



**Department of Biotechnology**  
**Manonmaniam Sundaranar University,**  
 Tirunelveli-12

**Dr.Kasi Murugan**  
**(Professor)**



**I. Academic Details**

**Area of Specialization** Aflatoxin; Biofilm; Bioactive natural compounds; Bionanoparticles

**Research Experience** 21 Years

**Teaching Experience** 23 Years

**Ph.D. Guidance** On-going 6 ; Completed: 7

Programme(s)	Organized	Attended
Workshops	7	10
Seminar	4	15
Conferences	1	9
Invited Talks	14	

**Additional Responsibilities:**

- Mentor Manonmaniam Sundaranar University constituent college Sankarankovil
- University representative to affiliated college
- Additional Controller of Examinations (DD&CE)

**Countries Visited** Saudi Arabia South Korea

**Editorial Membership**

Associate Editor, Asian Journal of Biotechnology

Member, Editorial Board, Austin Journal of clinical Microbiology

Member, Editorial Board, Research in Biotechnology

Member, Editorial Board, Food and Public Health

Member, Editorial Board, Acta Scientific Pharmaceutical Sciences

Editor in chief, Editorial Board, South Indian Journal of Biological Sciences

**Membership in Professional Bodies**

Indian Association of Applied Microbiology

Indian Society For Technical Education

**Awards / Recognition**

IAAM Fellowship Award 2017 (FIAAM).

IISC – INSA – NASI: Summer Research Fellowship (2007)

**II. Research Profile`**

**Research Publications**

Publications	No.of.Publications
Journals	43
Conferences	7+15
Books	2+4

**Citations and Indexing**

**Journal Citations**

Google scholar	601
Scopus	229
Web of Science	

**Indexing(h –Index)**

Google Scholar	14
Scopus	10
Web of Science	7

Research Projects IPR/Patents	Nos	Amount
	1	10000

**III. Personal Details**

**Date of Birth** 17.04.1971

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## Dr. KASI MURUGAN

### Professor

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### RESEARCH AREA OF INTEREST

- Aflatoxin, Biofilm, Nanomaterial biogenic synthesis, Microbial diversity exploration, Volarization

### ACADEMIC CREDENTIALS

Programme of Study	Name of the Institution/ University	Major Subject(s)	Year of Passing
Ph.D.	Manonmaniam Sundaranar University, Tirunelveli	Microbiology-Botany	2003
MSc	Manonmaniam Sundaranar University, Tirunelveli	Microbiology	1994
BSc	Madurai Kamaraj University, Madurai	Zoology	1992
HSC	Board of Higher Secondary Education, Tamil Nadu	Maths, Phy, Chem, Biol.	1989
SSLC	Board of Secondary Education, Tamil Nadu	Tamil, English, Mathematics, Science, History & Geography	1987
Certificate Course in Clinical Microbiology	Periyar University, Salem	Clinical Microbiology	2006
Certificate Course IPR	World Intellectual Property Rights Organization (WIPO), Geneva	Intellectual Property Rights	2007

## TEACHING EXPERIENCE

### ➤ 23 Years of Teaching Experience

S.No.	Position	Institution	From - To
1.	Professor	Department of Biotechnology, Manonmaniam Sundaranar University, Tirunelveli	02.11.2016 onwards
2.	Associate Professor	College of science, King Saud University, Riyadh, Kingdom of Saudi Arabia	23.08.2015 - 30.10.2016
3.	Assistant Professor	College of science, King Saud University, Riyadh, Kingdom of Saudi Arabia	14.10.2009 - 22.08.2015
4.	Reader	K.S.R.College of Arts and Science, Tiruchengode, Tami Nadu, India	01.04.2005 - 10.10.2009
5.	Senior Lecturer	K.S.Rangasamy College of Arts and Science, Tiruchengode, Tamil Nadu, India	28.07.2003 - 01.04.2005
6.	Lecturer	K.S.Rangasamy College of Arts and Science, Tiruchengode, Tamil Nadu, India	26.5.1996 - 28.7.2003
7.	Lecturer	P.G.P. College of Arts and Science, Namakkal, Tamil Nadu, India	31.7.1995 - 24.4.1996

## RESEARCH SUPERVISION

### ➤ Ph.D. Thesis Supervised

- Mr. R.V. Prabu, Periyar University, Salem- Phytochemical and Molecular docking studies on certain Indian medicinal plants for their antiviral properties against HIV and HBV.
- Ms. K. Selvanayagi, Periyar University, Salem-Evaluation of biofilm forming clinical isolates and their control through novel alternative approaches.
- K. Anandraj. Periyar University, Salem- Culinary plants antifungal activity, phytochemical profiling and molecular interaction study on groundnut oil aflatoxigenic fungi.
- K. Sekar. Bharathiar University, Coimbatore-Cariogenic biofilm management through ethnobotanical way: antibiofilm, phytoconstituents and in silico interaction study on *Mimusops elengi* L.
- S. Shakitha. Periyar University, Salem. Evaluation of carotene producing *Halobacterium* species and detection of antioxidant and anticancer activity.
- Shakthi V. Bharathiar University, Coimbatore Screening of antibacterial active actinomycetes from Javadi Hills, Tamilnadu, India.

