

## Curriculum Vitae

### **S. ANBU RADHIKA**

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### **OBJECTIVE**

To excel in the field of Zoology (entomology) and Nanobiotechnology.

### **HALLMARKS**

Ability to swiftly adapt to the environment and succeed in diverse technologies, creative, analytical, interpersonal and presentation skills.

### **PERSONALITY TRAITS**

Can-do-attitude, Self-confident, Result-Oriented, Straightforward, Committed to life-long learning, Effective Team worker, can be entrusted with responsibilities.

### **ACADEMIC TRACK RECORDS**

Ph.D. Zoology	St. Xavier's College (Autonomous) (Manonmaniam Sundaranar University)	Awarded (2017)	2012-2016
M.Sc. Zoology	St. Xavier's College (Autonomous) (Manonmaniam Sundaranar University)	72%*	2010-2012
B.Sc. Zoology	St. Xavier's College (Autonomous) (Manonmaniam Sundaranar University)	65%*	2007-2010
H.S.C.	St. Joseph's Girls Hr. Sec. School, Thoothukudi (State board)	67%*	2007
S.S.L.C.	St. Joseph's Girls Hr. Sec. School, Thoothukudi (State board)	71%*	2005

\*First class

## AREA OF INTEREST

- Entomology
- Aquaculture biotechnology
- Evolutionary biology
- Biotechnology

## TECHNICAL SKILLS

- **Toxicity assay:** Phytotoxicity assessment (in lab, microplot and field conditions), insecticidal assay.
- **Nanobiotechnology:** Nanoparticle synthesis (gold and silver) & characterization, UV-Visible spectrophotometer and Fourier Transform Infrared Spectroscopy.
- **Microbiology & Immunology:** Isolation and identification of microorganisms, Antimicrobial activity (Agar well and disc diffusion assay, Minimum Inhibitory Concentration determination using ELISA), Radial immunodiffusion, Immunoprecipitation, Agglutination Tests, Coloured antigen preparation and ELISA (Enzyme-Linked Immunosorbent Assay).
- **Formulation development:** Pesticide formulation (emulsifiable concentration) and conducting in field trials.
- **Computer applications:** SPSS, Adobe photoshop, Origin and MS office.

## RESEARCH EXPERIENCES

1. M.Sc., dissertation work on “**Effect of formulated diets on digestive enzymes of fresh water prawn *Macrobrachium idea* (Heller)**”
  - i. Fish meal waste and prawn head waste were utilized for feed formulation to the fresh water prawn *Macrobrachium idea*.
  - ii. Plant products spirulina, rice husk were also used for the diet of fresh water prawn.
  - iii. Growth performance and digestive enzymes were analysed.
2. Ph.D. thesis entitled “**Synergistic impact of essential oils, vijayneem and biogenic silver nano liquid with monocrotophos against *Spodoptera litura* Fab.**” –
  - i. The synergistic combinations were showed, higher mortality (100%) when compared with their individual treatments.

- ii. All botanicals (pungam oil, neem oil) biopesticides vijayneem and bio silver nano particles were mixed with monocrotophos it gave more mortality and weight loss of animal.
- iii. To reduce the usage monocrotophos level in field conditions and to create environment friendly nature of pesticides were prepared using botanicals.
- iv. Therefore, all the synergistic combinations of biopesticides could be used as a synergistic with monocrotophos to reduce the growth and increase mortality, it reduce the quantity of synthetic insecticides and increase their effectiveness in insect pest management.
- v. Field studies with monocrotophos and neem oil at 2 % showed the reduction of *S. litura* population (Sahayaraj and Amalraj, 2006) indicate that this kind of combination could be recommended for farmers.
- vi. However, further study is needed to develop more and more synergists that could be utilized in insect pest management programmes to reduce the indiscriminate use of harmful chemical insecticides.

