

Faculty Profile of Dr. T. Muthukumar



Dr. T. Muthukumar
Professor
Department of Botany

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Mobile No:+91 9942436855

Research Area

- Root and Soil Biology
- Fungal Endophytes
- Mycorrhizal Technology
- Plant Anatomy
- Bioremediation

Education & Career

Education

Ph.D.

Subject : Botany

Institution : Bharathiar University, Coimbatore

Affiliated University : Bharathiar University

Year of Award : 1997

GATE

Year of Award: 1992

Register Number : XB81347

M.Phil.,

Subject : Botany

Institution : Bharathiar University, Coimbatore

Affiliated University : Bharathiar University

Year of Award : 1991

M.Sc.,

Subject : Botany

Institution : Govt. Arts College, Coimbatore

Affiliated University : Bharathiar University

Year of Award : 1990

B.Sc.,

Subject : Botany

Institution : Govt. Arts College, Coimbatore

Affiliated University : Bharathiar University

Year of Award : 1988

Career**At Bharathiar University (Reverse Order)**

Associate Professor : 2017 to Till date

Assistant Professor (Stage III) : 2014 to 2017

Assistant Professor (Stage II) : 2009 to 2014

Assistant Professor (Stage I) : 2007 to 2009

Awards

Academic Awards

Sl.No. : 1

Awarding agency : Marina Labs: Research and Development, Chennai.

Country : India

Purpose of award : Scientific Excellence – 2018

Year of Award : 2018

Sl.No. : 2

Awarding agency : GRABS Educational Charitable Trust, Chennai.

Country : India

Purpose of award : Research Excellence – 2019

Year of Award : 2019

Sl.No. : 3

Awarding agency : Global Management Council, Ahmedabad.

Country : India

Purpose of award : Teaching and Research Excellence – 2019

Year of Award : 2019

Sl.No. : 4

Awarding agency : Nature Science Foundation

Country : India

Purpose of award : Research excellence

Year of Award : 2020

Membership

Membership in Professional Bodies

Sl. No.: 1

Organization : Indian Society of Mycology and Plant Pathology

Type of Membership : Life member

Period : Lifetime

Sl. No. : 2

Organization: International Mycorrhiza Society (IMS)

Type of Membership : Life member

Period: Lifetime

Sl. No. : 3

Organization: American Fern Society

Type of Membership : Life member

Period : Lifetime

Sl. No. : 4

Organization: Indian Association for Angiosperm Taxonomy (IAAT)

Type of Membership : Life member

Period : Lifetime

Sl. No. : 5

Organization : Indian Orchid Society

Type of Membership : Life member

Period : Lifetime

Sl. No. : 6

Organization : International Society of Plant Morphologists

Type of Membership : Member

Period : 2007-2018

Sl. No. : 7

Organization : National Academy of Biological Sciences (NABS)

Type of Membership : Life member

Period : Lifetime

Membership in Professional Bodies

Sl. No. : 1

Journal : Biology and Fertility of Soils (Springer)

Type : Editorial Board Member

Period : 2009 to till date

Sl. No. : 2

Journal : World Journal of Agricultural Sciences (IDOSI Publications)

Type : Editorial Board Member

Period : 2007 to till date

Sl. No. : 3

Journal : Journal of Agricultural Science (Canadian Center of Science and Education)

Type : Editorial Board Member

Period : 2010 to till date

Sl. No. : 4

Journal : International Journal of Plant, Animal and Environmental Sciences (IJPAES, INDIA)

Type : Editorial Board Member

Period : 2015 to till date

Sl. No. : 5

Journal : Wudpecker Journal of Agricultural Research

Type : Editorial Board Member

Period : 2015 to till date

Sl. No. : 6

Journal : African Journal of Food Sciences

Type : Editorial Board Member

Period : 2016 to till date

Sl. No. : 7

Journal : International Journal of Plant Physiology and Biochemistry (Academic Journals)

Type : Editorial Board Member

Period : 2015 to till date

Sl. No. : 8

Journal : Research Journal of Agricultural and Environmental Sciences

Type : Editorial Board Member

Period : 2017 to till date

Sl. No. : 9

Journal : American Journal of Experimental Agriculture (SCIENCEDOMAIN International)

