Curriculum Vitae

Seenivasan Subbiah Ph.D.

Research Associate,
The Institute of Environmental and Human Health (TIEHH),
Department of Environmental Toxicology, Texas Tech University,
1207 Gilbert Drive Box 41163
Lubbock-79415
Texas
Tel: 806-834-4567; Fax: 806-885-2132
e-mail: vasan1981@rediffmail.com; seenivasan.subbiah@ttu.edu

Phone +1-806-543-4274
Skype ID subbiah.seenivasan

EDUCATION

Doctor of Philosophy, Ph.D in Plant Chemistry (2009) at Bharathiar University, Tamil Nadu, India
Thesis: Studies on the content of certain heavy metals in tea.

Master of Science, M.Sc in Chemistry (2003) at Madurai Kamaraj University, Tamil Nadu, India.
Desertation: Studies on clay catalysed organic transformations.

Bachelor of Science, B.Sc in Chemistry (2001) at Madurai Kamaraj University, Tamil Nadu, India.

ANALYTICAL AND RESEARCH EXPERIENCE

Research Associate (January 2017 – Present)

Post-Doctoral Research Associate at "The Institute of Environment and Human Health" (TIEHH), Texas Tech University, Lubbock, USA (February 2015 – December 2016).

Current Projects Actively Involved:

- Monitoring of anti-cancer drugs in lakes, waste water treatment plant feeding pipes located in the Lubbock County, Texas. The analyses were performed by using a sophisticated analytical instrument, Liquid Chromatography with Mass Spectrometry at parts per trillion levels. This project is being continued.

- Microplastics contaminations in the Lakes of Lubbock County, TX.

- Monitoring of inorganic anions (sulfate, chloride, fluoride, nitrate and bromide ions), cations (lithium, ammonium, sodium, potassium, calcium and magnesium), pharmaceuticals and personnel care products in water samples from Lake Texoma, Texas. This project is being continued.

- Monitoring of Cylindrospermopsin, Saxitoxin and Microcystins in water samples from Lake Texoma, Texas**.**

- Analysis of veterinary drug residues in White Tailed Deer tissues by using Liquid Chromatography with Mass Spectrometry. **.**

- Extraction and identification of bio-active compounds in the herbal tea, *Tecoma stans* (L.) Juss. ex Kunth by using Gas Chromatography.

- Assessment of neo-nicotinoid pesticides and its metabolites in the agricultural soils, water ecosystem.

- Assessment of Pollinator Risks Associated with Aerialized Feed Yard-Derived Agrochemicals.

- Storage stability of androgens compounds in pheromone blend and analytical determination by high performance liquid (HPLC).

General Research

- Responsible to maintenance, calibration, trouble shooting the analytical instruments like, HPLC, GC, AAS, GC-MS, LC-MS/MS, Mercury Analyzer and minor lab instrument.
- Analysing and reporting the ethanolamines in water by using LC-MS/MS.
- Analysing the samples received from the third party customers as per their requirements.
- Collaborating with Professor's to analyse the project samples as per their requirements by using different analytical instruments (For example: Macrolides, Antibiotics in animal tissue, PAH in milk, Hg in animal tissue).
- As an Analytical Lab/Post-Doctoral Research Associate, is responsible to conduct the lab demonstration and experiments for the course entitled "ENTX 6251 Analytical Toxicology Laboratory" with Drs. Todd Anderson, Jaclyn E. Cañas-Carrell and David Klein.

Laboratory specialist at **Saudi Food and Drug Authority (ISO 17025:2005)**, Riyadh, Kingdom of Saudi Arabia (December 2011 – January 2015).

- Method development & verification in food analysis and trained the chemists.
- Preparation of internal quality control materials for routine analysis.
- Internal verification of analytical equipment's as per guidelines.

- Instruments handled: Triple Quad LCMS/MS (ABSciex 4000 & 5000; ABSciex 6500, Agilent 6490), HPLC (Agilent 1200, 1290 series), ICP-MS (7500cx), GC-MS/MS (Agilent 7000B).

