

BHARATHIDASAN UNIVERSITY TIRUCHIRAPPALLI – 620 024 Phone No.: 0431-2407092, Fax : 0431-2407045, Email: <u>office@bdu.ac.in</u> Website : <u>www.bdu.ac.in</u> (Re-Accredited with "A" Grade by NAAC)

Dr.G.Gopinath REGISTRAR

Ref.No29500/E4/2009 dt. 29.05.2018.

То

Ms.Rukmani Srinivasan Under Secretary University Grants Commission Bahadhurshah Zafar Marg New Delhi – 110 002.

Sir,

 Sub: UGC - Innovative Programme, Depratment of Plant Science M.Sc., Biodiversity and Bioprospecting, Department of Plant Science – Forwarding of Audit Certificate, Statement of Expenditure & Audited Utilization Certificate - Reg.
 Ref: UGC Sanction Lr.No.F.14-4/2010(Inno/ASSIST) dated 14.11.2010.

I am forwarding herewith the Audit Certificate, Statement of Expenditure & Audited Utilization Certificate for the period from 01.04.2015 to 31.03.2016, in respect of the UGC Innovative Programme – M.Sc., Biodiversity and Bioprospecting received from Dr. M.B.Viswanathan, Professor, Department of Plant Science, Bharathidasan University, Tiruchirappalli – 620 024, for your kind consideration.

Yours faithfully,

REGISTRAR

Encl: As Above

Copy to:

Dr. M.B.Viswanathan, Professor, Department of Plant Science, Bharathidasan University, Tiruchirappalli – 620 024

LOCAL FUND AUDIT DEPARTMENT

From Thiru.V.Raja, M.Sc., M.Phil., Assistant Director(i/c), Local Fund Audit, Bharathidasan University, Tiruchirappalli - 620 024. To The Registrar, Bharathidasan University, Tiruchirappalli - 620 024.

Rc. No.58/A2/2018, Dated:22.05.2018

Sir,

Sub	•	Audit Certificate - Bharathidasan University – UGC Project entitled, "UGC-Innovative Programme" – Period from 01.04.2015 to 31.03.2016 – Dr.M.B.Viswanathan, Department of Plant Science, Bharathidasan University - Statement of Expenditure - Audit Certificate requested- regarding.
Ref	:	Your Office Letter Ref. No.29500/E-4/2009, Dated: 03.04.2018.

Audit Certificate requested in the reference cited towards the expenditure for the period from 01.04.2015 to 31.03.2016 under UGC operated by **Dr.M.B.Viswanathan**, **Department of Plant Science**, Bharathidasan University, Tiruchirappalli - 620 024, is sent herewith.

Assistant/Director(i/c).

Local Fund Audit. Bharathidasan University, Tiruchirappalli - 620 024

Encl: Audit Certificate

25.16

Copy to

The Finance Officer, Bharathidasan University, Trichy-24.
 Dr.M.B.Viswanathan, Department of Plant Science, Bharathidasan University, Tiruchirappalli - 620 024.

R.C.No:58/A2/2018 Dt.22.05.2018

Office of Assistant Director. Local Fund Audit, Bharathidasan University, Tiruchirappalli -24.

AUDIT CERTIFICATE

As per the final statement of Accounts enclosed and an examination of records and registers, it is ascertained in audit that the total grant of **Rs.56,00,000/- (Rupees Fifty Six Lakhs only)** was sanctioned by UGC in letter No-**F.14-4/2010(Inno/ASSIST) Dated 14.11.2010,** for the project entitled **"UGC-Innovative Programme"** to **Dr.M.B.Viswanathan, Department of Plant Science,** Bharathidasan University, Trichy-24, during the period from 01.04.2015 to 31.03.2016.

It is certified that on an examination of relevant records it is ascertained in audit that out of the total grant received **Rs.39,80,000/-**(**Rupees Thirty Nine Lakhs Eighty Thousand only**) a total sum **Rs.39,20,954/-** (**Rupees Thirty Nine Lakhs Twenty Thousand Nine Hundred and Fifty Four only**) have been incurred as expenditure for the project during the period from 01.04.2015 to 31.03.2016 as per the conditions laid down by the UGC and detailed in the final statements of expenditure enclosed.

The above Audit certificate is issued subject to the conditions that

On a cross verification of the expenditure incurred, the balance amount of **Rs.59,046**/- is available under Recurring and Non-Recurring Heads of the first installment under Innovative Programme scheme is adjusted towards salary expenses of Dr.S.R.Sivakumar. Assistant Professor. for the period from 26.12.2012 to 31.03.2016. After adjustment the balance amount of **Rs.21,56,206**/-(**Rupees Twenty One Lakhs Fifty Six Thousand Two Hundred and Six only**) towards salary expenses of Dr.S.R.Sivakumar. Assistant Professor, for the period from 26.12.2016 has to be reimbursed by the UGC.

Assistant Director(i/c), Local Fund Audit, Bharathidasan University, Trichy-24. ANNEXURE-VII

University/?nstitution Bharathidasan University, Tiruchirappalli, Tamil Nadu, India, Sanction letter No. and date F.14-4/2010(Inno/ASSIST)/dt.14.11.2010 Statement of actual Expenditure from 01.04.2015 to 31.03.2016 Amount in Rupees

Item of Expenditure	Total grant approved	Actual grant		Actual Exper (bills act	Actual Expenditure incurred (bills actually paid)	pe		Total Expenditure	Excess/Saving (difference of	Remarks
		received	2011	2012	2013	2014	2015	2011To	Col.3 and 8)	
			To	To	To	To	To	2015		
			2012	2013	2014	2015	2016			
NON-RECURRING (As approved by UGC)	-									
Equipment	30,00,000	30,00,000	lin	23,85,865	6,14,135	Nil	Nil	20,00,000	Nil	
Books and Journals	2,00,000	2,00,000	lin	32,665	77,274	Nil	Nil	1,09,939	(+)90,061	
Seminars/Conference at National level	1,00,000	1	Nil	IIN	lin	Nil	Ni	IIN	lin	
Minor Repair/Facilities	1,00,000	1,00,000	Nil	23,017	41,656	Nil	Nil	64,673	(+)35,327	
Minor Equipment	3,00,000	3,00,000	Nil	IIN	3,00,000	Nil	Nil	3,00,000	Nil	
RECURRING (As approved by UGC)										
Working Expenses/ Contingency (Rs.1.20 lakh	6,00,000	1,20,000	84,313	35,656	73,887	IIN	IZ	1,93,856	(-)73,856	
Consumables and Glassware (Rs.0.6 lakh p.a.)	3,00,000	60,000	IIN	60,000	60,000	Nil	ίΝ	1,20,000	(-)60,000	
Travel and Fields Trips (Rs.0.4 lakh p.a.)	2,00,000	40,000	IIN	IIN	Nil	Nil va	Ni	IIN	(+)40,000	
Hiring Services of Technical/ Secretarial Assistance (Rs.0.4 lakh p.a.)	2,00,000	40,000	30,569	Nil	Nil	IIN	in Z	30,569	(+)9,431	
Guest and Visiting Faculty (Rs.1.20 lakh p.a.)	6,00,000	1,20,000	23,642	78,275	IIN	liΝ	IIN	1.01,917		
TOTAL	56,00,000	39,80,000	1,38,524	26,15,478	11,66,952	Nil	IIN.	39,20,954	(+)59046	

Certified that the grant has been utilized for the purpose for which it was sanctioned and in accordance with terms and conditions attached to the grant. It as a result of check on audit objection, some irregularities are noticed at a later stage, action will be taken for refund, adjustment or regularization.

30 Professor Dr. M. B. VISWANATHAN e 6

Professor Jf. W. D. VIO WAWAT LITAN Co-ordinator, UGC Innovative Programme Centre for Research & Development of Stiddha-Ayurveda Medicines (CRDSAM) Department of Plant Science Bharathidasan University, Triuchirappalli-24.

FINANCE OFFICER BHARATHIDASAN UNIVERSITI TIRUCHIRAPPALLI,

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Signature

No.