Type : Academic Editor

Period : 2015 to till date

Sl. No. : 10

Journal : Advanced Journal of Basic and Applied Sciences

Type : Editorial Advisor

Period : 2017 to till date

Sl. No. : 11

Journal : Journal of Pure and Applied Microbiology

Type : Editorial Board Member

Period : 2016 to till date

Sl. No. : 12

Journal : Glacier Journal of Scientific Research

Type : Editorial Board Member

Period : 2018 to till date

Visits

Sl. No. : 1

Countries Visits : China

Duration of Visit : 1 Month

Month and Year : July to August, 2001

Purpose of Visit : Visiting Scientist

Sl. No. : 2

Countries Visits : Switzerland

Duration of Visit : 5 days

Month and Year : 15th to 20th March 2015

Purpose of Visit : ISCB annual project meeting

Collaborators

Others

Projects

Funded Projects(National Level)

- [Ongoing - 01](#)
 - [Completed - 03](#)
-

1. UGC- MRP

Title of the project : Diversity of arbuscular mycorrhizal fungi in shola forests of Nilgiris

Funding Agency : UGC- MRP

Amount : Rs.8. 01 Lakhs.

Duration : 2009-2012 (3 years)

2. DBT

Title of the project : Biofertilization and bioirrigation for sustainable mixed cropping of pigeon pea and finger millet

Funding Agency : DBT

Amount : Rs.71.95 Lakhs.

Duration : 2014-2018 (5 years)

3. MHRD- RUSA 2.0-BEICH

Title of the project : Development of crop growth bioformulation for sustainable crop production

Funding Agency : MHRD- RUSA 2.0-BEICH

Amount : Rs.6.00 Lakhs.

Duration : 2020 (5 months)

1. MHRD- RUSA 2.0-BCTRC

Title of the project : Medicinal plants: their role in human health and drug discovery for cancer

Funding Agency : MHRD- RUSA 2.0-BCTRC

Amount : Rs. 6.10 Lakhs.

Duration : 2021-2023 (2 years)

Consultancy Projects

- [Ongoing](#)
- [Completed](#)

Research Guidance

- [Post-Doc](#)
- [Ph.D.](#)
- [M.Phil.](#)
- [M.Sc.,](#)

ONGOING

Candidate Name

Title of the Thesis : *****

Date of Submission:

Date of Award:

AWARDED

Sl. No. : 1

Name of the candidate : Sathiyadash, K.

Title of the Thesis : Mycorrhizal characterization of certain south Indian orchids.

Year : 2014

Sl. No. : 2

Name of the candidate : Rajashree, K.

Title of the Thesis : Studies on the production and effect of selenium enriched yeast (*Saccharomyces cerevisiae*) on the performance and quality of broilers and breeders.

Year : 2014

Sl. No. : 3

Name of the candidate : Sarah Jaison

Title of the Thesis : Mycoremediation of chromium contaminated soils

Year : 2014

Sl. No. : 4

Name of the candidate : Muniappan, V.

Title of the Thesis : Prevalence of arbuscular mycorrhizal fungi in shola forests of the Nigiris, South India and its influence on plant growth and nutrient uptake responses off *Morus alba* and *Musa* sp.

Year : 2016

Sl. No. : 5

Name of the candidate : Uma, E.

Title of the Thesis : Studies on the morphotaxonomy of subterranean parts and influence of bioinoculants on growth and nutrient uptake of gingers

Year : 2017

Sl. No. : 6

Name of the candidate : Priyadharsini, P.

Title of the Thesis : Harnessing the bioinoculant potential of dark septate endophytic fungi.

Year : 2017

Sl. No.: 1

Name of the candidate : Uma, E.

Title of the Thesis : Arbuscular mycorrhizae in Zingiberaceae and Costaceae.

Year : 2009

Sl. No.: 2

Name of the candidate : Valarmathi, V.

Title of the Thesis : Arbuscular mycorrhizal and dark septate fungal association in

plant species of Velliangiri holy hills, Western Ghats, Southern India.

Year : 2009

Sl. No.: 3

Name of the candidate : Priyadharshini, K.

Title of the Thesis : A comparative study on the influence of salinity on maize growth and non-pathogenic root fungal associations in two soil types.

Year : 2010

Sl. No.: 4

Name of the candidate : Prabha, K.