### Peer reviewed Journal Papers Published

1. **S. Anbu Radhika** and K. Sahayaraj. 2014. Synergistic effects of pesticides, biopesticides and bio silver nano particles against *Spodoptera litura*. Journal of Biopesticides, 7 (sub.): 152-159.
2. Sahayaraj K, N. Sundarapandiyam, C. Krishnaveni, Princy Rathnamala Jayaseeli and **S. Anbu Radhika**. 2015. Laboratory culture of early life stages of *Rhynocoris albopilosus* (Fab.) (Hemiptera: Reduviidae) using early life stages of Eri silkworm. Faunistic Entomology, EFFE Pp: 14-53.
3. Sahayaraj, K., Madasamy, M. and **S. Anbu Radhika**. 2016. Insecticidal activity of bio-silver and gold nanoparticles against *Pericallia ricini* Fab. (Lepidoptera: Archidae). Journal of Biopesticides, 9 (1): 53- 64.
4. **S. Anbu Radhika** and Kitherian Sahayaraj\* 2016. Insecticidal activity of monocrotophos and pungam oil combinations for cotton pests management under laboratory condition. Agronomía Trop., 66 (1-2): 125-133.
5. **Anbu Radhika, S.**, N. Sakthivel, and \*K. Sahayaraj; 2017. Acceptance of tertiary and non-food plants by eri silkworm, *Samia cynthia ricini* Boisduval (Lepidoptera: Saturniidae). *Munis Journal of Entomology*, 12(1): 127-132.
6. D. Sathya, **S. Anbu Radhika**, V.Sivashankar and D. Prem Anand. 2017. Antibacterial Activities of Guanidine Family Single Crystals against *Bacillus Subtilis* and

*Staphylococcus Aerus*. J. Chem. Bio. Phy. Sci. Sec. C, November 2017 – January - 2018, Vol. 8, No. 1.

7. **Anbu Radhika, S.,** K. Sahayaraj, N. Senthinathan, H.B. Hunter. 2018. Individual and synergist activities of monocrotophos with neem based pesticide, Vijayneem against *Spodoptera litura* Fab. *Physiological and Molecular Plant Pathology*, 101: 54-68.
8. K. Sahayaraj, Vivek Kumar, S. Nazeera Banu, Pasco B. Avery and **S. Anbu Radhika. 2018.** Bio efficacy of *Rhynocoris marginatus* (Reduviidae) life stages against three mealybugs species of agricultural importance in India. *Journal of Applied Entomology, Appl Entomol Zool* **53**, 475–482 (2018). <https://doi.org/10.1007/s13355-018-0576-6>.
9. Shunmugadevi, C., **Anbu Radhika, S.,** 2020. Bioactivity of Plant Extracts against Cowpea Bruchid *Callosobruchus maculatus* (Fab): A Review. *Agricultural Reviews. Agricultural Reviews*, Volume Issue : (1-16). 10.18805/ag.R-1970.
10. Sahayaraj, K., T. Packiyamani **S. Anbu Radhika.** 2015. Coal fly ash for *Phenacoccus solenopsis* management. *Environmental Health Perspective* (Under review).

### BOOK CHAPTER PUBLICATIONS

1. Uma Rajeswari, S and **Anbu Radhika, S.** 2021. Phytoplankton and Zooplankton Diversity in Melaneelithanallur pond at Tenkasi, Tamilnadu, India. In: Biodiversity conservation and sustainable development., Dharmar. K and Mary Sujin. R(Eds). Published by Research Department of Botany, Pasumpon Muthuramalinga Thevar Memorial College. Kamuthi, Pp:1-429.
2. **Anbu Radhika, S.** 2021. A review on impact of seaweeds as Biopesticides. In: Marine Nutraceuticals; Challenges and Opportunities, G. Chelladurai. Published by Research Culture Society and Publication, Pp: 34 - 38.