Method transferred & validated so far:

- Pesticide residues in fruits & vegetables, agri products, oils etc by using LCMSMS & GCMSMS – EN QuEChERS method.
- Heavy metals in food & drinking water by using ICP-MS – EN/ISO methods.
- Melamine in milk & milk products, LCMSMS method – ISO method.
- PAH (15 PAH, 4 EU priority PAH included) in oils & fats by HPLC – ISO method.
- PAH (15 PAH, 4 EU priority PAH included) in drinking water by HPLC – ISO method.
- PAH (15 PAH, 4 EU priority PAH included in animal tissue by HPLC – USFDA method.
- Aflatoxins B1, B2, G1, G2 in all type of nuts, dry fruits by HPLC-FLD – EN method.
- Ochratoxin A in coffee, dry fruits, spices by HPLC – EN/CVUA, Germany methods.
- Illegal dyes in spice powders, ketchup, sauce products by LCMSMS – European commission method.
- Caffeine in tea, coffee, chocolates products – ISO method.
- Catechin fractions in tea by HPLC – ISO method.
- Artificial sweeteners, caffeine in beverages by HPLC – ISO method.
- Acrylamide in fried potato, coffee & biscuits by LCMSMS-European method.
- Aflatoxin M1 in milk & milk products by using immuno-affinity cleanup & HPLC analysis, ISO method; by LC-MS/MS technique – In-House method.
- Fumonisin B1 & B2 in corn, maize, corn products & grains by LCMSMS – CVUA method.
- Vitamin D_2 & D_3 in milk and milk products by LCMSMS – In-house method based on EN & Agilent Application Notes.
- Analysis of chloramphenicol in honey, milk, animal tissue by LC-MS/MS – AGES method.

Method transfer & verification is in under progress:

- Screening method for mutli-mycotoxin's in nuts, cereals, grains, spices grains by LCMSMS.

Proficiency Testing (PT):

- Passed lot of PT's with good Z-scores & conducted by FAPAS, LGC and BIPEA.

Analytical Scientist at **M/s. Microchem Silliker India Pvt. Limited** (Accredited by ISO/IEC 17025), Mumbai, India (April 2010 – November 2011).

- Method development and validation of pesticide residues, trace metals, Aflatoxins, Melamine, Vitamins, Naturally occurring toxins in food and beverages, fruits, vegetables, infant milk/cereal products, Ayurvedic products, mineral oil, PCB and PAH in water.
- Preparation of standard operating procedures for the analysis of food as per regulatory guidelines.
- Participation of proficiency testing programmes and maintaining the internal quality control data and plotting the charts.
- Calculation of uncertainty for analytical methods.
- Instruments handled : LCMS/MS (ABSciex 4000), GC MS/MS (Varian 2200), HPLC (Agilent 1100, 1200, 1290 series) and AAS (Therm S Series).

Proficiency Testing:

- Passed lot of PT's with good Z-scores & conducted by FAPAS, FERA, UK.
- Participated PT, inter-laboratory comparison studies conducted by Silliker Corporation, USA.

Analytical Scientist at **M/s. VIMTA Labs Pvt. Limited** (Accredited by ISO/IEC 17025, cGMP, GLP quality system), Hyderabad, India (July 2009 – April 2010).

- Food quality, safety and Nutritional Evaluation of foods.
- Sample preparation and reporting of trace metals in food products, drinking water, herbal products, API products.
- Operation of Microwave reaction system (Multiwave MDS 3000), HPLC (Class VP) and ICP-MS (Agilent 7500cx).
- Working knowledge on LIMS Labware software

Senior Research Fellow in "**UPASI Tea Research Institute**" (Pesticide Residue Laboratory – Accredited by NABL (ISO/IEC – 17025 and National GLP certified) for Chemical testing) at Valparai (July 2003 to June 2009).

- Sample preparation for trace metals in food by using dry ashing, wet digestion and microwave assisted digestion.
- Analysis of nutrients, heavy metals by using AAS with flame, graphite furnace and vapour generation techniques.
- Method development and validation for trace metals and pesticide residues in food and water using AAS, GC, HPLC.
- Analysis of metals in fertilizers, agro inputs, organic manures and soil.
- Environmental Monitoring and Assessment
- ISO 17025 Quality Management Systems for chemical testing.