Title of the Thesis : Root fungal association in south Indian pteridophytes.

Year : 2010

Sl. No.: 5

Name of the candidate : Venkatesh, M.

Title of the Thesis : Root fungal associations in aquatic and marshy plant species of south India.

Year : 2011

Sl. No.: 6

Name of the candidate : Priyadharsini, P.

Title of the Thesis : Growth, nutrient uptake and root phosphatase activity of maize as influenced by rock phosphate and arbuscular mycorrhizal fungus.

Year : 2012

Sl. No.:7

Name of the candidate : Muthuraja, R.

Title of the Thesis : Distribution of arbuscular mycorrhizal and dark septate endophyte fungal association in lycophytes and ferns of Kolli Hills, Eastern Ghats, India.

Year : 2013

Sl. No.: 8

Name of the candidate : Sathiyaraj, G.

Title of the Thesis : Arbuscular mycorrhizal and dark septate endophyte fungal associations in ferns and fern-allies of Pulney Hills, Western Ghats.

Year : 2013

Sl. No.: 9

Name of the candidate : Chandra Gandhi, K.

Title of the Thesis : Potassium fertilization influences arbuscular mycorrhizal formation and function in a tropical Alfisol soil.

Year : 2014

Sl. No.: 10

Name of the candidate : Nagaraj, K.

Title of the Thesis : Growth, nutrient content, root architecture and arbuscular mycorrhizal symbiosis of maize maintained at different concentrations of potassium in sand culture.

Year : 2014

Sl. No.: 11

Name of the candidate : Balachandar, M.

Title of the Thesis : Effect of chitosan on plant growth and endorhizal fungal associations in tomato and brinjal.

Year : 2017

Sl. No.: 12

Name of the candidate : Prema Sundara Valli, P.

Title of the Thesis : Extracellular enzyme production, salinity tolerance and plant growth promotion by the dark septate endophytic fungus *Necteria haematococca*.

Year : 2017

Sl. No.: 13

Name of the candidate : Ranjithamani, A.

Title of the Thesis : Comparative vegetative anatomy and mycorrhizal morphology of three south Indian *Luisia* species (Orchidaceae).

Year : 2018

Sl. No.: 14

Name of the candidate : Kowsalya, A.

Title of the Thesis : Comparative vegetative anatomy and mycorrhizal morphology of *Oberonia* species growing in southern Western Ghats.

Year : 2020

Sl. No. : 1

Name of the candidate : Muniappan, V.

Title of the Dissertation : Evaluation of soil factors affecting the distribution of Trichoderma in agricultural and plantation soils

Year : 2005

Sl. No. : 2

Name of the candidate : Senthilkumar, M.

Title of the Dissertation : Arbuscular mycorrhizal morphology in medicinal and aromatic plants of Western Ghats, southern India.

Year : 2005

Sl. No. : 3

Name of the candidate : Rajangam, M.

Title of the Dissertation : Survey of dark septate endophytic fungi associated with medicinal and aromatic plants of Western Ghats, southern India.

Year : 2005

Sl. No. : 4

Name of the candidate : Bagyalakshmi, G.

Title of the Dissertation : Mycorrhizal and dark septate fungal associations in shola species of Nilgiris.

Year : 2006

Sl. No. : 5

Name of the candidate : Prakash, S.

Title of the Dissertation : Arbuscular mycorrhizal morphology of certain crops and their associated weeds.

Year : 2006

Sl. No. : 6

Name of the candidate : Sathiyadash, K.

Title of the Dissertation : Mycorrhizal association in south Indian orchids.

Year : 2006

Sl. No. : 7

Name of the candidate : Gowri, V.

Title of the Dissertation : Arbuscular mycorrhizal morphology of ornamental plants.

Year : 2007

Sl. No. : 8

Name of the candidate : Murugan, T.

Title of the Dissertation : The mycorrhizal status of south Indian orchids

Year : 2007

Sl. No. : 9

Name of the candidate : Maheswaran, A.

Title of the Dissertation : Arbuscular mycorrhizal morphology in Euphorbiaceae.

Year : 2007

Sl. No. : 10

Name of the candidate : Rajeswari, K.

Title of the Dissertation : Arbuscular mycorrhizal morphology and dark septate fungal association in fruit crops.