➤ **M.Phil Guided**

<b>Name of the Scholar</b>	<b>University</b>	<b>Title of the Thesis</b>	<b>Year</b>
C. Ramyakalyani	Manonmaniam Sundaranar University	Cariogenic biofilm management: <i>in vitro</i> and <i>in silico</i> study on activity, phytochemicals and nano emulsion of <i>Tabernaemontana divaricata</i>	May 2018
S. Kalavathi	Manonmaniam Sundaranar University	Halitosis management: An exploratory <i>in vitro</i> study on <i>Hemidesmus indices</i> plant extracts and their nanoemulsions inhibitory potency on oral biofilm bacteria	May 2018
P. Prabhakaran	Periyar University	Microbial source tracking of Tirumanimutharu river fecal pollution using REP, PCR, RAPD, ARA and serotyping	November 2009
A. Yasotha	Periyar University	A study on cyanogenic glycoside utilizing cassava peel waste isolate and their enzyme	November 2009
S. Sathya	Periyar University	Characterization and inhibitory study on aflatoxigenic fungi from edible oil	December 2008
M. Saranya	Periyar University	Cyanogenic glycoside utilizing sago industry waste isolate and their applications in cyanide removal	October 2008
M. Sadhasivam	Bharathidasan University	Molecular characterization and detection of biofilm formation among clinical isolates of <i>Staphylococcus</i> sp.	October 2007
G. Lekshmi	Periyar University	Molecular characterization and inhibition study on aflatoxigenic fungi isolated from tea samples	October 2007
C. Ambika	Periyar University	Studies on the termite gut microflora with special reference to cellulose degradation	October 2007
S. Sangeetha	Periyar University	A Study on degradation and molecular characterization of cyanide degrading steel plant	October 2007

		effluent isolate <i>Bacillus</i>	
I.Susana Christy	Periyar University	<i>In vitro</i> study on antibacterial activity of selected medicinal plants against clinical isolates	October 2007
S. Helan Prema	Bharathidasan University	Study on physico chemical microbial analysis of sago effluent and the effect of biotechnologically treated effluent on pluses	August 2007
P. Sasikumar	Bharathidasan University	Investigation of the antibacterial activities of some actinomycetes isolated from soils	August 2007
A. Krishnaveni	Bharathidasan University	Molecular and enzymatic studies on trehalase producing <i>Saccharomyces cerevisiae</i>	August 2007
K. Vijayakumar	Bharathidasan University	Prevalence of pathogenic bacteria in raw and processed milk and milk products	August 2006
S.Suganya	Bharathidasan University	Preliminary studies on <i>Arachis hypogea</i> and <i>Vigna mungo</i> for heavy metal tolerant germplasm development	August 2006
M. Kanchana	Bharathidasan University	Study on dermatophytosis in and around Tiruchencode and the susceptibility of pathogens to medicinal plants extracts	December 2005
K. G. Vanitha	Bharathidasan University	Optimization of medium components for mass production of bio-pesticides	December 2005
S.M. Rajamurugan	Bharathidasan University	Amylase production from <i>Bacillus cereus</i> and its assay	August 2004
K. Nirmaladevi	Bharathidasan University	Optimization and comparative studies of amylase production by immobilized <i>Bacillus subtilis</i> and <i>Bacillus coagulans</i>	August 2004
M. Selvan	Bharathidasan University	Isolation characterization and optimization oil utilizing bacteria with special reference to BTX toxicity	April 2005

## AWARDS & HONOURS

- **IISC – INSA – NASI: Summer Research Fellowship for 2007.** Availed the fellowship under the guidance of Dr. K.L. Dixit, Deputy Director, Institute of Microbial Technology, Chandigarh during May – June 2008.
  - Editor in chief, Editorial Board, South Indian Journal of Biological Sciences
  - Associate Editor, Asian Journal of Biotechnology
  - Member, Editorial Board, Austin Journal of clinical Microbiology
  - Member, Editorial Board, Research in Biotechnology
  - Member, Editorial Board, Food and Public Health

## PUBLICATIONS

- MysoonAl-Ansaria, NoorahAlkubaisi, P.Vijayaragavan, **K. Murugan**. 2019. Antimicrobial potential of Streptomyces sp. to the Gram positive and Gram negative pathogens. 2019. Journal of Infection and Public Health. <https://doi.org/10.1016/j.jiph.2019.05.016> (ISSN: 1876-0341; IF: 2.487).
- Senthilkumar B, Senbagam, D, **Murugan K**, Selvam K, Rajesh S, Anbarasu K. 2019. Syntheses, physicochemical characterization, antibacterial studies on potassium morpholine dithiocarbamate nickel (II), copper (II) metal complexes and their ligands. Heliyon 5: e01687.
- Fahad S. Albaqami, Saleh A. Sohaibani and **Murugan Kasi**. 2018. Arbuscular Mycorrhizal Fungi Diversity in Two Different Regions in Saudi Arabia. International Journal of Current Microbiology and Applied Sciences 7(4): 2492-2510. (ISSN:2319-7692).
- Murugesan Kanagavel, Santhanam Shanmughapriya, Kayanam Vijaya Lalitha Aishwarya, Karupppiah Ponmurugan, **Kasi Murugan**, Naif Abdullah Al-Dhabi & Kalimuthusamy Natarajaseenivasan. 2017. Peptide specific monoclonal antibodies of Leptospiral LigA for acute diagnosis of leptospirosis. Scientific Reports 7: 3250.DOI:10.1038/s41598-017-03658-0 (ISSN: 2045-2322; IF:4.609).
- **Murugan Kasi**, Anandaraj K, Ashraf A. Hatamleh, Saleh Al-Sohaibani. 2015. Groundnut oil biopreservation: bioactive components, nutritional value, and anti-aflatoxic effects of traditional ginger seasoning Doi:10.1111/jfpp.12984 (Journal of Food Processing and Preservation, ISSN: 1745-4549; IF: 1.51).

