction of Disease Resistance against Grain Mold in Sorghum	
20.	Ms. R. Olimathy	Semiochemical studies in gall forming insects on <i>Eucalyptus species</i> .	27/04/2011



20. Research activities of the Department:

20.1. Major ongoing Projects

S. No	Name of the Coordinator(s)	Title of the project	Funding Agency	Amount sanctioned (Rs)	Project Duration
1.	Dr.P.Ponmurugan	Effect of Biotic and Abiotic Factor on the growth metabolism of <i>Cephaleuros parasitucues</i> karst, the casual organism of red rust disease in tea plants.	DST, New Delhi. (Ref.: NO. SR/FT/L-105/2006, dated August 03, 2007)	8,76,000/-	3 years (2007-10)
2.	Dr.P.Ponmurugan	Evaluation of <i>Streptomyces</i> spp. for the biological control of stem and root diseases of tea	NTRF, Kolkatta. (Ref. No.: NTRF:17 (215)/09/2104 dated 23 rd March 2010)	4,66,400/-	2 years (2010-12)
3.	Dr.P.Ponmurugan	Antimicrobial and anticancerous activities of Lichens for Biomedical applications	ICMR, New Delhi. (D.O.No.45/12/2008/BMS/TRM dated 23-04-2009).	5,76,000/-	3 years (2009-12)
4.	Dr.P.Ponmurugan Dr.Rama S.Verma (IIT, Chennai)	Evaluation of anti oxidant properties of Lichens obtained from Eastern Ghats for Biomedical applications	ICMR New Delhi. (ICMR No. 59/14/2008/BMS/TRM dated 17-03-2011).	14,24,934/-	3 years (2011-14)

20.2. Minor ongoing Projects

There are two minor projects were received from Tamil Nadu State Council for Science and Technology (TNSCST), Chennai in the academic year 2010-2011.

S. No	Student Name	Guide Name	Project Title	Funding Agency	Amount sanctioned
1.	R.Sowmya (IV B.Tech., Biotech) 	Dr.P.Ponmurugan	Biodegradation of chicken feather using indigenous keratin producing microorganisms	TNSCST, Chennai (Ref No.: TNSCST/SPS/AR/2010-2011 dated 01-02.2011, Project Code No.VS-005)	Rs.6,000/-
2.	Gaanappriya Mohan (IV B.Tech., Biotech) 	Ms.S.R.Saranya	Screening of plant pigments for sensitizing photovoltaic cells	TNSCST, Chennai (Ref No.: TNSCST/SPS/AR/2010-2011 dated 01-02.2011, Project Code No.ECE-01)	Rs.6,000/-

20.3. Summer Research Fellowship

The following three Biotechnology students were received their “Summer Research Fellowship” from Indian Academy of Sciences, Bangaluru. The students were undertaken their project work at the following reputed Institutes for a period of two months.

S.No	Name	Class	Place of work
1.	S.Vahita Banu	IV B.Tech (BT)	Institute of Himalayan Bioresource Technology, Palampur
2.	Jyoti Prasad Kakati	III B.Tech (BT)	University of Agricultural Sciences, Bangaluru.
3.	Adeena Ane Joel	III B.Tech (BT)	Centre Cellular Molecular Biology, Hyderabad

21. Post Graduate Indira Gandhi Scholarship for Single Girl Child Fellowship

Ms.M.Karthika, I M.Sc., Biotechnology has been received Post Graduate “Indira Gandhi Scholarship for Single Child Fellowship” for the year 2010-12 from Indira Gandhi Memorial fund, University Grants Commission (UGC), New Delhi. (Ref. No.: F.8-9/2011 (SR-III) dated 1st March 2011.