Year : 2008

Sl. No. : 11

Name of the candidate : Tamilselvi, V.

Title of the Dissertation : Arbuscular mycorrhizal morphology and dark septate fungal associations in field crops.

Year : 2008

Sl. No. : 12

Name of the candidate : VEDIYAPPAN, S.

Title of the Dissertation : Root anatomy and arbuscular mycorrhizal morphology in *Gloriosa superba* L. (Liliaceae)

Year : 2008

Sl. No. : 13

Name of the candidate : Sakthikala, G.

Title of the Dissertation : Influence of paper mill effluent irrigation on arbuscular mycorrhizal and dark septate fungal associations

Year : 2009

Sl. No. : 14

Name of the candidate : Rajeshkumar, MGS.

Title of the Dissertation : A comparative study on the arbuscular mycorrhizal fungal diversity of shola and grassland ecosystems of Nilgiris.

Year : 2009

Sl. No. : 15

Name of the candidate : Loganathan, J.

Title of the Dissertation : Arbuscular mycorrhizal and dark septate edophytic fungal status of tree species in Aliyar, Western Ghats, south India.

Year : 2009

Sl. No. : 16

Name of the candidate : Chinnathambi, M.

Title of the Dissertation : Fungal endorhizal association in lithophytes from Siruvani Hills of Western Ghats, southern India.

Year : 2010

Sl. No. : 17

Name of the candidate : Priyadharsini, P.

Title of the Dissertation : Arbuscular mycorrhizal and dark septate fungal association in onion (*Allium cepa* var. *aggregatum*)

Year : 2010

Sl. No. : 18

Name of the candidate : Jayanthi, R.

Title of the Dissertation : Effect of vermicompost on maize growth and endorhizal fungal associations.

Year : 2010

Sl. No. : 19

Name of the candidate : Dinesh Babu, S.

Title of the Dissertation : Effects of heavy metals (Zn and Cd) on the regeneration ability of *Talinium portulacifolium* L. grown in nutrient solutions.

Year : 2011

Sl. No. : 20

Name of the candidate : Sowkarthika, D.

Title of the Dissertation : Rhizobacterial and plant growth hormone promotion of mint adventitious rooting and growth.

Year : 2011

Sl. No. : 21

Name of the candidate : Vanitha, M.

Title of the Dissertation : Allelopathic potentialities of *Acacia auriculiformis* and *Leucaena leucocephala* on monocot (*Zea mays*) and dicot (*Vigna unguiculata*) plants under in vitro and in vivo conditions.

Year : 2011

Sl. No. : 22

Name of the candidate : Kumar, S.

Title of the Dissertation : Fungal root symbionts in some common aquatic and marshy macrophytes of south India.

Year : 2012

Sl. No. : 23

Name of the candidate : Ram Prabhu, N.

Title of the Dissertation : Influence of cement dust pollution on arbuscular mycorrhizal and DSE fungal association.

Year : 2012

Sl. No. : 24

Name of the candidate : Sathya, R.

Title of the Dissertation : Arbuscular mycorrhizal and dark septate endophyte fungal association in Solanaceae.

Year : 2012

Sl. No. : 25

Name of the candidate : Nagaraj, K.

Title of the Dissertation : Observations on the non-pathogenic root fungal symbiosis in gymnosperms.

Year : 2013

Sl. No. : 26

Name of the candidate : Prabhu, A.

Title of the Dissertation : Influence of Bioinoculants on growth and phosphorus uptake of *Impatiens balsamiana* stem cuttings.

Year : 2013

Sl. No. : 27

Name of the candidate : Rajendran, R.

Title of the Dissertation : Comparative anatomy of *Eulophia epidendraea* and *Malaxis acuminata* of sub family Epidendroideae (Orchidaceae).

Year : 2013

Sl. No. : 28

Name of the candidate : Abinaya, M.

Title of the Dissertation : Comparative effects of arbuscular mycorrhizal fungus inoculation and soil sterilization on growth and nutrient uptake of pigeon pea under drought stressed conditions.

Year : 2014

Sl. No. : 29

Name of the candidate : Parimala, M.

Title of the Dissertation : Influence of arbuscular mycorrhizal fungus on growth and nutrient uptake of finger millet under drought stress.