### ORIENTATION /REFRESHER / OTHER COURSES ATTENDED

Name of the Course	Academic Staff College, University	Duration in Days	From – To (Mention Date here)
Orientation Programme	Teachers and Teaching Learning Centre, Ramanujan College, University of Delhi	21 days	26.06.2020 to 24.09.2020

Refresher Course –Inter disciplinary refresher Course in Environmental studies	Teaching Learning Centre, Ramanujan College, University of Delhi under the aegis of Ministry of Education, Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT), New Delhi.	14 days	15-07-2021 to 29-07-2021
RC / Faculty development programme Advanced Research Methodology 2.0	Teaching Learning Centre, Ramanujan College, University of Delhi under the aegis of Ministry of Education, Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching, New Delhi.	14 days	17-06-2021 to 01-07-2021

### **SEMINARS/CONFERENCES AND WORKSHOP ATTENDED**

#### **PAPERS PRESENTED IN INTERNATIONAL/ NATIONAL CONFERENCES**

1. Participated in the BIOQUEST-2010 Intercollegiate competition and Presented a model entitled “Climate change” held on 28 & 29.01.2010 in the Dept. of Bio science, Noorul Islam Arts & Science College, Kumaracoil and won second prize in poster presentation.
2. Presented a paper in Fourth Biopesticide International Conference ( BIOCICON 2013) Organized by the Crop Protection Research Centre, Dept. of Advanced zoology and Biotechnology, St. Xavier’s College (Autonomous), Palayamkottai on November 28-30, 2013.
3. Presented a paper in national seminar on “Trends in environmental resource management” on 7 – 8<sup>th</sup> August, 2014 in PG and Research Department of Zoology, Nirmala College for Women (Autonomous), Coimbatore and presented a paper.
4. Presented a paper in national seminar on “Bio-diversity and conservation: Present status and future perspectives” on 12 – 13 the February, 2015 in Department of Zoology, St. Xavier’s College (Autonomous), Palayamkottai and presented a paper.
5. Presented a paper in national seminar on October, 2018 in Research Department of Microbiology, VHNSN College, Virudhunagar.
6. Presented a paper in international conference on 9<sup>th</sup> January, 2019 in PG and Research Department of Zoology, Pasumpon Muthuramalinga Thevar College, Melaneelithanallur.

#### **CONFERENCES ATTENDED**

1. International symposium on “Insect Pest Management” organized by the Entomology Research Unit, St. Xavier’s College (Autonomous), Palayamkottai on 23<sup>rd</sup> to 25<sup>th</sup> Feb 2011.
2. Third Biopesticide International Conference (BIOCICON 2011) Organized by the Crop Protection Research Centre, Dept. of Advanced zoology and Biotechnology, St.

Xavier's College (Autonomous), Palayamkottai & Centre for Plant Protection Studies, Tamil Nadu Agricultural University, Coimbatore on November 28-30, 2011.

3. National seminar on "Climate Change Impacts on Environment" held on 4<sup>th</sup> & 5<sup>th</sup> April, 2013, Sponsored by Ministry of Earth Sciences, New Delhi, organized by Dept. of Physics, Kamaraj College, Tuticorin.
4. Fourth Biopesticide International Conference (BIOCICON 2013) Organized by the Crop Protection Research Centre, Dept. of Advanced zoology and Biotechnology, St. Xavier's College (Autonomous), Palayamkottai on November 28-30, 2013.

### **WORKSHOPS/TRAINING PROGRAMMES ATTENDED**

1. State level workshop on "**Research methodology and application of tools for analysis (SPSS)**" on 28<sup>th</sup> March, 2015 sponsored by UGC and organized by Pg and Research Department of Commerce, St. Xavier's College (Auto), Palayamkottai.
2. Workshop on "**Current Trends in Nanotechnology**" on 5 – 6<sup>th</sup> February, 2016 organized by Department of Mechanical Engineering, Centre for Nanoscience and technology, Mepco Schlenk Engineering College, Sivakasi.
3. Short term training programme on "**Synthesis of nanomaterials**" sponsored by TNSCST for researchers on 14- 31<sup>st</sup> May 2013 held at Crop Protection Research Centre, Dept. of Advanced zoology and Biotechnology, St. Xavier's College (Autonomous), Palayamkottai.
4. Summer training programme in "**Biological Sciences for post graduate students**" sponsored by science city department of higher education, Government of Tamil Nadu on 11 – 31<sup>st</sup> May 2011.
5. Two days workshop in "**NAAC - reforms**" sponsored by Government authorities for faculties on 14 and 15<sup>th</sup> December 2018 held at VOC College, Thoothukudi.