Proficiency Testing:

- Passed lot of PT's with good Z-scores & conducted by European Tea Committee-Germany and Unilever, UK.

INSTRUMENT OPERATION, MAINTENANCE AND INTERNAL VERIFICATION

AAS	: Perkin Elmer (AAnalyst 800 and Thermo M series, S Series).
GC (ECD, NPD)	: HP 5890 series II; Perkin Elmer Clarus 500; Agilent 6890.
GCMS/MS	: Varian Saturn 2000 (Ion Trap), Agilent 7000 (Triple Quad)
LC MS/MS	: ABSciex 4000, ABSciex 5000, AbSciex 6500, Agilent 6490, Thermo Quantum Access Max, LCQ Advantage (Ion Trap LC-MS/MS)
FTIR	: Bruker Alpha
ICP-MS	: Agilent 7500cx
Microwave	: Multiwave 3000 (Anton Paar)

TRAINING

Participated in a training course on "***Instrumental Methods of Chemical Analysis***" conducted by SITRA, Coimbatore.

Participated in the method development school programme on 22 and 23rd August, 2005 organized by M/s. Waters (India) Private Limited, Chennai.

Attended a training programme on "***Gas Chromatography***" between 19th – 21st April, 2006 at Perkin Elmer Technical Centre (PETC), Mumbai.

Participated in the three day course on ***OECD Principles on Good Laboratory Practices*** (GLP) from 21st to 23rd August - 2007 organized by UPASI Tea Research Institute, Valparai, conducted by Mr. D.S.Tewari, Former Director & Head NABL and National GLP compliance monitoring authority.

Participated in the "***INDO-US symposium on Good Laboratory Practice***" organized by INDO-US Science and Technology Forum, National GLP Compliance Monitoring Authority between 5th-7th March, 2008 at Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum.

Completed the training on "**6490 QQQ LC-MS/MS techniques** training including instrument operation, MS method development, optimization, troubleshooting and MassHunter based software operations" held at Saudi Food and Drug Authority, Riyadh, Saudi Arabia from April 27th to May 1st 2014, conducted by Dr. Laszlo Tolgyesi, Instructor, Life Sciences & Chemical Analysis, M/s. Agilent Technologies Sales & Services GmbH & Co. KG.

SCIENTIFIC PUBLICATIONS (Peer reviewed journals)

Seenivasan, S., Manikandan, N. and Muraleedharan, N. 2008. Chromium contamination in black tea and its transfer into tea brew. ***Food Chemistry***. 106: 1066-1069. **Impact factor : 3.391**

Seenivasan, S., Manikandan, N., Muraleedharan, N. and Selvasundaram, R. 2008. Heavy metal content of black teas from south India. ***Food Control.*** 19: 746-749. **Impact factor : 2.806**

Manikandan, N., **Seenivasan, S**., Ganapathy, M.N.K., Muraleedharan, N. and Selvasundaram, R. 2009. Leaching of residues of certain pesticides from black tea to brew. ***Food Chemistry.*** 113: 522-525. **Impact factor : 3.391**

Seenivasan, S. and Muraleedharan, N. 2009. Residues of lambda-cyhalothrin in tea. ***Food and Chemical Toxicology.*** 47(2): 502-505. **Impact factor : 2.895**

Sarkar, S. **Seenivasan, S**. and Asir, R.P. 2009. Biodegradation of propiconazole by *Pseudomonas putida* isolated from tea rhizosphere. ***Plant and Soil Environment.*** 55: 196-201. **Impact factor : 1.226**

Sarkar, S. **Seenivasan, S**. and Asir, R.P. 2010. Biodegradation of propargite by *Pseudomonas putida*, isolated from tea rhizosphere. ***Journal of hazardous materials.*** 174 (1-3) : 295-298. **Impact factor : 4.529**

Seenivasan, S. and Muraleedharan, N. 2011. Survey on the pesticide residues in tea in south India. ***Environmental Monitoring and Assessment.*** 176: 365-371. **Impact factor : 1.633**

Seenivasan, S. Muraleedharan, N. 2015. Dissipation Behavior of Fenpyroximate Residues in Black Tea and Brew. *International Journal of Agricultural Science and Food Technology*. 1(1): 003-006.