Year : 2014

Sl. No. : 30

Name of the candidate : Sulaiman, M.

Title of the Dissertation : Root endophytic fungi *Fusarium solani* promotes plant growth and nutrient uptake in green gram.

Year : 2014

Sl. No. : 31

Name of the candidate : Balachandar, M.

Title of the Dissertation : Distribution of arbuscular mycorrhizal fungal propagules at different soil depths in a tropical Alfisol

Year : 2015

Sl. No. : 32

Name of the candidate : Prema Sundara Valli, P.

Title of the Dissertation : Evaluation of non-pathogenic endophyte *Fusarium* sp., for plant growth promotion.

Year : 2015

Sl. No. : 33

Name of the candidate : Sangeetha, M.

Title of the Dissertation : Influence of chitosan on arbuscular mycorrhizal formations, plant growth and phosphorus nutrition of solanaceous fruit crops.

Year : 2015

Sl. No. : 34

Name of the candidate : Anusree, S.

Title of the Dissertation : Plastic responses that confers invasiveness to *Rivina*

humalis L.

Year : 2016

Sl. No. : 35

Name of the candidate : Kowsalya, A.

Title of the Dissertation : Comparative vegetative anatomy of south Indian Vandas (Orchidaceae)

Year : 2016

Sl. No. : 36

Name of the candidate : Tulasi, J.

Title of the Dissertation : Allelopathy of pigeon pea [Cajanus cajan (L.) Millsp.] on different crop species.

Year : 2016

Sl. No. : 37

Name of the candidate : Meena, S.

Title of the Dissertation : Anatomy of aerial and terrestrial roots of Ficus (Moraceae): A comparative study.

Year : 2017

Sl. No. : 38

Name of the candidate : Rashya, A.

Title of the Dissertation : Stimulatory effect of pesticides on growth, nutrient uptake and arbuscular mycorrhizal association in tomato.

Year : 2017

Sl. No. : 39

Name of the candidate : Vanisree, S.

Title of the Dissertation : Mycorrhizal dependency of some widely cultivated pigeon pea [Cajanus cajan (L.) Millsp.] cultivars in southern India.

Year : 2017

Sl. No. : 40

Name of the candidate : Jayasree, V.

Title of the Dissertation : Influence of Curvulria geniculata on growth and nutrient uptake of maize in different soil types, conditions and salinity level.

Year : 2018

Sl. No. : 41

Name of the candidate : Vaishnavi, G.

Title of the Dissertation : Influence of *Curvulria geniculata* on growth, nutrient uptake and amelioration of drought stress in maize and tomato in different soil types.

Year : 2018

Sl. No. : 42

Name of the candidate : Jinsha, K.

Title of the Dissertation : Comparative vegetative and ecological anatomy of *Sirhookera* (Orchidaceae) growing in Western Ghats of Southern India.

Year : 2019

Sl. No. : 43

Name of the candidate : Pavithra, L.

Title of the Dissertation : Bioformulation carriers influence growth, nutrient uptake and mycorrhizal symbiosis of maize and tomato.

Year : 2019

Sl. No. : 1

Name of the candidate : Anushya

Title of the Thesis : NPDF

Period : One year

Research Publication

- [International](#)
- [National](#)
- [Patents](#)
- [Conferences](#)
- [Books/Chapters](#)
- [Database](#)

Reverse Chronological Order

2021

120. [Isolation and characterization of potassium solubilizing Aspergillus species isolated from Saxum habitat and their effects on maize growth in different soil types.](#)

R. Muthuraja and T. Muthukumar,
[Geomicrobiology 2021](#),388, 672-685.

119. [Isolation and screening of potassium solubilizing bacteria from saxicolous habitat and their impact on tomato growth in different soil types.](#)

R. Muthuraja and T. Muthukumar,
Archives of Microbiology (2021) (In press).

118. [Anatomical adaptations and mycorrhizal morphology of two threatened Eulophia \(Orchidaceae\) growing in southern Western Ghats, India.](#)

R. Koshila Ravi, S. Sowmiya, M. Balachandar and T. Muthukumar,
Flora (2021) (In press).

117. [Root endophytic fungus Nectria haematococca promotes growth and nutrient uptake of green gram through modifications in root architecture in soil and soilless substrate,](#)

T. Muthukumar and M. R. Sulaiman,
Proceedings of the National Academy of Sciences, India: Section B. Biological Sciences, 91(2021).