Title/ Institution	Conference/ Seminar/ Workshop/ Symposium	Level State/ National/ International	State of Participation Presentation / Particular	Year
PMT College, Research Department of Zoology	Conference	International level	presented	Jan 2019
St. Thomas College, Ranni, Research Development committee & IQAC	Seminar on sustainable development through Biodiversity conservation	National level	presented	Feb 2019
NHNSN College, Research	Seminar on Miracle microspores	National level	presented	Sep 2018

Department of microbiology				
Sri Paramakalyani College, Alwarkurichi	Seminar on Prevention and control of communicable diseases	International level	presented	Feb 2019
Aditanar College of arts and science, Department of Zoology	Seminar on Current Trends in Nature Conservation	State level	participated	Feb 2017
St. Xavier's College, Department of Zoology	Workshop on Genetics To-day		Participated	Mar2017
St. Xavier's College, Department of Zoology	Zoology Congress (ZOOCONG-2018)		participated	Jan 2018
VOC College, Tuticorin	Workshop on NAAC Reforms: Outcome based education. An overview			Dec 2018
PMT College and Desia chindanai kazhagam, chennai	Seminar on national education policy -2019 Tamil Nadu perspective		participated	Jul 2019
PMT College, Department of Chemistry and PG & Research department of zoology	Seminar on Corona virus and its impact on humans		participated	Feb 2020
Tamil Nadu Science forum-tirunelveli	Teachers day		participated	Sep 2020
Mizoram University, Department of clinical Psychology	The upside of the stress : Staying psychologically fit and protective during the pandemic and beyond coping with stress during the 2019-nCOV outbreak		Participated	June 2020
Rajapalayam Rajus's College. Rajapalayam	Webinar on COVID 19: Solution for survival	International	Participated	June 2020
Ithaya Engineering College for	Art of living with Challenges		Participated	June 2020 (Five

Women, Chinnasalem				days)
Ithaya Engineering College for Women, Chinnasalem	To Up Immunity through herbals		Participated	June 2020 (Five days)
Ithaya Engineering College for Women, Chinnasalem	Facilitating 21 <sup>st</sup> centaury learners	National level FDTP	Participated	July 2020
Ithaya Engineering College for Women, Chinnasalem	Andragogical approaches in teaching and learning process	FDP	Participated	June 2020
Egra Sarada shasi pushan College, Department of Botany and IQAC	The great role of botanist in production of high quality authentic aurvedic or herbal medicine	National webinar	Participated	June 2020
St. Mary's College, Thoothukudi, PG and Research Department of Zoology	A path to wellness: Diabetes and Me	Internation al webinar	Participated	June 2020
The Quadie Milleth college for men, Medavakkam Chennai	Yogic secrets to stay fit and COVID safe	Webinar	participated	June 2020
Aarumugam pillai Seethai ammal College, Department of Zoology	Quorum Sensing: A great therapeutic choice for the development of antimicrobial agents	Internation al webinar	participated	June 2020
Nature Club of Rajapalayam Rajus' College and Wildlife Association of Rajapalayam	Asiatic Lions: An Insight into the History, Ecology and Human-Lion Interactions at it's last abode in the Saurashtra Peninsula” on celebrating "World Lion Day"	National level webinar	participated	August 2020
Nature Club of Rajapalayam	Hornbills are the farmers of forest in Western Ghats	National level	participated	August 2020