Registrar/Principal with Seal

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Annexure-VIII

UNIVERSITY GRANTS COMMISSION UTILIZATION CERTIFICATE

It is certified that the amount of Rs.39,20,954/- (Rupees thirty nine lakhs twenty thousand nine hundred and fifty four only) out of the grant of Rs.39,80,000/- (Rupees thirty nine lakhs eighty thousand only) sanctioned to M.Sc. Biodiversity and Bioprospecting by the University Grants Commission vide its letter No. F.14-4/2010(Inno/ASSIST)/dt.14.11.2010 towards first Installment under Innovative Programme scheme has been utilized for the purpose for which it was sanctioned and in accordance with the terms and conditions as laid down by the Commission.

It is certified that an amount of Rs.22,15,252/- (Rupees twenty two lakhs fifteen thousand two hundred and fifty two only) has been spent in accordance with the terms and conditions as laid down by the Commission towards salary of Dr. S.R. Sivakumar, Assistant Professor, from 26.12.2012 to 31.03.2016 under Innovative Programme scheme as sanctioned to M.Sc. Biodiversity and Bioprospecting by the University Grants Commission vide its letter No. F.14-4/2010(Inno/ASSIST)/dt.14.11.2010.

Balance amount of Rs.59,046/- (Rupees fifty nine thousand forty six only) available under Recurring and Non-Recurring Heads of the first Installment under Innovative Programme scheme is adjusted towards salary expenses of Dr. S.R. Sivakumar, Assistant Professor, for the period from 26.12.2012 to 31.03.2016.

After adjustment, it is requested to reimburse the balance amount of **Rs.21,56,206/- (Rupees twenty one lakh fifty six thousand two hundred and six only)** towards salary expenses of Dr. S.R. Sivakumar, Assistant Professor, for the period from 26.12.2012 to 31.03.2016 by the University Grants Commission, New Delhi. If as a result of check or audit objection some irregularities are noticed at a later stage, action will be taken for refund, adjustment or regularization.

Signature Registrar/Principal with seal SHARATHIDASAN UNIVERSITY IRUCHIRAPPALLI 620 024

Signature (04 BO18

Coordinator of the programme/ Head of the Department (As the case may be)

Prof. Dr. M.B. VISWANATHAN COORDINATOR UGC INNOVATIVE PROGRAMME DEPARTMENT OF PLANT SCIENCE BHARATHIDASAN UNIVERSITY TIRUCHIRAPPALLI-620 024. S. M. Lindow Signature

Finance Officer with seal FINANCE OFFICER BHARATHIDASAN UNIVERSITY TIRUCHIRAPPALLI.

Signature, Charted Accountant with seal and Registrar No. (If the accounts were audited prior to the audit of Statutory Auditorstant Director of Local Fund Audit

Audit Unit Bharathidasan University

Trichirappalli-620 024. Note: The University/Institution will submit an audited statement of accounts of the University/Institution are audited.

Assistant Dire

Local Fund Audit Audit Unit Bharathidasan University Trichirappalli - 620 024

ANNEXURE-V

UNIVERSITY GRANTS COMMISSION PROGRESS REPORT

PROFORMA FOR SUBMISSION OF THE REPORT OF THE PROGRESS AND ACHIEVEMENTS MADE UNDER THE UGC ASSISTANCE FOR INTRODUCTION OF COURSES IN INNOVATIVE PROGRAMME.

INPUT DATA

PERIOD OF REPORT: From 01.04.2011 To 31.03.2016

I.GENERAL INFORAMTION

1. Name of the University/Institute/College with full address, telephone, fax, e-mail telegram:

Bharathidasan University, Tiruchirappalli – 620024, Tel:0431 2407092, Fax: 0431 2407045, Email: reg@bdu.ac.in.

2. Level of the Course proposed and duration by the university:

b) Post-Graduate - Yes, Two years

3. Level of the Course and duration approved by the UGC.

Post-Graduate, Two years

4. Title of the Innovative Programme approved by the UGC and duration.

M.Sc. Biodiversity and Bioprospecting & Two years

5. Department(s) involved in implementing the Course/Programme approved by the UGC. Full address, telephone, fax, e-mail, Telegram:

Department of Plant Science, Bharathidasan University, Tiruchirappalli – 620024, Tel:0431 2407061, Fax: 0431 2407045, Email: vinaabdu@gmail.com

6. Name of the nodal Department which is coordinating/implementing the course/programme and noted by the UGC:

Department of Plant Science, Bharathidasan University, Tiruchirappalli - 620024.

- II FACULTY INVOLVED AND COORDINATOR
- 7. a) Name of the Coordinator of the Course/ Programme, Department with his/her designation

Dr. M.B. Viswanathan, Professor and Head, Department of Plant Science

b) Areas of specialization

Plant Taxonomy, Plant Conservation, Plant Tissue Culture, Molecular Biology, Ethnobotany, Medicinal Plants, Pharmacognosy, Drug Discovery and Development, Transfer of Technology Protocols and Economic Improvement of Tribal and Rural Sectors

c) Date of Superannuation

30.06.2021

- d) List of publication in referred journals: 72
- 72. Muniappan, V., S. Palanivel, S. Parvathi, M.B. Viswanathan, and R. Rajesh. 2016. Analysis of Seed Proteins in Groundnut Cultivars (*Arachis hypogaea* L.). International Journal of Engineering Research and Application 6(7): 06-10.
- 71. Packia Lekshmi, N. C. J., S. Viveka, M. B. Viswanathan, T. Mini Shobi, S. Jeeva and J. RajaBrindha. 2015. High performance thin layer chromatography profile of quercetin in three cultivars of *Allium cepa* and its antimicrobial activity against bacterial cultures. Journal of Pharmaceutical and Clinical Research 8(3): 213-218.
- 70. Packia Lekshmi, N. C. J., S. Viveka, M. B. Viswanathan, S. Jeeva and J. Raja Brindha. 2015. Phytochemical screening and *in vitro* antibacterial activity of *Allium sativum* extracts against bacterial pathogens. Journal of Science 5(5): 281-285.
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- 66. Viswanathan, M.B., C. Rajasekar, P. Sathish Kumar, and R. Rajesh. 2014. Population ecology of an endemic and endangered tree, *Memecylon subcordatum*, from Kalakkad-Mundanthurai Tiger Reserve in India. J. Swamy Bot. Cl. 29: 49-62.

- 65. Sathiyanarayanan, G., Vignesh, V., Saibaba, G., Vinothkanna, A., Dineshkumar, K., Viswanathan, M.B., Selvin, Joseph. 2014. Synthesis of carbohydrate polymer encrusted gold nanoparticles using bacterial exopolysaccharide: A novel and greener approach. RSC Advances 4: 22817-22827.
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- 59. Viswanathan, M.B. and U. Manikandan. 2009. Rediscovery of Syzygium courtallense (Gamble) Alston (Myrtaceae) and Dioscorea spicata Roth (Dioscoreaceae), from the Kalakkad
 Mundanthurai Tiger Reserve in India. Bull. Bot. Surv. India 50: 157-160.
- 58. Ramachandran, A. and M. B. Viswanathan. 2009. A new species of *Gymnema* (Asclepiadaceae) from the Kollihills in Peninsular India. Adansonia 31(2): 407-411.
- 57. Tamilvanan, S., G.S. Bangale, J. Jeya Ananthi, V. Sivakumar, G. Vinothapooshan, M. Palanivelu and M.B. Viswanathan. 2009. Carvedilol-loaded microadhesive buccal tablets: Influence of various Mucosdhesive polymers on drug release behavior. PDA J. Pharm. Sci. Technol. 63(3): 1-11.
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- 55. Viswanathan, M.B. & U. Manikandan. 2009. *Teucrium ramaswamii* sp. nov. (Lamiaceae) from India. Nordic J. Botany 27: 86-89.

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- Viswanathan, M.B. and U. Manikandan. 2008. A new species of *Hedyotis* (Rubiaceae) from India. Edinburgh J. Botany 65 (3): 387–392.
- 52. Viswanathan, M.B. and U. Manikandan. 2008. A new species of *Syzygium* (Myrtaceae) from the Kalakkad-Mundanthurai Tiger Reserve in Peninsular India. Adansonia 30 (1): 113-118.
- 51. Viswanathan, M.B., U. Manikandan and A.C. Tangavelou. 2005. A new species of *Neurocalyx* (Rubiaceae) from Peninsular India. Nordic J. Botany 23(4): 389-394.
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- 46. Viswanathan, M. B., S. Ramakrishnan, B. Jeyasuresh, N. Andal and M. Venkatesan. 2004. Amendment to an endemic species *Dalbergia tinnevelliensis* Thoth. Family Fabaceae on its rediscovery from Kalakkad-Mundanthurai Tiger Reserve, India. J. Bombay Nat. Hist. Soc. 101 (1): 191-194.
- 45. Viswanathan, M.B. & U. Manikandan. 2003. A new species of Balsaminaceae, *Impatiens tirunelvelica*, from Peninsular India. Bull. Bot. Surv. India 45(1-4): 189-194.
- 44. Viswanathan, M. B. and N. Ramesh. 2003. Rediscovery of *Aerva wightii* (Hook.f.) Amaranthaceae, an endemic, presumed extinct species, from Tirunelveli district of Tamil Nadu, India. J. Bombay Nat. Hist. Soc. 100(2&3): 635-637.