116. [Arbuscular mycorrhizal fungi in roots and rhizosphere of black rice in terrace fields of North-East India,](#)

K. Surendirakumar, R. R. Pandey and T. Muthukumar,
Proceedings of the National Academy of Sciences, India: Section B. Biological Sciences (2021).

2020

115. [Cadmium affects the regeneration of the leafy vegetable Talinum portulacifolium \(Forssk.\) Asch. ex Schweinf., stem cuttings in nutrient solution,](#)

T. Muthukumar and S. Dinesh Babu,
Anales de Biologia, 42, 147–159 (2020).

114. [Interactive influence of soil and plant genotypes on mycorrhizal dependency in finger millet,](#)

K. Nagaraj, R. Koshila Ravi and T. Muthukumar,

Journal of Soil Science and Plant Nutrition, 20, 1287–1297 (2020).

113. [Comparative vegetative and ecological anatomy of Sirhookera \(Orchidaceae\) growing in Western Ghats of Southern India,](#)

R. Koshila Ravi, K. Jinsha, M. Balachandar and T. Muthukumar,

Nordic Journal of Botany, 38, 1–16 (2020).

112. [Genotypic variation in response and dependency of pigeon pea on arbuscular mycorrhizal fungi in a tropical Alfisol,](#)

K. Nagaraj, S. Vanishree and T. Muthukumar,

Plant Biosystems (2020).

111. [Plastic responses that confers invasiveness to Rivina humilis L.](#)

R. Koshila Ravi, S. Anusree and T. Muthukumar,

Acta Oecologica Sinica, 40, 464–472 (2020).

2019-2004

110. [Vegetative anatomy of Tabernaemontana alternifolia L. \(Apocynaceae\) endemic to southern Western Ghats, India,](#)

S. Yuvarani, R. Koshila Ravi, S. Anaswara, M. Balachandar and T.

Muthukumar,

Acta Biologica Szegediensis, 63, 185–193 (2019).

109. [Competitive interaction between an arbuscular mycorrhizal fungus and phosphate solubilizing bacterium on growth and phosphorus uptake of Impatiens walleriana stem cutting in an unsterile field,](#)

T. Muthukumar and A. Prabhu,

Journal of Horticultural Research, 27, 11–22 (2019).

108. [Vegetative anatomy and mycorrhizal morphology of Schoenorchis nivea \(Lindl.\) Schltr., \(Orchidaceae\) and their adaptive significance,](#)

M. Balachandar, R. Koshila Ravi, K. Nagaraj and T. Muthukumar,

Acta Biologica Szegediensis, 63, 1–13 (2019).

107. [Arbuscular mycorrhizal and dark septate endophyte fungal association in Capsicum chinense and the role of bioinoculants on its growth and yield in North Eastern India,](#)
K. Surendirakumar, R. R. Pandey and T. Muthukumar,
Journal of Agricultural Science, 157, 31–44 (2019).
106. [Arbuscular mycorrhizal and dark septate endophyte fungal association in cassava \(Manihot esculenta Crantz\) varieties, southern India,](#)
R. Muthuraja and T. Muthukumar,
Notulae Scientia Biologicae, 11, 154–166 (2019).
105. [Comparative vegetative anatomy and mycorrhizal morphology of three South Indian Luisia species \(Orchidaceae\) with the note on their epiphytic adaptations,](#)
M. Balachandar, R. Koshila Ravi, A. Ranjithamani and T. Muthukumar,
Flora, 251, 39–61 (2019).
104. [Zinc influences regeneration of Talinum portulacifolium stem cuttings in nutrient solution,](#)
T. Muthukumar, S. Jaison, and S. Dinesh Babu,
Notulae Scientia Biologicae, 10, 530–539 (2018)
103. [Dark septate root endophytic fungus Nectria haematococca improves tomato growth under water limiting conditions,](#)
P. Prema Sundara Valli and T. Muthukumar,
Indian Journal of Microbiology, 58, 489–495 (2018),
102. [Vegetative anatomy of the medicinal orchid Bulbophyllum sterile,](#)
T. Muthukumar and M. Shenbagam,
LANKESTERIANA, 18, 13–22 (2018).
101. [Coinoculation of arbuscular mycorrhizal fungi and phosphate solubilizing bacteria improves Acacia auriculiformis seedling growth and nutrient uptake in a tropical Alfisol soil,](#)
T. Muthukumar, and K. Udaiyan,
Journal of Forestry Research, 29, 663–673 (2018).
100. [Arbuscular mycorrhizal and dark septate endophyte fungal associations in plants of different vegetation types in Velliangiri hills of Western Ghats,](#)