Rajus' College and Wildlife Association of Rajapalayam		webinar		
Nature Club of Rajapalayam Rajus' College and Wildlife Association of Rajapalayam	Biodiversity Enrichment and Conservation of Marine Ecosystem	National level webinar	participated	August 2020
Nature Club of Rajapalayam Rajus' College and Wildlife Association of Rajapalayam	Tiger Talk - Science Based Conservation of Tiger" on celebrating "World Tiger Day"	National level webinar	participated	July 2020
St. Xavier's College, Department of Zoology	Computational probing of antiviral drug for HCV NS3 protease and NS5B polymerase from other known antiviral drugs" by Dr. Febin P. Dass & "Cnidarians: A simple and beautiful aquatic creatures with stings" by Dr. L. Ranjith	Zoology webinar series	participated	July 2020
St. Xavier's College, Department of Zoology	Zoonotic viral infections" by Dr. Hubert Darius J. Daniel & "Mountains and species diversity patterns: A story of reptile distributions from the Western Ghats of India" by Dr. V. J. Jins	Zoology webinar series	participated	July 2020
Rajapalayam Rajus's College, Women development cell Rajapalayam	Power of Big Thinking-Manifest your desires with right thoughts	National webinar	participated	July 2020
Nature Club of Rajapalayam Rajus' College and Wildlife Association of Rajapalayam	PESTICIDES AND POLLINATORS	National webinar	participated	June 2020
Rajapalayam Rajus's College, Women development cell	Success in life- you can design your life	National webinar	participated	June 2020

Rajapalayam				
Nature Club of Rajapalayam Rajus' College and Wildlife Association of Rajapalayam	Conserves and Council of Wildbirds	National webinar	participated	June 2020
Manonmaniam Sundaranar University Thirunelveli	Online tools for teachers and administrators	Webinar	participated	June 2020
Government first grade college, Bengaluru	“Changing Aspirations in Dynamic Scenario-An Intellectual Deliberation”	Online FDP	participated	June 2020
Nature Club of Rajapalayam Rajus' College and Wildlife Association of Rajapalayam	WORLD SNAKE DAY” in the topic “Hissss Snake”	National webinar	participated	July 2020
Department of Botany, Telangana University, Dichpally, Nizamabad	Emerging Trends in Life Sciences (ICETLS – 2021) Virtual Mode	International Conference	Participated	January 2021
Nature Club of Rajapalayam Rajus' College and Wildlife Association of Rajapalayam	Significant Reduction in Snake Bite Death in India by Awareness	National webinar	Participated	June 2021
Nesamany Memmorial Christian College, Marthandam.	Current trends in Biodiversity	International workshop	Participated	June 2021
Nature Club of Rajapalayam Rajus' College and Wildlife Association of Rajapalayam	Understanding - The Snake	National webinar	Participated	July 2021
Nature Club of Rajapalayam Rajus' College and Wildlife Association of Rajapalayam	Science Based Conservation of Tiger	National webinar	Participated	July 2021

## **AWARDS AND ACHEIVEMENTS**

I have thorough knowledge on SPSS statistical package, Adobe Photoshop, origin, and completed DCA.

## **Scholars Under the guidance**

P. Shanmugadevi Registered her Ph.D - Research work going on.

## **PERSONAL DETAILS**

Name	:	<b>S. ANBU RADHIKA</b>
Father's Name	:	R. Soma Sundaram
Date of Birth	:	3 <sup>rd</sup> April, 1989
Address for communication	:	2/101, Eswari amman kovil street, Marutham Nagar, Keela Munnirpallam (Post), Tirunelveli- 627 356.
Contact number	:	08344590361
Email	:	sanburadhika90@gmail.com
Languages Known	:	English, Tamil
Nationality	:	Indian
Marital Status	:	Married

I hereby declare that above details and information is true to the best of my knowledge.

**S. ANBU RADHIKA**