22. Details of Patents Filed

A. Indian Patents

1. **Title** : Standardization of isolation techniques for *Cephaleuros parasiticus* Karst, a pathogenic alga in tea plants
Holders: P.Ponmurugan, D.Saravanan and M.Ramya
Ref No. : 1997/CHE/2009 dated. 21.08.2009, Published in “The Patent Office Journal”, Issue No. 44/2009 dated 30-10-2009, Part I, Page No. 8947).
2. **Title** : Screening of biocontrol agents against *Phomopsis theae*, a causal agent of *Phomopsis* canker disease in tea plants
Holders: P.Ponmurugan, and M.Murugesan
Ref No. : 1998/CHE/2009 dated. 21.08.2009, Published in “The Patent Office Journal”, Issue No. 44/2009 dated 30-10-2009, Part I, Page No. 8948).
3. **Title** : Bioseparation of algal and fungal partners from lichens obtained from eastern ghats for biomedical applications
Holders: P.Ponmurugan, G.Ayyappadasan and D.Saravanan
Ref No.: 2666/CHE/2011 dated. 01.02.2011, Published in “The Patent Office Journal”, Issue No. 23/2011 dated 28-05-2011, Part I, Page No. 011).

B. International Patents

- 1) **Title** : Biosynthesis of gold and silver nanoparticles for stability and extended shelf-life of antagonistic activities
Holders : B.Mythili Gnanamangai and P.Ponmurugan
Ref. No.: US/12/916,497 dated 30.10.2010
- 2) **Title** : Preparation of PGPR bioformulation for the biological control of red root rot disease in tea plants.
Holders : B.Manju Karunamkika and P.Ponmurugan
Ref. No.: US/13/092,178 dated 22.04.2011

23. Deposition of Nucleotide sequence at NCBI Gene bank

Deposited the database of nucleotide sequence of the following three fungal pathogens isolated from tea leaf spot disease which is sequenced by 5.8S Ribosomal RNA gene and International transcribed Spacer 2 at NCBI Gene Bank.

1. *Gibberella moniliformis* (Accession Number: GQ 916543)
2. *Colletotrichum gloeosporioides* (Accession Number: GQ 916544)
3. *Alternaria alternata* (Accession Number: GQ 916545)

24. K.S.R. Biofertilizers

In order to maintain soil health and increased productivity of different food and forage crops, K.S.R. Biofertilizers have been prepared for Tamil Nadu rural farmers at the rate of lowest cost. One kg of K.S.R. Biofertilizers is Rs. 25.00/- only. Biofertilizers such as Nitrogen fixers, Potassium solubilizers and Phosphorous mobilizers are being sold to the farmers at the Biotechnology Department especially for cereals such as rice, wheat, sorghum, ragi and maize and pulses such as green gram, black gram, bengal gram and horse gram. The K.S.R. Biofertilizers are exhibited at the time Entrepreneurship Development programme conducted at K.S.R. College campus.



Mrs.Subulakshim Jagadeesan Ex MP, Lion Dr.K.S.Rensagamy, Chairman, K.S.R. Educational Institutions, Dr.K.Thyagarajah, Principal, K.S.R. College of Technology and other VIPs at K.S.R. Biofertilizers Stall Exhibition

Stall Exhibition for K.S.R. Biofertilizers during the occasion of programme called Entrepreneurship Development Programmes at KSR College of Technology premises



Dr.Nammalwar, Natural Scientist, is being honoured with a token of memento by Dr.N.Mathivanan, Professor in Biotechnology, University of Madras, Chennai and Dr.P.Ponmurugan, Head of Biotechnology Department during the occasion of a Conference held at K.S.R. College of Technology, Tiruchengode.

24. Ph.D., Submission

In this academic year, two part-time Research scholars namely Mr.K.M.Johnson and Mr G.Saravanan have submitted their Ph.D., thesis under the guidance of Dr.P.Ponmurugan.

1. Dr.K.M. Johnson (Reg. No. : M748600001) – “Analysis of quality parameters in drinking water of New Delhi” at Vinayaka Missions University, Salem, Tamil Nadu.



2. Dr.G. Saravanan (Reg. No. R - Ph.D - E - 2008-0119) – “Biochemical evaluation of antidiabetic properties of S-allylcysteine of garlic on Streptozotocin induced experimental diabetic rats” at Bharathiar University, Coimbatore, Tamil Nadu.



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DEPARTMENT OF BIOTECHNOLOGY

Annual report for the
academic year 2010-2011

Submitted by

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Professor & Head, Department of Biotechnology

K.S.Rangasamy College of Technology

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