Southern India,

T. Muthukumar, K. Sathiyadash and V. Valarmathi,
Acta Botanica Hungarica, 60, 185–222 (2018).

99. Vegetative anatomical adaptations of Epidendrum radicans (Epidendroideae, Orchidaceae) to epiphytic conditions of growth,

T. Muthukumar and M. Shenbagam,
Modern Phytomorphology, 11, 117–130 (2017).

98. Role and influence of soil microbial communities on plant invasion,

R. Koshila Ravi and T. Muthukumar,
Ecological Questions, 27, 9–23 (2017).

97. Comparative vegetative anatomy of south Indian Vandas,

A. Kowsalya, K. Rojamala and T. Muthukumar,
Flora, 235, 59–75 (2017).

96. Endorhizal fungal association and colonization patterns in Solanaceae,

T. Muthukumar and R. Sathya,
Polish Botanical Journal, 62, 287–299 (2017).

95. Arbuscular mycorrhizal fungus Scutellospora calospora (Nicol. & Gerd.) Walker & Sanders influences maize root growth and architecture in rock phosphate amended tropical soil,

P. Priyadharsini and T. Muthukumar,
Anales de Biologia, 39, 211–222 (2017).

94. The root endophytic fungus, Curvularia geniculata from Parthenium hysterophorus roots improve plant growth through phosphate solubilization and phytohormone production,

T. Muthukumar and P. Priyadharsini,
Fungal Ecology, 27, 69–77 (2017).

93. Potassium fertilization influences indigenous arbuscular mycorrhizal formation and function in a tropical Alfisol,

K. Chandra Gandhi, P. Priyadharsini, T. Muthukumar,
Communications in Soil Science and Plant Analysis, 48, 524–538 (2017).

92. Comparative anatomy of aerial and substrate roots of Acampe praemorsa (Rox.) Blatt. & McCann.,

T. Muthukumar and A. Kowsalya,
Flora, 226, 17–28 (2017).

91. [Chromium accumulation in medicinal plants growing naturally on tannery pollutant contaminated and non-contaminated soils,](#)

S. Jaison and T. Muthukumar,
Biological Trace Elements Research, 175, 223–235 (2017).

90. [Root fungal associations in non-orchidaceous vascular lithophytes of Siruvani Hills, Western Ghats, southern India,](#)

T. Muthukumar, M. Chinnathambi, P. Priyadharshini,
Acta Botanica Brasilica, 30, 407–421 (2016).

89. [Arbuscular mycorrhizal and dark septate endophyte fungal associations in Asparagus,](#)

T. Muthukumar, and R. Muthuraja,
Turkish Journal of Botany, 40, 662–675 (2016).

88. [Influence of season and edaphic factors on endorhizal fungal associations in subtropical plantation forest trees of Northeastern India,](#)

R. R. Pandey, C. Ishworani and T. Muthukumar,
Flora, 222, 1–12 (2016).

87. [Morphology, anatomy and mycotrophy of pseudobulb and subterranean organs in Eulophia epidendraea and Malaxis acuminata of sub family \(Epidendroideae, Orchidaceae\),](#)

E. Uma, R. Rajendran and T. Muthukumar,
Flora, 217, 14–23 (2015).

86. [A new species of Malaxis \(Orchidaceae, Epidendroideae\) from the Southern Western Ghats, India,](#)

T. Muthukumar, A. Rajendran, P. Priyadharsini and A. Sarvalingam,
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Database : GenBank

ID/Ref no : JF499918

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Name of the Authors : Sathiyadash, K., Muthukumar, T., Bala Murugan, S., Sathishkumar, R. & Uma, E.

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Database : GenBank

ID/Ref no : JN648710

Year : 2011

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XRD/Protein/Gene/Any other : *Tulasnella* sp.