Seenivasan, S., Dhanakodi, K., and Muraleedharan, N. 2015. Residues of Propargite in Tea. *International Journal of Agricultural Science and Food Technology*. 1(1): 012-015.

Seenivasan, S. Muraleedharan, N. 2015. Cumulative effect of foliar application of copper oxychloride on Pb content in black tea. *Journal of Tea Science Research*. 5 (10), 1-4.

Seenivasan, S. Muraleedharan, N. 2015. Persistence of bifenthrin in tea and its transfer from black tea to tea brew. *Journal of Tea Science Research*. 5(9), 1-7.

Seenivasan, S. Anderson, T.A. and Muraleedharan, N. 2016. Heavy metal content in tea soils and their distribution in different parts of tea plants, Camellia sinensis (L). O. Kuntze. ***Environmental Monitoring and Assessment.*** 188(428): 1-8, 2016. **Impact factor : 1.633**

Shanoy C. Anderson, **Seenivasan Subbiah**, Angella Gentles, Galen Austin, Paul Stonum, Tiffanie A. Brooks, Chance Brooks, Ernest E. Smith. 2016. Qualitative and Quantitative Drug residue analyses: Florfenicol in white-tailed deer (Odocoileus virginianus) and supermarket meat by liquid chromatography tandem-mass spectrometry. ***Journal of Chromatography B***. 1033–1034: 73–79, 2016. **Impact factor : 2.687.**

Conference Abstracts/symposium papers

M.M. McManus., J. Jordan., **S. Subbiah**., J.E. Canas-Carrell, 2016. Co-authored publication, titled "The aquatic fate of neonicotinoids under natural irradiation" presented at the SETAC North America Thirty-seventh Annual Metting/ Seventh SETAC World Congress, p-437, Orlando, FL, November 6 – 10, 2016.

S. Lasee., J. Mauricio., A. Karnjanapiboonwong., J. Kasumba, **S. Subbiah**., T.A. Anderson, 2016. Co-authored publication, titled "Microplastics in a surface water environment receiving treated wastewater effluent" presented at the SETAC North America Thirty-seventh Annual Metting/ Seventh SETAC World Congress, p-369, Orlando, FL, November 6 – 10, 2016.

S. Lasee., J. Jordan., **S. Subbiah**., T. Anderson, 2016. Co-authored publication, titled "The uptake of several short and long-chain Perfluorinatedcompounds (PFCs) in foodstuff crops" presented at the SETAC North America Thirty-seventh Annual Metting/ Seventh SETAC World Congress, p-358, Orlando, FL, November 6 – 10, 2016.

J. Mauricio., S. Lasee., **S. Subbiah**., A. Karnjanapiboonwong., J. Kasumba., D. Wang., T. Anderson, 2016. Co-authored publication, titled "Effect of select perfluorinated compounds on hatching success of, and accumulation in, the house cricket (Acheta domesticus)" presented at the SETAC North America Thirty-seventh Annual Metting/Seventh SETAC World Congress, Orlando, FL, November 6 – 10, 2016.

Shanoy C. Anderson, **Subbiah Seenivasan,** Angella A. Gentles, Galen Austin, Paul Stonum, Tiffanie A. Brooks, Chance Brooks and Ernest E. Smith. 2016. Qualitative and quantitative drug residue analysis: Florfenicol in White-Tailed Deer (*Odocoileus Virginianus*) and supermarket meat by Liquid Chromatography with Tandem-Mass Spectrometry. 7th Texas Tech Annual Biological Sciences Symposium (TTABSS). Texas Tech University, Department of Biological Sciences, p 31-32, Lubbock, Texas, USA.

Shanoy C. Anderson , Angella A. Gentles , Elizabeth Buckner, **Subbiah Seenivasan** and Ernest E. Smith. 2015. Quantitative determination of ractopamine in White-tailed deer tissue. 6th Texas Tech Annual Biological Sciences

Symposium (TTABSS). Texas Tech University, Department of Biological Sciences, p-46.Lubbock, Texas, USA.