- Sekar Kuppusamy, **Murugan Kasi**, Pandiarajan K, Ignacimuthu, Saleh Al-Sohaibani. 2016. Anticaries potential of ethnomedicinal plants used by *Malayali* tribals from Kolli Hills, India. *Indian Journal of Traditional Knowledge*, 15(1):109-115 (ISSN: 0975-1068. IF: 1.061).
- Shakthi Velayudam, **Kasi Murugan**. 2015. Sequential optimization approach for enhanced production of antimicrobial compound from *Streptomyces rochei* BKM-4. *South Indian Journal of Biological Sciences*. 1(2); 72-79 (ISSN: 2454-4787).
- **Kasi Murugan**, Sangeetha Shanmugasamy, Ranjitha Shanmugasamy, Saleh Al-Sohaibani and Gopal Ramesh Kumar. 2015. TaxKB: A knowledge base for new taxane-related drug discovery. *BioData mining*, 8:19. DOI 10.1186/s13040-015-0053-5 (ISSN: 1756-0381, IF:2.074).
- Senbagam Duraisamy, **Murugan Kasi**, Senthilkumar Balakrishnan, Saleh Al-Sohaibani, Gurusamy Ramasamy. 2015. Optimization of *Lactobacillus brevis* NS01 Brevicin Production and Its Application in Apple Juice Biopreservation Using Food-Grade Clarifying Agent Silica as a Carrier. *Food and Bioprocess Technology*, 8(8):1750–1761. DOI 10.1007/s11947-015-1536-6 (ISSN:1935-5130, IF: 2.998).
- **Murugan Kasi**, Krishnasamy Selvanayaki, and Saleh Al-Sohaibani (2016) Urinary catheter indwelling clinical pathogen biofilm formation, exopolysaccharide characterization and their growth influencing parameters. *Saudi Journal of Biological Sciences*, 23, 150-159. Doi 10.1016/j.sjbs.2015.04.016 (ISSN:1319-562X, IF: 3.138).
- **Kasi Murugan**, Shanmugasamy Sangeetha, Shanmugasamy Ranjitha, Antony Dasan Vimala, Saleh Al-Sohaibani and G. Rameshkumar. 2015. HDACiDB: A Database for Histone Deacetylase Inhibitors. *Drug Design, Development and Therapy* 2015:9, 2257—2264 (ISSN: 1177-8881; IF 3.048).
- **Kasi Murugan**, K.Kavitha and Saleh Al-Sohaibani. 2015. Rifampicin resistance among clinical multiresistant MRSA isolates from Chennai, India and their molecular characterization. *Genetics and Molecular Research*, 14(1), 2716-2725 (ISSN: 1676-5680; IF:0.775).
- **Kasi Murugan**, Balakrishnan Senthilkumar, Duraisamy Senbagam, Saleh Al-Sohaibani. 2014. Biosynthesis of silver nanoparticles using *Acacia leucophloea* extract and their antibacterial activity. *International Journal of Nanomedicine*, 9: 2431-2438. (ISSN: 1178-2013; IF 5.154).

- **Kasi Murugan**, K. Anandaraj, Saleh Al-Sohaibani. 2014. Evaluation of the effects of *Allium* spp and *Allium* seasoning on the toxigenic, nutritional and sensorial profiles of groundnut oil. *Journal of Food Science*, 79(4); M643-M654. (ISSN: 1750-3841; IF:2.028).
- Shahitha Sikkandar, **Kasi Murugan**, Saleh Al-Sohaibani, Flora Rayappan, Aneesh Nair and Florida Tilton. 2013. Halophilic bacteria-A potent source of carotenoids with antioxidant and anticancer potentials. *Journal of Pure and Applied Microbiology*, 7(4): 2825-2830. (ISSN: ISSN 0973-7510; IF:0.054).
- **Murugan K**, Sangeetha S, Kalyanasundaram V.B and Saleh Al-Sohaibani. 2013. *In vitro* and *in silico* screening for *Andrographis paniculata* quorum sensing mimics: new therapeutic leads for cystic fibrosis *Pseudomonas aeruginosa* biofilms. *Plant Omics Journal* 6(5):340-346. (ISSN:1836-3644; IF 0.456).
- S. Sangeetha, S.Ranjitha, **K. Murugan**, and G. Rameshkumar. 2013. Breast cancer specific HDACi lead discovery using molecular docking and descriptor study. *Trends in Bioinformatics*, 6(2): 25-44 **DOI:** 10.3923/tb.2013.25.44 (ISSN: 1994-7941).
- **Kasi Murugan**, K. Anandaraj, Saleh Al-Sohaibani. 2013. Antiaflatoxicogenic food additive potential of *Murraya koenigii*: An *in vitro* and molecular interaction study. *Food Research international*, 52(1); 8-16 (ISSN: 0963-9969, IF: 3.520).
- Shahitha Sikkandar, Kasi Murugan, Aneesh Nair and Florida Tilton. 2013. Molecular authentication and genetic diversity analysis of *Haloferox volcanii* and *Halobacterium salinarium* from salt brines. *Asian Journal of Pharmaceutical and Clinical Research*, 6(3), 158-160 (ISSN - 0974-2441).
- **K. Murugan**, K. Sekar, S. Sangeetha, S. Ranjitha and SA Sohaibani. 2013. *In vitro* and structure based *in silico* screening of putative therapeutic quorum sensing inhibitors from an ethanomedicinal herb *Achyranthes aspera* controlling cariogenic *Streptococcus mutans*. *Pharmaceutical Biology*, 51(6): 728–736. (ISSN: 1388-0209, IF 1.918).
- **Kasi Murugan**, Selvanayaki Krishnasamy, V.B.Kalyanasundaram, and Saleh Al-Sohaibani. 2013. Nanotechnological approach for exploring the antibiofilm a potential of an ethanomedicinal herb *Andrographis paniculata* for controlling lung infection causing *Pseudomonas aeruginosa*. *Digest Journal of Nanomaterials and Biostructure*, 8:1, 117-126. (ISSN:1842–3582, IF 1.2).