Database : GenBank

ID/Ref no : JN704001

Year : 2011

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XRD/Protein/Gene/Any other : *Ceratobasidium* sp

Database : GenBank

ID/Ref no : JQ655464

Year : 2011

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Name of the Authors : Sathiyadash, K., Muthukumar, T., Bala Murugan, S., Sathishkumar, R. & Uma, E.

XRD/Protein/Gene/Any other : *Tulasnella calospora*

Database : GenBank

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Year : 2012

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XRD/Protein/Gene/Any other : *Trichoderma* sp

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Database : GenBank

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Database : GenBank

ID/Ref no : JX120568

Year : 2012

Sl.No. : 11

Name of the Authors : Jaison, S., Muthukumar, T. & Uma, E.

XRD/Protein/Gene/Any other : *Aspergillus niger* strain

Database : GenBank

ID/Ref no : KJ549638

Year : 2014

Sl.No. : 12

Name of the Authors : Jaison, S., Muthukumar, T. & Uma, E.

XRD/Protein/Gene/Any other : *Candida parapsilosis* strain

Database : GenBank

ID/Ref no : KJ549639

Year : 2014

Sl.No. : 13

Name of the Authors : Priyadharsini, P., Muthukumar, T. & Jaison, S.

XRD/Protein/Gene/Any other : *Curvularia* sp

Database : GenBank

ID/Ref no : KU311055

Year : 2016

Sl.No. : 14

Name of the Authors : Priyadharsini, P. & Muthukumar, T.

XRD/Protein/Gene/Any other : *Eurotiomycetes* sp.

Database : GenBank

ID/Ref no : KU355865

Year : 2016

Sl.No. : 15

Name of the Authors : Priyadharsini, P. & Muthukumar, T.

XRD/Protein/Gene/Any other : *Phoma multirostrata*

Database : GenBank

ID/Ref no : KU355864

Year : 2016

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Name of the Authors : Priyadharsini, P. & Muthukumar, T.

XRD/Protein/Gene/Any other : *Phoma multirostrata*

Database : GenBank

ID/Ref no : KU355863

Year : 2016

Sl.No. : 17

Name of the Authors : Priyadharsini, P. & Muthukumar, T.

XRD/Protein/Gene/Any other : *Nectria haematococca*

Database : GenBank

ID/Ref no : KU355862

Year : 2016

Sl.No. : 18

Name of the Authors : Muthuraja, R. & Muthukumar, T.

XRD/Protein/Gene/Any other : *Aspergillus terreus*

Database : GenBank

ID/Ref no : MH124236

Year : 2019

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Name of the Authors : Muthuraja, R. & Muthukumar, T.

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Database : GenBank

ID/Ref no : MH220542

Year : 2019

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Database : GenBank

ID/Ref no : MH220543

Year : 2019

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XRD/Protein/Gene/Any other : *Aspergillus niger*

Database : GenBank

ID/Ref no : MH220544

Year : 2019

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XRD/Protein/Gene/Any other : *Aspergillus niger*

Database : GenBank
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Year : 2019

Sl.No. : 23
Name of the Authors : Muthuraja, R. & Muthukumar, T.
XRD/Protein/Gene/Any other : *Aspergillus terreus*
Database : GenBank
ID/Ref no : MH220540
Year : 2019

Sl.No. : 24
Name of the Authors : Muthuraja, R. & Muthukumar, T.
XRD/Protein/Gene/Any other : *Aspergillus terreus*
Database : GenBank
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Year : 2019

Sl.No. : 25
Name of the Authors : Muthuraja, R. & Muthukumar, T.
XRD/Protein/Gene/Any other : *Aspergillus violaceofuscus*
Database : GenBank
ID/Ref no : MH220545
Year : 2019

Sl.No. : 26
Name of the Authors : Balachandar,M., Muthuraja,R. & Muthukumar,T.
XRD/Protein/Gene/Any other : *Cladosporium* sp.
Database : GenBank
ID/Ref no : MH220539
Year : 2019

Sl.No. : 27
Name of the Authors : Balachandar,M., Muthuraja,R. & Muthukumar,T.
XRD/Protein/Gene/Any other : *Hypoxylon fendleri*
Database : GenBank
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