- 43. Viswanathan, M. B., U. Manikandan & A.C. Tangavelou. 2003. A new species of *Aganope* (Fabaceae) from the Southern Western Ghats, Peninsular India. Adansonia 25(2): 205-210.
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- 40. Viswanathan, M. B., N. Ramesh, M. Maridass & U. Manikandan.2002. Rediscovery of a critically endangered species, *Phyllanthus beddomei* (Gamble) Mohanan, Euphorbiaceae, from Kalakkad-Mundanthurai Tiger Reserve in India. J. Bombay Nat. Hist. Soc. 99(3): 560-562.
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- 31. Thangadurai, D., M.B. Viswanathan and N. Ramesh. 2001. The chemical composition and nutritional evaluation of *Canavalia virosa*: A wild perennial bean from Eastern Ghats of Peninsular India. European Food Research and Technology 213(6): 456-459.
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- 23. Viswanathan, M.B. and U. Manikandan. 2001. *Polyalthia tirunelveliensis* (Annonaceae), a new species from Peninsular India. Kew Bull. 56: 217-221.
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- 20. Thangadurai, D. and M. B. Viswanathan. 2000. Antiulcerogenic activity of *Indigofera longeracemosa*. Indian J. Pharmaceutical Sci. 62(4): 287–290.

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- Ranjithakani, P., S. Murugan, M.B. Viswanathan, S. Geetha and G. Lakshmi. 1992. Notes on three Rubiaceous species as new records to the Eastern Ghats in Peninsular India. Indian J. Forestry 13(2): 273-275.
- Viswanathan, M.B. and K.K. Lakshmanan. 1991. Taxonomy of *Neonotonia wightii* (Wight & Arn.) Lackey (Papilionaceae). J. Bombay Nat. Hist. Soc. 88(1): 137-138.
- Viswanathan, M.B. 1990. On the occurrence of *Ventilago goughii* Gamble (Rhamnaceae) A rare/threatened species- in the Eastern Ghats. Bull. Bot. Surv. India 32(1-4): 181-182.
- Viswanathan, M.B. 1990. *Dalbergia congesta* Graham ex Wight & Arn. (Papilionaceae) A new record from North Arcot District to the Eastern Ghats. Bull. Bot. Surv. India 32(1-4): 170-172.

- Viswanathan, M.B. and K.K. Lakshmanan. 1990. *Memecylon talbotianum* Brandis (Melastomataceae) - A new record for the Eastern Ghats of Peninsular India. Indian J. Forestry 13(2): 174-175.
- Viswanathan, M.B. 1990. Ventilago gamblei Suesseng.(Rhamnaceae) A rare species from North Arcot District, Tamil Nadu. J. Econ. Tax. Bot. 14(1): 105-107.
- Kalyani, K., K.K. Lakshmanan and M.B. Viswanathan. 1989. Medico-botanical survey of plants in Marudhamalai Hills of Coimbatore District, Tamil Nadu. J. Swamy Bot. Cl. 6(3 & 4): 89-96.
- Viswanathan, M.B. 1989. Ethnobotany of the Malayalis in the Yelagiri hills of North Arcot District, Tamil Nadu. J. Econ. Tax. Bot. 13(3): 667-671.
- Viswanathan, M.B. 1989. A new species of *Asplenium* L. (Aspleniaceae) from Javadi hills of North Arcot District, Tamil Nadu, India. Curr. Sci. 58(6): 318-319.
- Viswanathan, M. B., K.K. Lakshmanan and N. P. Balakrishnan. 1988. The confusion regarding *Phyllanthus wightianus* Muell. Arg. (Euphorbiaceae). J. Econ. Tax. Bot. 12 (2): 342 344.
- Hosagoudar, V. B., K. K. Lakshmanan and M. B. Viswanathan. 1988. Meliolaceae of South India - III. Indian J. Bot. 11(2): 185-187.
- e) Full address with telephone, Fax-Nos., e-mail.

Dr. M. B. Viswanathan Professor and Head Department of Plant Science Bharathidasan University Tiruchirappalli – 620024 Tel: 431 2407061 Cell: 9443229677 Fax: 431 2407045 e-mail:vinaabdu@gmail.com

- Name of the other faculty members in the Nodal Departments with the information as at 7 (a) to (d)
 - 1. Prof. B.D. Ranjitha Kumari
 - > Areas of specialization : Plant Stress Physiology and Biochemistry, Medicinal

Plant Biotechnology and Molecular Biology

- Superannuation date : 16.07.2019
- **Experience with years** : 27 years of research and 16 years of teaching experience.

- 1. Settu, A., Ranjitha Kumari, B.D. and Jeyamary, R. 1996. *In vitro* selection for salt tolerance in *Trigonella foenum-graecum* using callus and shoot tip culture. J. Mendel. 13, 91 92.
- Ranjitha Kumari, B.D. and Veeranjaneyulu, K. 1996. Modulation in levels of inorganic ions, dry matter and nitrogen fractions in mulberry under different moisture regimes. Annali Di Bot. Vol. LIV, 189-192.
- 3. Settu, A. and Ranjitha Kumari, B.D. 1998. Isolation and characterization of salt tolerant cell lines of Soybean. Physiol. Mol. Biol. Plants. 4, 189 192.
- 4. Ranjitha Kumari, B.D. 1998. The influence of water deficit stress on some enzymes of nitrogen metabolism in mulberry (*Morus alba* L.) Physiol. Mol. Biol. Plants. 4, 59 62.
- 5. Settu, A. and Ranjitha Kumari, B.D. 1999. *In vitro* regeneration from leaf explants of Soybean (*Glycine max* (L.) Merr.). Plant Tissue Culture. 9(1), 11 16.
- Velayutham, P. and Ranjitha kumari, B.D. 2003. Direct shoot regeneration from leaf explants of Chicory (*Cichorium intybus* L.). Plant Cell Biotechnology and Molecular Biology 4(3&4), 125-130.
- Ranjitha kumari, B.D., Settu, A. and Sujatha, G. 2005. Agrobacterium mediated genetic transformation in soybean (*Glycine max* L.) Merr). J. Plant Cell Biotech. Mol. Biol. 5(3&4): 165 - 168.
- Vijaya Kumar, J. and Ranjitha Kumari, B.D. 2005. Effect of phytohormones on multiple shoot induction in cv. NARI -6 of safflower (*Carthamus tinctorius* L.) J. Plant Biotechnol. Vol. 7(3). Pp. 149-153.
- Nandagopal, S. and Ranjitha Kumari B.D. 2006. Adenine sulphate induced high frequency shoot organogenesis in callus and *in vitro* flowering of *Cichorium intybus* L cv. Focus- a potent medicinal plant. Acta Botanica Slovenica. 87: 415-425.
- Ganesan, M., Chandrasekar, M., Ranjitha Kumari, B.D. and Jayabalan, N. 2006. Somatic embryogenesis and plant regeneration of okra (*Abelmoschus esculentus* (L.) Moench) through suspension culture. Biologia Plantarum. 27:315-321.
- Nandagopal, S. and Ranjitha Kumari B.D. 2006. Influence of Exogenous hormones on development of root culture in *Cichorium intybus* L cv. Focus- J. Central European Agriculture. 27:231-235.