- Abeer R. M. Abd El- Aziz, Monira R. Al-Othman, Saleh A. Al-Sohaibani, Mohamed A. Mahmoud and **Kasi Murugan**. 2012. Prevention of aflatoxin contamination of maize by *Aspergillus flavus* through aqueous plant extracts in Saudi Arabia. African Journal of Microbiology Research 6(41), 6931-6935 (ISSN: 1996-0808; IF: 0.56).
- **Kasi Murugan**, Perumal Prabhakaran, Saleh Al-Sohaibani, Kuppusamy Sekar. 2012. Identification of source of faecal pollution of Tirumanimuttar River, Tamilnadu, India using microbial source tracking. Environmental Monitoring and Assessment 184(10), 6001-6012 (ISSN:0167-6369; IF:1.804).
- Saleh Al-Sohaibani and **Kasi Murugan**. 2012. Anti-biofilm activity of *Salvadora persica* on cariogenic isolates of *Streptococcus mutans*: in vitro and molecular docking studies. Biofouling, 28:1, 29-38. <http://dx.doi.org/10.1080/08927014.2011.647308>. (ISSN: 0892-7014; IF: 4.429).
- Kavitha K and **Murugan K**. 2012. Antibacterial studies of *Smilax zeylanica* on methicillin and rifampicin resistant *Staphylococcus aureus*. Indian Journal of Applied Microbiology, 15(2), 107-113. (ISSN 2249-8400).
- **Kasi Murugan**, Savitha T and S. Vasanthi (2012). Retrospective study of antibiotic resistance among uropathogens from rural teaching hospital, Tamilnadu, India. Asian Pacific Journal of Tropical Disease, 375-380. (ISSN: 2222-1808).
- Shakthi Velayudham and **Kasi Murugan** (2012). Diversity and Antibacterial Screening of Actinomycetes from Javadi Hill Forest Soil, Tamilnadu, India. Journal of Microbiology Research 2(2), 41-46 (ISSN:2166-5885).
- **Kasi Murugan**, Yashotha, Kuppusamy Sekar, Saleh Al-Sohaibani (2012). Detoxification of cyanides in cassava flour by linamarase of KM05 isolated from cassava peel. African Journal of Biotechnology 11(28), 7232-7237. (ISSN: 1684-5315).
- **K. Murugan**, Selvanayaki K and Saleh Al- Sohaibani (2011). Antibiofilm activity of *Andrographis paniculata* against cystic fibrosis clinical isolate *Pseudomonas aeruginosa*. World Journal of Microbiology and Biotechnology 27(7),1661-1668 (ISSN: 0959-3993; IF:1.532).
- Saleh Al-Sohaibani, **Murugan K**, Lakshimi G, Anandraj K. 2011. Xerophilic aflatoxigenic black tea fungi and their inhibition by *Elettaria cardamomum* and *Syzygium aromaticum* extracts. Saudi Journal of Biological Sciences 18, 387–394 (ISSN:1319-562X, IF: 3.138).