Seenivasan Subbiah, Adcharee Karnjanapiboonwong, John Kasumba and Todd Anderson. 2015. Environmental Assessments of Novel Energetics. Poster Abstracts: National Energetic Materials Consortium, October 12 – 14, Texas Tech University, Lubbock, USA.

Manikandan, K.N., Karthika, C., Muraleedharan, N., **Seenivasan, S**. and Selvasundaram, R. 2007. Co-authored publication, titled "Studies on the residues of copper and hexaconazole during their combined application and their subsequent transfer into tea infusion*" An extended abstract of paper published in the Journal of Plantation Crops 34(4): 409-409. Planters' Chronicle. 103: (4&5), 16-19.

Manikandan, K.N., Karthika, C., Muraleedharan, N., **Seenivasan, S**. and Selvasundaram, R. 2006. Co-authored publication, titled "Studies on the residues of copper and hexaconazole during their combined application and their subsequent transfer into tea infusion" presented at the Seventeenth Symposium on Plantation Crops, Kochi, India, December 5-8, 2006 and published in *Journal of Plantation Crops.* 34(3): 405 – 409.

Manikandan, K.N., Smitha, S., **Seenivasan, S**., Muraleedharan, N. and Selvasundaram, R. 2006. Co-authored publication, titled "Fenazaquin residues in tea and its persistence in south Indian climatic conditions" presented at the Seventeenth Symposium on Plantation Crops, Kochi, India, December 5-8, 2006 and published in *Journal of Plantation Crops.* 34(3): 410 – 413.

Manikandan, K.N., **Seenivasan, S**., Selvasundaram, R. and Muraleedharan, N. Co-authored publication, titled "Chromium in black tea", *Newsletter of UPASI Tea Research Foundation*, 16 (1): 4-5, 2006.

Manikandan, K.N. and **Seenivasan, S**. 2004. Co-authored publication, titled "Influence of shoot growth on ethion residues", *Newsletter of UPASI Tea Research Foundation*, 14(1): 6, 2004.

HONOR/AWARDS/Professional Memberships

Received the Senior Research Fellowship under Tenth five plan (2003 to 2008) from the Tea Board, Govt. of India.

Received a membership for AAAS/Science Program for Excellence in Science.

The paper with the title: "**Heavy metal content of black teas from south India**", Food Control, 19:8(2008) 746-749 featured in the **Sciencedirect top 25 list of most downloaded articles and ranked 15th on the top 25** for Food Control – April to June 2008.

Member of the editorial board in the journal titled "Science Journal of Analytical Chemistry".

COMPUTER SKILLS

MS office, Internet, Literature Survey

PERSONNEL INFORMATION/LANGUAGES

Father : Shri. S.Subbiah Naicker
Mother : Smt. S.Veerammal
Wife : Smt. S.Dhivya
D.O.B : 09/05/1981

Tamil (Native Language)
Telugu (Mother Language-Only speaking)
English (Communication & Written) – Excellent

Permanent Address:

S.Seeenivasan,
S/o. S.Subbiah Naicker,
2/270, West Street,
Uppathur – 626205
Sattur Taluk,
Virudhunagar District,
Tamil Nadu
INDIA

Present Address:

Seenivasan Subbiah Naicker
701 North Ithaca Ave
Apt 1513
Lubbock 79415
Texas
USA

REFERENCES

Dr. P. Mohan Kumar,
Adviser,
National Tea Research Foundation,
C/o. Tea Board,
Ministry of Commerce & Industry,
14, B.T.M. Sarani,
Kolkata 700 001
Email: ntri.india@gmail.com; drp.mohankumar@gmail.com
Phone : +91-2235 1411 Ext.: 237
Fax : +91-2234 1687

Dr. Todd Anderson,
Professor and Chair,
The Institute of Environmental and Human Health (TIEHH),
Department of Environmental Toxicology,
Texas Tech University,
1207 Gilbert Drive
Box 41163
Lubbock-79415
Texas
Tel: 806-834-4567
Fax: 806-885-2132
e-mail: todd.anderson@ttu.edu