- Sujatha G. and Ranjitha Kumari B.D. 2007. Effect of Phytohormones on multiple shoot induction and plantlet regeneration in *Artemisia vulgaris* L. Acta Physiologiae Plantarum 29(3): 198-195.
- Sujatha G, Jayabalan N and Ranjitha Kumari BD. 2007. Rapid *in vitro* micropropagation of *Cicer arietinum* L. Hort. Sci. 34(1): 1-5.
- 14. Nandagopal S. and **Ranjitha Kumari BD.** 2007. Enhancement of inulinase production from chicory and fenugreek rhizosphere soil. Am. Eur. J. Agric. Environ. Sci. 1(3): 225-228.
- 15. Sujatha G. and Ranjitha Kumari B.D. 2007. High-frequency shoot multiplication in *Artemisia vulgaris* using thidiazuron. Plant Biotechnology Reports. 3:159-164.
- 16. Nandagopal S. and **Ranjitha Kumari BD.** 2007. Effectiveness of auxin induce *invitro* root culture in Chicory. Central European Agriculture 8(1): 73-80.
- Vijaya Kumar and Ranjitha Kumari, B.D. 2007. Obtaining of plants resistant to *Alternaria carthami* via organogenesis and somatic embryogenesis occurred Plant Cell Tissue and Organ Culture. Dot. 10.1007/s 11240-008-9346-4.
- 2. Dr. A. Lakshmi Prabha
 - Areas of specialization : Plant Tissue Culture
 - Superannuation date : 28.04.2025
 - > Experience with years :19 years of research and 10 years of teaching experience

- Vasanth K, Lakshmi Prabha A, Jeyakumar M, Muthusamy A and Jayabalan N (2002) In vitro plant regeneration from shoot tip explants of Panicum sumatrence. Plant Cell Biotechnology and Molecular Biology 3 : 111 – 116.
- Vasanth K, Lakshmi Prabha A, Jeyakumar M and Jayabalan N (2003) In vitro seed formation in Panicum sumatrence. Physiol. Mol. Biol. Plants 9: 291 – 294.
- 3. Vasanth K, Lakshmi Prabha A, Jayabalan N (2004). Multiple shoot induction and plant regeneration of peanut (Arachis hypogaea L), Plant Cell Biotech Mol Biol. 5 : 892 894.

3. Dr. M. Sathiyabama

- > Areas of specialization : Plant and Microbial Biotechnology
- Superannuation date : 04.04.2025
- **Experience with years** : 17 years of research and 9 years of teaching experience.

- M.Sathiyabama, R.Balasubramanian. 1991. Chitinases and glucanases in Arachis hypoga ea, L. in detached leaves infected with Puccinia arachidis Speg. J. Plant Disease and Protection: 98: 305-316.
- M. Sathiyabama, R. Balasubramanian, 1998. Chitosan induces resistance components in Arachis hypogaea against the leaf rust caused by *Puccinia arachidis* Speg. Crop Protection : 17; 307-313.
- M.Sathiyabama, R. Balasubramanian, 2000. Partial purification and properties of β-1,3 glucanases from intercellular washing fluid of groundnut leaves against the rust disease caused by *Puccinia arachidis* Speg. Canadian J. of Botany: 78: 168-174.
- Sonali, P. Barwe*, M.Sathiyabama*, and C. Jayabaskaran.2001. Induction of chitinase activity by exogenous cytokinins in excised dark grown cucumber cotyledons: Involvement of calcium and staurosporine sensitive protein kinase in cytokinin signaling. J. Plant Physiol. 158: 1-7.
- 5. Sonali P. Barwe, M.Sathiyabama, C. Jayabaskaran, 2001. The requirements for calcium, protein phosphorylation and concurrent protein synthesis for cytokinin signaling of acidic chitinase transcript accumulation in *Cucumis sativus* L. J. Plant Physiol. 158: 1117-1123.

4. Prof. N. Jayabalan - BSR Faculty Fellow

A	Areas of specialization	: In vitro studies in crop and medicinal plants and disease
		resistant in groundnut.
\triangleright	Superannuation date	: 18.01.2014
A	Experience with years	: 29 years of research and 20 years of teaching experience.

Best Publications only:

- 1. Jayabalan, N. and Rao, G. R. 1987. Gamma radiation induced cytological abnormalities in *Lycopersicon esculentum* Mill. Var. *Pusa Ruby*. Cytologia 52: 1-4.
- 2. Jayabalan, N and Rao, G. R. 1987. Effect of physical and chemical mutagens on chiasma frequency in *Lycopersicon esculentum* Mill. Caryologia 40: 115-121.
- 3. Jayabalan, N. and Rao, G. R. 1987. Effect of NMU and EMS on chromosomal behavior of Lycopersicon esculentum Mill. During meiosis. Cytologia 52: 813 819.

- Jayabalan, N. and Rao, G. R. 1988. Cytological effects of single and Combination treatments of physical and chemical mutagens on tomato (*Lycopersicon esculetum* Mill). Cytologia 53: 601-605.
- 5. Jayabalan, N. and Rao, G. R. 1988. Induced chlorophyll mutation studies in tomato. Genet.Agararia. 42: 268-272.
- Venkatachalam, P. and Jayabalan, N. 1991. Induction of mutants in Zinnia elegans Jacq. Mutat.Breed.News Let. 38: 10.
- 7. Jayabalan, N. and Rao, G. R. 1994. Induced mutants in Tomato. Muta. Breed. News let. 41:12.
- 8. Venkatachalam, P. and Jayabalan, N. 1996. Selection and regeneration of groundnut plants resistance to the pathotoxic culture filtrate of *cercosporidium personatum* through tissue culture technology. Appl.Biochem.Biotech. **61:** 351-364.
- 9. Venkatachalam, P. and Jayabalan, N. 1996. *In vitro* flowering in cotyledon and stem node explant cultures of groundnut (*Arachis hypogaea L*.). Korean J. Plant Tiss. Cult. 239 -313.
- Venkatachalam, P. and Jayabalan, N. 1996. In vitro screening of groundnut (Arachis hypogaea L) cell lines and regeneration of plants resistant to pathotoxic culture filtrate of Cercosporididum personatum. Plant Tiss. Cult. 6; 73-82.
- 11. Jeyamary. R and Jayabalan, N. 1997. Influence of growth regulators on somatic embryogenisis in *Sesamum indicum L*. Plant Cell, Tiss. Org. Cult. 46: 67-70
- Jawahar, M. Varisai Mohamad, S. and Jayabalan, N. 1997. A simple protocol for efficient plantlet regeneration from tomato (*Lycopersicon esculentum*.Mill) Hypocotyl derived callus. Plant Tissue Cult. 7: 35-39.
- Venkatachalam, P., Geetha, N., Jayabalan, N. 1998 Induction of somatic embryos and plantlet development in cell suspension culture of *Arachis hypogaea* L. Breeding Sci. 48 (3): 231 -236.
- Venkatachalam, P., Geetha, N., Kavi kishor, P. B., Thangavelu, M. and Jayabalan, N. 1999.
 A rapid protocol for somatic embryogenesis from immature leaflets of groundnut (*Arachis hypogaea* L.). *In vitro* Cellular Developmental Biology. 35: 409 412.

- 15. Venkatachalam, P. Geetha, N. Jayabalan, N. and Saravanababu, A. 1999. Effects of Gammarays irradiation and Ethyl methane sulphonate on *in vitro* regeneration in Groundnut (*Arachis hypogaea* L.). Plant Tissue cult. 9(2): 113-120.
- Stephen, R. and Jayabalan, N. 2000. Artificial seed production in Coriander (*Coriandrum sativum L.*) Plant Tissue Cult. 10(1): 45 49.
- Palanivel, S. and Jayabalan, N. 2000. Correlative effect of adinine sulphate and Benzyl amino purine on the regeneration potentiality in cotyledonary explants of Ground nut (*Arachis hypogaea* L.). J.of Plant Biotechnology. 2(1): 21 - 24.
- Thiruvengadam, M. and Jayabalan, N. 2000. Mass propagation of Vitex negundo. In vitro.
 J. Plant Biotech. 2 (3): 151 155.
- 19. Thiruvengadam, M. and Jayabalan, N. 2001. Regeneration of Plantlets from Cotyledon explants of Lablab bean (*Lablab purpureus* (L.) Prain). Plant Tissue Cult. 11 (1): 41 45.
- 20. Muthusamy, A & N. Jayabalan. 2003. Induced alterations in oil, lipid and fatty acid composition in the mutant seeds of *Gossypium hirsutum* L. Cotton Science 15 (2): 113-119.
- Jayabalan, N., P. Anthony, M.R. Davey, J.B. Power, and K.C. Lowe (2004). Haemoglobin promotes somatic embryogenesis in peanut cultivars. Artificial cells, Blood substitutes and Biotechnology. 32 (1): 147 – 157
- 22. Varisai Mohamed, S., C.S. Wang, M. Thiruvengadam, and N. Jayabalan (2004). In vitro plant regeneration via somatic embryogenesis through cell suspension cultures of horse gram Macrotyloma uniflorum (Lam.) Verdc.). In vitro cell Devep. Biol. Plant. 40 : 284 289.
- 23. Ganesan M, and N. Jayabalan (2004). Evaluation of haemoglobin (erythrogen) for improved somatic embryogenesis and plant regeneration in cotton (*Gossypium hirsutum* L. cv. SVPR 2) Plant Cell Reports 23 : 181 187.
- 24. Ganesan, M. and N. Jayabalan (2004). Haemoglobin enhances somatic embryogenesis and plant regeneration. Agricell Report, 43 (5) : 36.
- 25. Thiruvengadam M, Varisai Mohamed S, Yang CH, and N. Jayabalan (2006) Development of an embryogenic suspension culture of bitter melon (*Momordica charantia* L.) Scientia Horticulturae 109 (2006) 123–129.