- **Murugan K**, Usha M, Malathi P, Saleh. A. Al Sohaibani and Chandrasekaran M. (2010). Biofilm forming conjunctivitis multi drug resistant *Staphylococcus* spp. among the ocular patients. Poland Journal of Microbiology 59(4), 233-239 (ISSN: 1733-1331; IF: 0.697).
- **Kasi Murugan**, Ramakrishnan Venkatesh Prabu, Shanmugasamy Sangeetha and Saleh Al-Sohaibani. (2011). Antiviral activity of *Cardiospermum halicacabum* L. extract against coinfecting agents HIV and HBV. Journal of Herbs, Spices & Medicinal Plants 17(4), 403-418. (ISSN: 1049-6475).
- Savitha T, **Murugan K**, and Thangamariappan K. (2011). Prevalence study on emergence of urinary tract infection in Erode, Tamil Nadu, India. International Journal of Current Research 2(1), 067-072. (ISSN: 0975-833X).
- **K.Murugan** and Saleh A. Al-Sohaibani. 2010. Biocompatible removal of tannin and colour from tannery effluent using the biomass and tannase enzyme of *Aspergillus candidus* MTTC 9628. Research Journal of Microbiology 5(4) :262-271. ISSN: 1816-4935.
- **Kasi Murugan**, J.Pandiarajan, Prabakaran, Saleh A Al Sohaibani. 2010. PHB and Nanocomposite Production by Coconut Oil Utilizing Native *Pseudomonas aeruginosa* KSR3. Advanced Biotech 9(12): 38-43. ISSN: 0973-0109.
- N.Ramesh, T.Meenambal, **K.Murugan**, S.M.Suneethkumar, Lakshmipriya Thiagarajan, N.Lakshmi Narashimaih. 2009. Biphasic Anaerobic Digestion Of The Organic Fraction Of Municipal Solid Waste (OFMSW) Through UASB Reactor: A Performance Studies 28(2),239-246. (ISSN: 0257-8050)
- Ramesh, S., Meenambal, T., and Murugan, K. Quantification characterization and leachate analysis of municipal solid waste from Erode municipality, Tamilnadu,2009. Nature Environment and Pollution Technology 9(1): 141-149
- **K. Murugan**, S. Saravanababu and M. Arunachalam, 2007. Screening of Tannin Acyl Hydrolase (E.C.3.1.1.20) producing tannery effluent fungal isolates using simple agar plate and SmF process. Bioresource Technology (98) 946 – 949.
- **K. Murugan**, P. Kaviyarasi and S. Saravanababu 2006. Antifungal activities of *Cassia auriculata* against AIDS isolate *Candida albicans* and dermatophytes *Epidermophyton floccosum*, *Geotrichum candidum* and *Trichophyton*

*mentagraphytes*. Asian Journal of Microbiology Biotechnology and Environmental Sciences 8(3): 300.

- **K. Murugan**, P.S. Suman and S. Saravanababu, 2005. Ecofriendly approach of improving the nutritive value of sorghum straw through tannase producing filamentous fungal SSF culture. Pollution research 24 (special issue); 303-307.
- **K. Murugan**, S. Saravanababu, K. Udayashankar and M. Arunachalam 2005. Tannery effluent isolates-potential sources of tannin acyl hydrolase enzyme. Journal of Ecobiology 17 (3); 287-291.
- **K.Murugan**, K.Vijayakumar and S.Saravanababu. 2005. Study on the evaluation of tannase production and expression of aflatoxin during SSF culture on sorghum straw by tannery effluent isolates *Aspergillus niger* and *A. flavus*. Asian Journal of Microbiology Biotechnology and Environmental Sciences 4 (2): 334-338. ISSN: 0972-3005
- A.J.A.Ranjitsingh, **K.Murugan** and R.Gowrishankar. 1996. Isolation and identification of microflora in the sugar factory effluents. Environment & Ecology, 14 (4): 973 – 975. ISSN: 0970-0420.
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## BOOKS / CHAPTERS

1. Book on Major Practical I (General microbiology) for I BSc Microbiology course PRIDE, Periyar University, Salem, Tamil Nadu, India.
2. Book on Soil Environmental and Pollution Microbiology for II MSc Microbiology course, PRIDE, Periyar University, Salem, Tamil Nadu, India.
3. **K.Murugan**, K.Selvanayaki and P.Aasma. 2006. Efficacy of selected medicinal plant extracts, antibiotics and disinfectants on controlling biofilm forming dye industry effluent isolate *Bacillus subtilis*. In: Proceedings of the International conference on Recent Advances in Marine Antifouling Technology. Pp. 388 – 399. Allied Publishers Private Limited. ISBN 81 – 8424 – 128 –133
4. **Murugan K**, Chandrasekaran VS, Karthikeyan P and Al-Sohaibani S (2012). Current State-of-the-Art on Food Processing By-Products. In: *Valorization of Food Processing By-Products*, (Chandrasekaran M Eds) CRC Press, New York. Pp 36-62 (ISBN: 9781439848852).
5. **Murugan K** and Al-Sohaibani S (2012) Coffee, Tea, and Cocoa. In: *Valorization of Food Processing By-Products*. In: *Valorization of Food Processing By-Products*, (Chandrasekaran M Eds) CRC Press, New York pp 455-489 (ISBN:9781439848852).

6. **Murugan K** and Ramasamy K. (2012). Environmental concerns and sustainable development. In: *Valorization of Food Processing By-Products*, pp 739-755 (Chandrasekaran M Eds) CRC Press, New York. (ISBN:9781439848852).