- 26. Ganesan, M. and N. Jayabalan (2006) Isolation of disease tolerant cotton (*Gossypium hirsutum* L. cv. SVPR 2) plants by screening somatic embryos with fungal culture filtrate. Plant Cell Tissue and Organ Culture, 87 : 273 284.
- 27. Muthusamy, A, Vasanth, K., Sivasankari, D., Chandrasekar, B.R., and Jayabalan, N. (2007) Effect of mutagens on somatic embryogenesis and plant regeneration in groundnut. Biologia Plantarum 51: 430-435.
- Ganesan. M., Chandrasekar. R., Ranjitha Kumari, B.D., and N Jayabalan (2007) Somatic embryogenesis and plant regeneration of okra (*Abelmoschus esculentus* (L.) Moench) through suspension culture. Biologia Plantarum, Biologia Plantarum, 51 (3): 414 - 420.
- 29. P. Baskaran and N. Jayabalan (2007). Rapid micropropagation of *Psoralea corylifolia* L. using nodal explants cultured in organic additive-supplemented medium. J. Hort. Sci & Biotechnol., 82: 908-913.
- 30. K. Ganesh kumari, M. Ganesan and N. Jayabalan (2008). Somatic organogenesis and plant regeneration in *Ricinus communis*. Biologia Plantarum. 52 (1): 17-25.
- 5. Prof. M. V. Rao Honorary Professor
 - > Areas of specialization : Plant Biotechnology, Plant Ecology & Mycorrhizal symbiosis.
 - Superannuation date : 27.01.2014
 - > Experience with years : 30 years of research and 21 years of teaching experience

- 1. Senthil Kumar, M. and Rao, M.V. 2007. *In vitro* micropropagation of *Heliotropium indicum* Linn.-an Ayurvedic herb. Indian J Biot.6:245-249.
- 2. G.Sivakumar, S.Alagumanian and M.V.Rao. 2006. High frequency *in vitro* multiplivation of *Centella asiatica*. An important industrial medicinal herb. Eng.Life Sci.6: 597-601
- S. Alagumanian, V.Saravanaperumal, R.Balchandar, K.Rameshkannan and M.V.Rao. 2004. Plant regeneration from leaf and stem explants of *Solanum trilobatum* L. Curr.Sci. 86(11): 1478-1480.
- 4. N. Komalavalli and M.V.Rao. 2000. *In vitro* micropropagation of *Gymnema sylvestre*-A multipurpose medicinal plant. Plant Cell, Tissue and Organ Culture 61:97-105.
- 5. N.Geetha, P.Venkatachalam, G.R.Rao and M.V.Rao.1999. An efficient *in vitro* method of mass propagation of *Eucalyptus tereticornis* Smith. Physiol.Mol.Biol.Plants 5:77-82.

- 6. S.Arumugam and M.V.Rao.1998.Regeneration of plantlets from immature leaflet-derived callus cultures of *Aegle marmelos* (L.) Corr. Plant Tissue Cult.8: 77-82.
- 7. S.Arumugam and M.V.Rao.1996. In vitro regeneration of plantlets directly from epicotyl explants of *Aegle marmelos* (L.) Corr. Int.J.Mendel.13: 81-82.
- 8. S.Arumugam and M.V.Rao.1996. *In vitro* production of plantlets from cotyledonary node cultures of *Aegle marmelos* (L.) Corr. Adv.Pl.Sci.9: 181-186.
- 9. R.K.Dixon, M.V.Rao and V.K.Garg. 1994. *In situ* and *in vitro* response of mycorrhizal fungi to salt stress. Mycorrhiza News 5:6-8.
- 10. R.K.Dixon, M.V.Rao and V.K.Garg. 1993. Water relations and gas exchange of mycorrhizal *Leucaena leucocephala* seedlings. Trop.For.Sci.6: 542-552.
- 11. R.K.Dixon, M.V.Rao and V.K.Garg.1993. Salt stress affects *in vitro* growth and *in situ* symbioses of ectomycorrhizal fungi. Mycorrhiza 3:63-68.
- R.K.Dixon, V.K.Garg and M.V.Rao.1993. Inoculation of *Leucaena* and *Prosopis* seedlings with *Glomus* and *Rhizobium* species in saline soil: rhizosphere relations and seedling growth. Arid Soil Res. Rehab. 7:133-144.
- S.C.Verma, M.V.Rao and A.S.Murthy.1992. Energy flow of grassland ecosystem on marginal lands of Lucknow, India. Range Mgmt.Agrofor.13: 107-113.
- 9. Names of the faculty members of the other Participating Departments involved for implementation of the Course/Programme as approved by the UGC with the information as at 8

Department of Microbiology

1. V. Rajesh Kannan - Assistant Professor

Department of Biotechnology

- 1. S. Sivaramakrishnan Assistant Professor
- III FACULTY / OTHER STAFF APPROVED BY THE UGC FOR IMPLEMENTING THE SCHEME (Give numbers):-

Faculty	Name of the	No. approved under Scheme	
	Faculty working	· · · · · · · · · · · · · · · · · · ·	
Assistant	Dr. S. R. Sivakumar	One	
Professor			

10. UGC letter No.:F.14-4/2010(Inno/ASIST) and date:16.11.2010

11. (a) Students/Candidates intake approved per annum by the UGC.

Minimum 20 candidates.

- (b) The Course/Programme is applicable for students/candidates passing out of Any branch in Life Sciences (B.Sc. Degree in Botany or Zoology or Chemistry or Biotechnology or Biochemistry or Plant Biology and Biotechnology or Animal Biology and Biotechnology or Microbiology or Environmental Sciences or Forestry)
- (c) Number of the students/ Candidates expected to appear for the course/ involved in the programme per year
 Expected but admission was not made.
- (d) Number of the sponsored candidates/students from the industry, agency, organization (Also give the names of the industry, agency etc.)
 Nil
- (e) Number of in-service candidates with their educational qualifications, period of service, department, University/Institute/Organization: Nil
- (f) Number of the SC/ST students/candidates/ in-service candidates Nil
- (g) Placement of the passed out students: Nil
- V. MAJOR AIMS OF STARTING THE COURSE BY THE UNIVERSITY/ INSTITUTE/ COLLEGE (PLEASE SPECIFY THE PURPOSE AS GIVEN IN THE PROPOSAL APPROVED BY THE UGC)
- (a) Whether the approved Course/Programme is for bringing innovation and excellence in teaching or research or both in the area: In both Teaching and Research.
 - (b) Whether the approved Course/ Programme will help to give a solution to local/ regional/global problems by training of required human resources for:-
 - I. Generating possible employment opportunities for students in the area :-Serving industry, government, other organization which are possible users or are sponsoring agencies for course/programmes etc. and to mobilize industry/other organization to know their requirements (give the names of industry, agency etc.)
 - All the above sectors will reap benefits out of the course.
 - II. Solving problems in ecological/environmental/ atmospheric and related aspects

Utilizing medicinal plant wealth found in different ecosystems of India to produce drugs

III. Societal education, research and teaching for popularization and application of

the know-how, technology output:

The course is unique in India. It will have hands on training to impart plant Biodiversity knowledge and linking into phytoneutraceuticals and phytopharmaceuticals.