#### FULL PAPER PUBLISHED IN CONFERENCE PROCEEDINGS

1. M.Jasmine and **K. Murugan**. 2019. Development of natural compound contact lens care solution. Proceedings: Student projects scheme seminar cum exhibition Tamilnadu state council for science and Technology, Chennai, 2019.
2. Priyadharshini and **Murugan K**. 2018. Exploratory study on kani tribal traditional oral care plants for dental caries management. Student projects scheme seminar cum exhibition proceedings Tamilnadu state council for science and Technology, Chennai, 2018. Pp 169-172.
3. Rajaguru, **K.Murugan** 2009. Economical nutritional source from tannery waste for the growth and pigment production of commercially important *Halobacterium salinarium*. Student projects scheme seminar cum exhibition proceedings Tamilnadu state council for science and Technology, Chennai, 2009.
4. Ramesh, **K,Murugan**. 2008. Production of Bioethanol from Cassava solid waste using *Zymomonas mobilis*. Student projects scheme seminar cum exhibition proceedings Tamilnadu state council for science and Technology, Chennai, 2008.
5. Shyamala, **Murugan K**. 2007. Development of Antibiofilm product against dental caries causing organisms from traditionally used medicinal plant. Student projects scheme seminar cum exhibition proceedings Tamilnadu state council for science and Technology, Chennai, 2007.
6. **K.Murugan**, K.Selvanayaki and P.Aasma. 2006. Efficacy of selected medicinal plant extracts, antibiotics and disinfectants on controlling biofilm forming dye industry effluent isolate *Bacillus subtilis*. In: Proceedings of the International conference on Recent Advances in Marine Antifouling Technology. Pp. 388 – 399. Allied Publishers Private Limited. ISBN 81 – 8424 – 128 –133.
7. **K.Murugan**, P.S.Suman and S.Saravanababu. 2005. Ecofriendly approach of improving the nutritive value of sorghum straw through tannase producing filamentous fungal SSF culture. Pollution Research 24 (special issue): 303-307. ISSN: 0257-8050.
8. **K.Murugan**, Viviana Echenique and German Spangenberg. 2003. Southern Blotting Technique with Genomic DNA from Plants, In workshop manual International Training Course on Biotechnological Tools in Plant improvement, Sep. 7th – 20th, Practical manual,69-79.
9. **K.Murugan**, K.Vijayakumar, M.Thavasumani, S.Saravanababu and M.Arunachalam. 2003. A Preliminary study on tannase by SSF using agriculture residues, pp167-172, Proc. of Int. Sem. Recent Adv. In Biotechnology. 24th and 25th Feb, 2003, P.R College, Thanjavur.
10. **K. Murugan**, K.G.Vanitha, S.Saravanababu and M.Arunachalam. 2003 Potentiality of tannery effluent isolates in the production of tannin acyl hydrolase enzyme, pp 173-176 Proc. Of Int. Sem. Recent Adv. In Biotechnology. 24th and 25th Feb, 2003, P.R College, Thanjavur.

11. N.R.Rajendran, S.Saravanababu, and **K.Murugan**. 1998. Pollution from motor vehicles. In:Proceedings of the seminar on Exposure to the Environmental Status in Tamilnadu, 28th -29th March, 1998.

#### SEQUENCES SUBMITTED TO NCBI

- **K.Murugan**, G.Lekshmi, S.Sangeetha. *Aspergillus flavus* strain MLO2 28S ribosomal RNA gene, partial sequence (Ref. EU 1825 89).
- **K.Murugan**, G.Lekshmi, Muthukumaran. *Aspergillus niger* strain MLO2 28S ribosomal RNA gene, partial sequence (Ref. EU 179522).
- **K.Murugan**, Sangeetha, Muthukumaran. *Bacillus pumilus* strain MS 01 16S ribosomal RNA gene, partial sequence (Ref. EU 179521).
- **K.Murugan**, Usha, Selvanayagi, Malathi, Wilson. *Staphylococcus aureus* strain MP 01 *Staphylococcus ica A* gene, partial sequence (Ref. GQ214387).
- **K.Murugan**, Selvanayagi, Usha, Malathi, Wilson. *Staphylococcus aureus* strain MP 02 *Staphylococcus ica A* gene, partial sequence (Ref. GQ214388).
- **K.Murugan**, K. Selvanayagi, *Enterococcus faecalis* strain KMS E01 putative surface protein precursor, gene, partial cds (Ref. HM140703).
- **K.Murugan**, K. Selvanayagi, *Enterococcus faecalis* strain KMS E07 putative surface protein precursor, gene, partial cds (Ref. HM140704).
- **K.Murugan**, K. Selvanayagi, *Pseudomonas aeruginosa* strain KMS P03 putative surface protein precursor, gene, partial cds (Ref. HM140705).
- **K.Murugan**, K. Selvanayagi, *Pseudomonas aeruginosa* strain KMS P05 putative surface protein precursor, gene, partial cds (Ref. HM140706).
- Syed Zahir, S., **Murugan, K.**, Lakshmi Priya, K., Vadivukkarasi, B.K. Tilton, F. *Haloferax* sp. BRTH2 16S ribosomal RNA gene (HM804588)
- Syed Zahir, S., **Murugan, K.**, Lakshmi Priya, K., Vadivukkarasi, B.K. Tilton, F. *Halobacterium* sp. BRTH1 16S ribosomal RNA gene (HM 804587)
- K.Sekar., K.Murugan. *Bacillus anthracis* strain KS-1 16S ribosomal RNA gene (JX423633)
- **K.Murugan.**, Sakthi Velayudham. *Streptomyces rochei* strain BKM-4 16S ribosomal RNA gene, partial sequence (KJ607323).