IV. Monitoring, abatement of and giving a solution to the hazardous problems, natural calamity disasters/flood

To solve problems in health sector by producing drugs to various diseases and new diseases such as AIDS, Bird Flu, Swine Flu, etc.

V. Any other (please specify)

Bringing global recognition to Indian Systems of Medicine

VI. FINANCIAL INFORMATION ASSISTANCE RECEIVED FROM UGC TO IMPLEMENT THE APPROVED COURSE/ INNOVATIVE PROGRAMME

13. Duration of UGC assistance approved for the Course/ Innovative Programme.

01.04.2011 to 31.03.2016

14. Total allocation of grants (Non-recurring and Recurring) approved by the UGC for the duration (Please give details according to the UGC approval letter(s):

S. No.	Non-Recurring	Amount in Rs.
1	Equipment	30,00,000
2	Books and Journals	2,00,000
3	Seminars/Conference at National level	1,00,000
4	Minor Repair/Facilities	1,00,000
5	Minor Equipment	3,00,000
	Recurring	
5	Working Expenses/Contingency (Rs.1.20 lakh p.a.)	6,00,000
6	Consumables and Glassware (Rs.0.60 lakh p.a.)	3,00,000
7	Travel and Fields Trips (Rs.0.40 lakh p.a.)	2,00,000
8	Hiring Services of Technical/Secretarial Assistance (Rs.0.40 lakh p.a.)	2,00,000
9	Guest and Visiting Faculty (Rs.1.20 lakh p.a.)	6,00,000
	TOTAL	56,00,000

15. Re-appropriation/enhancement of the allocated grants approved by the UGC, if any (Please enclose a copy of the UGC letter): Not applicable

Item approved	Original allocation	Re-appropriation/ enhancement	Period for which Re- appropriation was approved
1.	2.	3.	4.
NON-RECURRING			-
RECURRING			

16. TOTAL GRANTS RECEIVED SO FAR OUT OF THE ALLOCATION APPROVED BY THE UGC FOR THE COURSE/INNOVATIVE PROGRAMME:

Items approved	Duration approved	Total allocation approved (as per approval letter)	Grants received by the Uni./Instt./Co llege so for (give UGC sanction letter and the date)	Amount acutually provided to the Department by the Uni./Instt./Colle ge against the sanctioned grant and the date	If the department was paid less amount than the grants actually paid by the UGC for each item, the reason and the justification
1	2	3	4 13	5	6
NON-RECURRING Equipment	2011-2016	30,00,000	30,00,000		
Books and Journals	2011-2016	2,00,000	2,00,000		
Minor Repair/Facilities	2011-2016	1,00,000	1,00,000		
Minor Equipment	2011-2016	3,00,000	3,00,000		
RECURRING					
Working Expenses/ Contingency	2011-2016	6,00,000	1,20,000		
Consumables and Glassware	2011-2016	3,00,000	60,000		
Travel and Fields Trips	2011-2016	2,00,000	40,000		
Hiring Services of Technical/Secretarial Assistance	2011-2016	2,00,000	40,000		
Guest and Visiting Faculty	2011-2012	6,00,000	1,20,000	4	
TOTAL	I	56,00,000	39,80,000		

17. ASSISTANCE RECEIVED BY THE DEPARTMENTS INVOLVED TO IMPLEMENT THE APPROVED COURSE/INNOVATIVE PROGRAMME INCLUDING NODAL DEPARTMENT FROM OTHER PROGRAMMES/SCHEMES OF THE UGC (SAP, COSIST, MAJOR RESEARCH PROJECT ETC.) AND OTHER FUNDING AGENCY.

Name of the Depart ment	Name of the Agency	Name of the Programme/ Course/under which financial assistance has been received	Amount of Assistanc e received NRR Total Amount in Rs.	Durati on for which assista nce receive d	Year of Assistanc e received	Grants received from UGC under Developm ent Grants for X plan period
1	2	3	4	5	6	7
Plant Science	UGC	<i>In vitro</i> regeneration, salt tolerance, Agrobacterium mediated hairy root production in <i>Rauvolfia</i> <i>tetraphylla</i> L.	4,30,500	2003 To 2006	2006	
Plant Science	UGC	Conservation and Reintroduction of <i>Elaeocarpus</i> <i>recurvatus</i> and <i>Hoya wightii</i> ssp. <i>pulneyensis</i> of western Ghats of Tamil Nadu	6,14,000	2007 To 2010	2010	
Plant Science	UGC	<i>In vitro</i> regeneration and development of <i>Alternaria</i> <i>carthami</i> resistant Safflower (<i>Carthamus tinctorius</i> L.) plant.	9,36,800	2008 To 2011	2011	
Plant Science	UGC .	Molecular interactions during Pathogenesis of Plasmopara halstedii In elicitor treated sunflower plant, , 2010-2013, Rs.	2,53,400	2010 To 2013	2013	
Plant Science	UGC	Ex-situ Conservation and Antibacterial studies on Plectranthus bourneae	9,01,000	2011 To	2014	

		Gamble, an endemic Red Data Listed Plant		2014		
Plant Science	UGC	Improving the production of Aristolochic acid from Aristolochia indica and A. bracteolata through in vitro culture-A potential antivenom and anticancer drug	11,08,984	2011 To 2014	2014	
Plant Science	UGC	DRS-I Under the Special Assistance Programme (SAP)	65,00,000	2011 To 2016	2016	
Plant Science	UGC	Non- Special Assistance Programme (Non-SAP)	20,00,000	2011 To 2013	2013	
Plant Science	UGC	Isolation, characterization and enhancing the production of Psoralen from <i>Psoralea</i> <i>corylifolia</i> L. through <i>in vitro</i> culture.	11,99,000	2012 To 2015	2015	
Plant Science	UGC	Enhancement of repellence activity in Artemesia vulgaris (L.) to control yellow fever mosquitoes Aedes aegypti through in vitro precursor and Agrobacterium chizogenes mediated transformation.	14,20,800	2013 To 2016	2016	
Plant Science	TNSCST	Phytoremediation: Reclamation of mercury contaminated soil through <i>Catharanthus roseus</i> (L.) G. Don.	1,54,000	2007 To 2009	2009	
Plant Science	DRDO	Molecular screening of CDA gene from marine microorganism, , Rs.	19,52,000	2007 To 2010	2010	
Plant Science	CSIR	Molecular interaction between Tomato- <i>Alternaria</i> <i>solani</i> .	12,50,000	2007 To 2010	2010	
Plant Science	DBT	Studies on Population Ecology and Micropropagation Techniques of Selected Endemic and Threatened Plants of Peninsular India	84,13,000	2008 To 2013	2013	

Plant	DBT	Development of <i>Alternaria</i> carthami disease resistant	s. S	2008		
Science	-	transgenic plants of safflower through overexpression of	29,37,000	To 2011	2011	
		chitinase gene disease resistance.				
Plant	TNSCST	An Ecofriendly approach to		2010		
Science		control Rhizome rot disease of turmeric.	2,30,000	То 2014	2014	
Plant	DST	Fund for Improvement of	55,00,000	2014	2014	
Science		Science and Technology (FIST)		То 2019		

(b) Total fees charged from the candidates enrolled for the course(s):

Name of the Fee		Amount in Rs.	Period
Caution Deposit		1000	Refundable
Tuition Fee		5000	Per Semester
Stationary		200	Per Semester
Special Fee		250	Per annum
Library Fee	Other than SC/ST candidate	200	Per annum
	SC/ST candidate	100	Per annum
Laboratory Fee		500	Per annum
Computer, Chemical,	Internet etc.	600	Per annum
Group Insurance		20	Per annum
Sports Fee		100	Per annum
Youth Development I	Fee	10	Per annum
Youth Red Cross		10	Per annum
Registration Fee		95	One time at the time of admission
Identity Card Fee		25	One time at the time of admission
Alumini Registration	Fee	200	One time at the time of admission
Matriculation Fee	Bharathidasan University	Nil	One time at the time of admission
	Other than Bharathidasan University	40	One time at the time of admission

Recognition Fee	Bharathidasan University	Nil	One time at the time of
U			admission
	Other than Bharathidasan	190	One time at the time of
	University		admission
	Outside of Tamil Nadu	375	One time at the time of
			admission
	Outside of India and Sri	815	One time at the time of
	Lanka		admission

VIII. INFRASTRCTURE AVAILABLE FOR RUNNING THE COURSE/INNOVATIVE PROGRAMME

- 18. Specify the major equipments available with the nodal and other Departments involved to implement the Course/ innovative programme. List of equipments with their sources, year of procurements, model, make may be enclosed.
 - > Stereo-zoom Microscope
 - > Trinocular Microscope (Inverted) with EPI Fluorescence Attachment Model XDS 2
 - Ultrafast Gradient PCR System Eppendorf Mastercycler pro S & Control Panel, 230 V, 50-60 Hz
 - > Table Top Refrigerated Centrifuge Eppendorf Refrigerated Centrifuge 5810 R
 - > Gel Documentation & Fluorescent imaging System
 - > Versatile Environmental Test Chamber
- 19. National facilities available, if any, in the Departments involved or any other departments in the University/ Institute/ College which has helped to implement the approved Course/innovative programme.