#### CULTURES DEPOSITED IN MICROBIAL TYPE CULTURE COLLECTION (MTCC)

- Tannase producing fungal isolate *Fusarium proliferatum* MTTC 9635
- Tannase producing fungal isolate *Aspergillus candidus* MTTC 9628
- Tannase producing fungal isolate *Aspergillus awamori* MTTC 9636
- Tannase producing fungal isolate *Aspergillus heteromorphus* MTTC 9619
- Tannase producing fungal isolate *Aspergillus fumigatus var.ellipticus* MTTC 9626
- Tannase producing fungal isolate *Aspergillus flavus* MTTC 9627
- Aflatoxin producing oil fungal isolate *Aspergillus flavus* MTTC 10860

#### PAPER PRESENTATION

- **Presented 15 Papers in both International and National Conferences and Symposia**
1. **Murugan K**, K. Selvanayagi and P. Asma. Efficacy of Selected Medicinal Plant Extracts, Antibiotics and Disinfectants on controlling biofilm forming Dye Industry Effluent

Isolate *Bacillus subtilis*. International conference on Recent Advances in Marine Antifouling Technology. 6-8 Nov 2006. National Institute of Ocean Technology, Chennai.

2. **Murugan K**, Zubaiar Ahamed. S and Saravanababu, S. Ecofriendly approach of improving the nutrient value of sorghum straw through tannase producing fungi SSF culture. International seminar on Ecotechnology for Sustainable development. Eco tech 2004. 04<sup>th</sup> - 06<sup>th</sup> October, 2004. PG & Research Department of Zoology. The New College, Chennai.
3. **Murugan K**, T. Karunakaran and P.S. Suman. Antimicrobial activity of *Pedaliium murex* (L.) against clinical isolates causing gonorrhoeae. National conference on Current Trends in Biological Scenario. 11<sup>th</sup> & 12<sup>th</sup> August, 2004. PG & Research Department of Botany, Vellalar College for Women, Erode.
4. **Murugan K**, S.Saravanababu, K.Nithamary Kuriakose and Soumya. Preliminary screening of some traditional medicinal plant for antifungal activity against *Candida* and superficial mycoses. National seminar on superficial mycoses, causes, prevention, and cure with medicinal plants Sep 12<sup>th</sup>-13<sup>th</sup>, 2003. Department of Botany, Kandasamy Kander`s College, Velur.
5. **Murugan K**, K.Viajayakumar, S.Saravanababu and M.Arunachalam. Study on the Effect of Enzymatic treatment on Tannery Effluent. National Seminar on Current Environmental Issues. 5<sup>th</sup> March 2003. Bharathiar University, Coimbatore.
6. **Murugan K**, M. Thavasumani. K. Vijayakumar, S. Saravanababu and M. Arunachalam. Agriculture residues-An alternate substrate for Tannase production by Solid State Fermentation. International Seminar on Recent Advances in Biotechnology. 24<sup>th</sup> & 25<sup>th</sup> February 2003. Ponnaiyah Ramajeyam College, Thanjavur.
7. **Murugan K**, K.G. Vanitha, S. Saravanababu and M. Arunachalam. Potentiality of Tannery Effluent Isolates in the Production of Tannin Acyl Hydrolase Enzyme. International Seminar on Recent Advances in biotechnology. 24<sup>th</sup> & 25<sup>th</sup> February 2003. Ponnaiyah Ramajeyam College, Thanjavur.
8. **Murugan K**, R. Kaviarasi, S. Saravanababu and K. Nataraja Seenivasan. Antifungal efficacy of *Cassia auriculata* against *Candida*. UGC National Seminar on Recent Advances in Plant Sciences and their relevance to Agriculture and Industry. 16<sup>th</sup> & 17<sup>th</sup> March 2002. Annamalai University, Annamalai Nagar.
9. P. Venugopalan, **K. Murugan**, S. Saravanababu and N.R. Rajendran. Optimization and a comparative study of tannin acyl hydrolase and its mass production by tannery effluent

- isolates. National Seminar on Current Trends and Future Directions in Life Science, 4<sup>th</sup> & 5<sup>th</sup> Jan, 2002. Muthayammal College of Arts and Science, Rasipuram.
10. P. Uday Shanker, **K. Murugan**, S. Saravanababu and N. R. Rajendran. Purification and characterization of tannase enzyme from tannery effluent isolates. National Seminar on Current Trends and Future Directions in Life Science, 4<sup>th</sup> & 5<sup>th</sup> Jan, 2002. Muthayammal College of Arts and Science, Rasipuram.
  11. Nabeel Hamsa, **K. Murugan**, S. Saravanababu and N.R. Rajendran. The effect of various physical and chemical parameters on the activity of purified tannase enzyme extracted from different fungal isolates. National Seminar on Current Trends and Future Directions in Life Science, 4<sup>th</sup> & 5<sup>th</sup> Jan, 2002. Muthayammal College of Arts and Science, Rasipuram.
  12. M. Kanchana, **K. Murugan**, S. Saravanababu and N.R. Rajendran. Identification of antifungal bioactive compounds from traditional herbal plants using TLC and its production through PTC. National Seminar on Current Trends and Future Directions in Life Science, 4<sup>th</sup> & 5<sup>th</sup> January, 2002. Muthayammal College of Arts and Science, Rasipuram.
  13. R. Kaviarasi, **K. Murugan** and M. Kanchana. Identification of Antifungal bioactive compounds from traditional medicinal plants (*Aristolochia bracheata*) using TLC. International Symposium on Recent Advances in Biological Sciences. 11<sup>th</sup> and 12<sup>th</sup> October 2001. K.S.R College of Arts & Science, Tiruchengode.
  14. **Murugan K**, M. Saravanan, S. Elangovan and S. Saravanababu. Isolation and characterization of catabolic plasmid of tannery effluent isolate *Pseudomonas fluorescens* and its transformation into *E.coli* JM 109. International conference on New Horizons in Biotechnology, 21<sup>st</sup> -24<sup>th</sup> April, 2001. RRL, Trivandrum, India.
  15. **Murugan K**, S. Saravanababu, N.R. Rajendran and A. Murugan. Potentiality of Microbes in Tannery Effluent Treatment. National Conference on Industry and Environment. 28<sup>th</sup> - 30<sup>th</sup>, December, 1999. Y.C. College of Science, Karad.