Facilities available in the national laboratories such as Rapinat Herbarium in St. Josephs's College, Tiruchirappalli, Central Electrochmical Research Institute, Karaikudi, Indian Institute of Technology, Madras, Indian Institute of Science, Bangalore, etc.

20. Space/ building/ class rooms available prior to the UGC assistance received for teaching the approved Course/innovative programme.

Basic infrastructural facilities available in the University.

- Infrastructural facilities available/ created, if any, through the UGC Special Assistance Programme viz. SAP,COSIST,COSIP,COHSSIP, Computer Development grants, Development grants prior to the assistance received for implementing the approved Course/Innovative Programmes. Yes.
- 22. Whether the University/Institute/College where the Course/innovative programme is being undertaken has agreed to provide the required infrastructure facilities for the students? **Yes.**

- a) If the departments involved to implement the Course/innovative programme are not under SAP/COSIST Programme, whether they are using or allowed to use the facilities created by the other UGC SAP/ COSIST (ASIST) supported departments in the University. All the available infrastructural facilities are extended to the course.
 - b) If not using, the reasons thereof.

23.

Coordinator/ Deputy Coordinator / 217 Head of the Department

(with seal) Professor Dr. M. B. VISWANATHAN Co-ordinator, UGC Innovative Programme Centre for Research & Development of Siddha-Ayurveda Medicines (CRDSAM) Department of Plant Science Bharathidasan University, Tiruchirappalli-24. Registrar/Principal With seal

REGISTRAR BHARATHIDASAN UNIVERSITY TIRUCHIRAPPALLI 620 024

S. N o.	Name of the Equipment	Cost in Rupees	Make and Model	Bill/Invoice No	Date of Purchase and Installation	Date of Expiry of warranty/guarantee period	Purpose
1	High Performance Liquid Chromatography (HPLC)	23,85,865	Make: Waters Model: Preparative Model	274207713 274207714	Purchased; 06.09.2012 Installed; 02.11.2013	12 month from the date of Installation	
2	Fourier Transform-Infra Red Spectroscopy (FTIR)	9,45,214	Make: PerkinElmer Model: Spectrum Two FTIR	5800563046	Purchase on 04.03.2013 Installed on 25.06.2013	12 month from the date of Installation	

S. No.	Name of the Person						
		2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015	2015 to 2016	Rupees
1	Mrs. Kala	15.06.2011 to 22.03.2012	Nil	Nil	Nil	Nil	30,569

Detailed Statement of Hiring Services under this Innovative Programme

Detailed Statement for Guest/Visiting Faculty invited under this Innovative Programme

Duration: 2011-2012

S. No.	Name	Designation	Place of duty	Duration	Honorar ium	Total
		Director, School of Basic		23 & 24.12.2011	8,684	
ł	Dr. K. Balasubramanian	Science, Vel's University, Pallavaram, Chennai – 600117	Chennai	08 & 09.03.2012	1,742	12,168
				19.03.2012	1,742	
				10.03.2012	1000	
	Dr. C. Selvamurugan	Assistant Professor, Dept. of Biotechnology, Pavendar Bharathidasan College of Engg. And Technology,		12.03.2012	500	
0				13.03.2012	500	
2			Tiruchirappalli.	14.03.2012	500	3,500
	* - E	Tiruchirappalli.		15.03.2012	500	
				21.03.2012	500	
	D. M. Damach	Assistant Professor, Dept. of Biotechnology, J.J.	Pudukkottai	12.03.2012	2,158	4,316
3	Dr. N. Ramesh	College of Arts and Science, Pudukkottai – 622 422.	ruuukkottai	15.03.2012	2,158	
4	Dr. S. Sivasubramanian	Assistant Professor, Dept. of Botany,	Pudukkottai	16.03.2012	2,158	2,158

-				0	ant Total	23,642	
6	Dr. S. Selvaraj	of Bioinformatics, Bharathidasan University, Tiruchirappalli – 620024	Tiruchirappalli	20.03.2012	500	1,000	
		Assistant Professor, Dept.		13.03.2012	500		
5	Dr. P. Selvamani	J.J. College of Arts and Science, Pudukkottai – 622 422. Assistant Professor, Dept. of Pharmaceutical Technology, Anna University of Technology, Tiruchirappalli.	Tiruchirappalli.	17.03.2012	500	500	

Duration: 2012-2013

S. No.	Name	Designation	Place of duty	Duration	Hono rariu m	Total
				27.03.2012	500	
			۵.,	30.03.2012	500	
		2		03.04.2012	500	
		Assistant Professor, Dept. of Biotechnology, Pavendar		05.04.2012	500	
1	Dr. C. Selvamurugan	Bharathidasan college of	Tiruchirapp alli.	09.04.2012	500	4,500
		Engg. And Technology, Tiruchirappalli.		12.04.2012	500	-
				19.04.2012	500	-
				27.04.2012	500	
	i.			11.05.2012	500	-
	2	Assistant Professor, Dept. of		23 & 24.03.2012	5,316	
2	Dr. N. Ramesh	Biotechnology, J.J. College	Pudukkottai	05.04.2012	2,658	41,528
		of Arts and Science, Pudukkottai – 622 422.		07.04.2012	2,658	-
				13.04.2012	2,658	1

×				14.04.2012	2,658	Ŀ
		а 		28.04.2012	2,658	
			-	30.04.2012	2,658	
				01 & 02.05.2012	5,316	
				04.05.2012	2,658	
				14.05.2012	2,658	
				16.05.2012	2,158	
				17.05.2012	2,658	
		10 0		18.05.2012	2,158	
	5		12	25.05.2012	2,658	
				28.03.2012	500	
				19.04.2012	1,000	
			•	24.04.2012	1,000	
2		S. Selvaraj S. Selvaraj Assistant Professor, Dept. of bioinformatics, Bharathidasan University, Tiruchirappalli – 620024	Tiruchirapp	27.04.2012	500	5,500
3	Dr. S. Selvaraj		alli	15.05.2012	1,000	0,000
				23.05.2012	500	
				24.05.2012	500	
		5		25.05.2012	500	
101-10- 21		Assistant Professor, Dept. of		20.10.2012	2,000	
4	Dr. P. Selvamani	Pharmaceutical Technonology, Anna	Tiruchirapp alli	03.11.2012	1,500	5,000
		University of Technology, Tiruchirappalli.	am	18.11.2012	1,500	
				29.03.2012	2,658	
-		Assistant Professor, Dept. of Biotechnology, J.J. College	Pudukkottai	06.04.2012	2,658	10,63
5	Dr. B. Venkatesh	: B. Venkatesh of Arts and Science, Pudukkottai – 622 422.		23.04.2012	2,658	10,03
		1 udukkonur 022 722.		03.05.2012	2,658	

			1.5	Gra	nt Total	78,275
8	Dr. J. Jaya Ananthi	College of Pharmacy, Srivalliputhur.		23.11.2012	2,620	5,240
	D. L.L	Assistant Professor, Arulmigu Kalasalingam		18.11.2012	2,620	
7	Dr. P. Solairaj	Professor & Head, Dept. of Pharmaceutical Analysis, Shankaralingam Bhuvaneshwari College of Pharmacy, Sivakasi – 626 130	Sivakasi	25.11.2012	3,075	3,075
6	Dr. G.C. Abraham	Dean & Associate Professor, American College, Madurai - 645 002	Madurai	08.05.2012	2,800	2,800