#### REFRESHER COURSE ATTENDED

- Botany with Special reference to plant diversity, 16 November-13th December 1998. S.P.K Center for Environmental Sciences, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India.

## **TRAINING UNDERGONE**

1. International Training course on Biotechnological Tools in Plant Improvement. 7th-20th, September, 2003. ICRO, UNESCO, EMBO, K.S.R. College of Arts & Science, Tiruchengode.
2. Training on plant Tissue Culture, 1st - 7th October 2000. Center for Biodiversity and Biotechnology, St.Xavier`s College, Palayamkottai.
3. Workshop on Acquired Immune Deficiency Syndrome, 22nd & 23rd August 2000. IMA Hall, Salem.
4. International Training Program on Use of Atomic Absorption Spectrophotometer for heavy metal analysis, 8th - 9th July 1999. Department of Environmental Sciences, Tamilnadu Agricultural University, Coimbatore.
5. Crash Course on Applied Biology-an Update, 10th - 11th October, 1998. K.S.R. College of Arts and Science, Tiruchengode.
6. General Orientation course for NSS Programme Officers, 2nd - 11th July 1997. TORC NSS and Madras School of Social Work, Chennai.
7. Short course on Instructional Design and Delivery System, 20th – 22nd June 2002. Technical Teachers Training Institute, Chennai.
8. Workshop on Guidance and Counselling, Oct 20th- 22nd 2003. Technical Teachers Training Institute, Chennai.
9. Workshop on communicative competence, 29th Jan 2005. K.S.R College of Arts and Science, Tiruchengode.

## **SEMINAR / WORKSHOP / TRAINING PROGRAMME ORGANIZATION**

1. Exploring Microbes for nanoscience and nanotechnology sponsored by DST and ICMR, June 6-7,2008 Department of Microbiology, K.S.R. College of Arts and Science, Tiruchengode
2. Exploring Microbial diversity for human welfare sponsored by ICMR, March 2-3, 2007, Department of Microbiology, K.S.R. College of Arts and Science, Tiruchengode
3. Workshop cum Training Course on Biofertilizer, 19th-21st Sep, 1998. Flora and Department of Microbiology, K.S.R. College of Arts and Science, Tiruchengode.
4. Exposure to the environmental status in Tamilnadu, 28th & 29th March 1998. Department of Environment, Govt. of Tamilnadu and Flora, Erode.
5. Recent Trends in Applied Biology, 30th & 31st October 1998. S.T. Hindu College, Nagercoil.
6. Biofertilizer training course Flora Erode, 1998.
7. Recent Advances in Biological Sciences, 11th & 12th Oct, 2001. Center for Biological Sciences, K.S. Rangasamy College of Arts and Science, Tiruchengode.



8. Ethics of Biotechnology, 10th August 2002. Flora (People of Biology) and Centre for Environmental Sciences, Manonmaniam Sundaranar University, Alwarkurichi.

#### **PROFESSIONAL MEMBERSHIP**

- Member, Board of studies (B.Sc., M.Sc., M.Phil.) Periyar University, Salem, Tamilnadu, India (2000-2006)
- Member, District Environmental Committee, Erode District, Government of Tamil Nadu, India (1999-2000)
- Executive Committee Member, Indian Association of Applied Microbiology, India
- Executive Committee Member-FLORA-An Organization of Biology People, India
- Life Member, Indian Society for Technical Education, India
- Member, American Society of Microbiology, USA

#### **EXTRA-CURRICULAR ACTIVITIES**

1. Served as a NSS Program Officer for 2 years from 2-12-1996-30-12-1998 at K.S.R College of Arts & Science, Tiruchengode.
2. Served as a resource person / Tamil Nadu Science Forum, Namakkal Dist. Tamil Nadu, India.
3. Served as a College Level Coordinator, Eco Club, Namakkal District, Tamilnadu, India.
4. Served as an active volunteer in NSS for 3 years from 1989-1993 at SPK College, Alwarkurichi.
5. NCC Cadre for one year in SPK College, Alwarkurichi.
6. Participated in ten days special camp on Youth for Mass Literacy, 1st - 10th June 1990, Therkumedu, NSS SVK College, MKU.
7. Participated in ten days special camp on Youth for Mass Literacy, 15th - 24th June 1992, Aayikudi, NSS SPK College, MKU.
8. Attended NCC Annual Training Camp 24th December 1989-4th January 1990.
9. Organised number of one day and two - ten days camps, awareness programmes. Health camps, Blood donation camps for NSS volunteers.
10. Organised number of self-employment training programmes on Biofertilizers, Mushroom production and Medicinal plants.