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Duration: 2013-2014

S. No.	Name	Designation	Place of duty	Duration	Honorar ium	Total
1	NIL	NIL	NIL	NIL	NIL	NIL

Duration: 2014-2015

S. No.	Name	Designation	Place of duty	Duration	Honorar ium	Total
1	NIL	NIL	NIL	NIL	NIL	NIL

Duration: 2015-2016

S. No.	Name	Designation	Place of duty	Duration	Honorar ium	Total
1	NIL	NIL	NIL	NIL	NIL	NIL

	Grand To	otal		22,15,252
S.R. SIVAKUMAR	Assistant Professor	26.12.2012	Not applicable	7,68,072
	01.04.20	15 to 31.03.2016		
S.R. SIVAKUMAR	Assistant Professor	26.12.2012	Not applicable	7,03,465
	01.04.20	14 to 31.03.2015		8
S.R. SIVAKUMAR	Assistant Professor	26.12.2012	Not applicable	6,18,011
	01.04.20	13 to 31.03.2014		
S.R. SIVAKUMAR	Assistant Professor	26.12.2012	Not applicable	1,25,704
	26.12.20	12 to 31.03.2013		
NAME OF THE PERSON	NAME OF THE POST	DATE OF JOINING	DATE OF LEAVING	TOTAL SALARY PAID DURING THE FINANCIAL YEAR

Manpower Staffing Details (In the financial year-wise manner)

(Signature of Coordinator)⁰³ 2018

Professor Dr. M. B. VISWANATHAN Co-ordinator, UGC Innovative Programme Centre for Research & Development of Siddha-Ayurveda Medicines (CRDSAM) Department of Plant Science Bharathidasan University, Tiruchiragpalli-24.

S. Achendan

(Signature of Accounts Officer) FINANCE OFFICER BHARATHIDASAN UNIVERSITY TIRUCHIRAPPALLI.

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(SIGNATURE OF HEAD OF THE INSTITUTE)

Name: Dr. S.R. Sivakumar

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Month	Pay	DA	HRA	CCA	MA	Total
	26.	12.2012 to	31.03.20	13		
Dec 2012	4,180	3,010	271	70	87	7,618
Jan 2013	21,600	15,552	1,400	360	450	39,362
Feb 2013	21,600	15,552	1,400	360	450	39,362
Mar 2013	21,600	15,552	1,400	360	450	39,362
Total	68,980	49,666	4,471	1,150	1,437	1,25,704

DA - Dearness Allowance; HRA –House Rent Allowance; CCA – City Compensatory Allowance; MA – Medical Allowance; SLS – Surrender Leave Salary

01.04.2013 to 31.03.2014						
Apr 2013	24,850	17,892	1,400	360	450	44,952
May 2013	24,850	19,880	1,400	360	450	46,940
June 2013	24,850	19,880	1,400	360	450	46,940
July 2013	24,850	19,880	1,400	360	450	46,940
August 2013	24,850	19,880	1,400	360	450	46,940
September 2013	24,850	19,880	1,400	360	450	46,940
October 2013	25,600	23,040	1,400	360	450	50,850
November 2013	25,600	23,040	1,400	360	450	50,850
December 2013	25,600	23,040	1,400	360	450	50,850
January 2014	25,600	23,040	1,400	360	450	50,850
February 2014	25,600	23,040	1,400	360	450	50,850
March 2014	25,600	23,040	1,400	360	450	50,850
Pay Arrear	17,852					17,852
DA Arrear		15,407				15,407
Total	3,20,552	2,70,539	16,800	4,320	5,400	6,18,011

01.04.2014 to 31.03.2015							
Apr 2014	25,600	25,600	1,400	360	450	53,410	
May 2014	25,600	25,600	1,400	360	450	53,410	
June 2014	25,600	25,600	1,400	360	450	53,410	
July 2014	25,600	25,600	1,400	360	450	53,410	
August 2014	25,600	25,600	1,400	360	450	53,410	
September 2014	25,600	25,600	1,400	360	450	53,410	
October 2014	26,370	28,216	1,400	360	450	56,796	
November 2014	26,370	28,216	1,400	360	450	56,796	
December 2014	26,370	28,216	1,400	360	450	56,796	
January 2015	26,370	28,216	1,400	360	450	56,796	
February 2015	26,370	28,216	1,400	360	450	56,796	
March 2015	26,370	28,216	1,400	360	450	56,796	
SLS	28,173					28,173	
Pongal Bonus	1,000					1,000	
DA Arrear		13,056				13,056	
Total	3,40,993	3,35,952	16,800	4,320	5,400	7,03,465	

	01	.04.2015 to	31.03.201	16		
Apr 2015	26,370	29,798	1,400	360	450	58,378
May 2015	26,370	29,798	1,400	360	450	58,378
June 2015	26,370	29,798	1,400	360	450	58,378
July 2015	26,370	29,798	1,400	360	450	58,378
August 2015	26,370	29,798	1,400	360	450	58,378
September 2015	26,370	29,798	1,400	360	450	58,378
October 2015	27,170	32,332	1,400	360	450	61,712
November 2015	27,170	32,332	1,400	360	450	61,712
December 2015	27,170	32,332	1,400	360	500	61,762
January 2016	27,170	32,332	1,400	360	500	61,762
February 2016	27,170	32,332	1,400	360	500	61,762
March 2016	27,170	32,332	1,400	360	500	61,762
SLS	30,631					30,631
Pongal Bonus	1,000				3	1,000
DA Arrear		15,201				15,201
MA Arrear					500	500
Total	3,52,871	3,87,981	16,800	4,320	6,100	7,68,072

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Annexure

UNIVERSITY GRANTS COMMISSION UTILIZATION CERTIFICATE

It is certified that an amount of Rs.22,15,252/- (Rupees twenty two lakhs fifteen thousand two hundred and fifty two only) has been spent in accordance with the terms and conditions as laid down by the Commission towards salary of Dr. S.R. Sivakumar, Assistant Professor, from 26.12.2012 to 31.03.2016 under Innovative Programme scheme as sanctioned to M.Sc. Biodiversity and Bioprospecting by the University Grants Commission vide its letter No. F.14-4/2010(Inno/ASSIST)/dt.14.11.2010.

Balance amount of Rs.59,046/- (Rupees fifty nine thousand forty six only) available under Recurring and Non-Recurring Heads of the first Installment under Innovative Programme scheme is adjusted towards salary expenses of Dr. S.R. Sivakumar, Assistant Professor, for the period from 26.12.2012 to 31.03.2016.

After adjustment, it is requested to reimburse the balance amount of **Rs.21,56,206/-**(**Rupees twenty one lakh fifty six thousand two hundred and six only**) towards salary expenses of Dr. S.R. Sivakumar, Assistant Professor, for the period from 26.12.2012 to 31.03.2016 by the University Grants Commission, New Delhi. If as a result of check or audit objection some irregularities are noticed at a later stage, action will be taken for refund, adjustment or regularization.

Signature Registrar/Principal with seal BHARATHID 620 024 **TIRUCHIRAPPALLI** 8198 Signature Coordinator of the programme/ Head of the Department (As the case may be)

Prof. Dr. M. WISWANATHAN COORDINATOR UGC INNOVATIVE PROGRAMME DEPARTMENT OF PLANT SCIENCE BHARATHIDASAN UNIVERSITY TIRUCHIRAPPALLI-620 024. 5. M. Loodo Signature Finance Officer with seal FINANCE OFFICER BHARATHIDASAN UNIVERSITY TIRUCHIRAPPALLI.

Signature, Charted Accountant with seal and Registrar No. (If the accounts were audited prior to the audit of Statutory Auditors) Assistant Director of Local Fund Audit Audit Unit Bharathidasan University Triohirappalli-620 024

Note: The University/Institution will submit an audited statement of accounts, duly audited by the Statutory Auditors of the University/Institution as soon as the accounts of the University/Institution are audited.

ANNEXURE-I C

UNIVERSITY GRANTS COMMISSION (ASSET CERTIFICATE)

It is certified that inventories of permanent or semi-permanent assets created/acquired [High Performance Liquid Chromatography (HPLC) & Fourier Transform-Infra Red Spectroscopy (FTIR)] wholly or mainly out of the grant given by the University Grants Commission are being maintained in the prescribed form and are being kept up-to-date.

Government Auditor/Chartered Accountant Registrar Assistant Director of (with his seal) Ma Local Fund Audit REGIS Audit Unit Bharathidasan University SHARATHIDAS Trichirappalli-620 024