CENTRAL MUGA ERI RESEARCH AND TARINING INSTITUTE, CENTRAL SILK BOARD, MINISTRY OF TEXTILES, GOVT OF INDIA, LAHDOIGARH, JORHAT, ASSAM-785700

LIST OF SCIENTIFIC PUBLICATIONS: (2020-21)

Research/Review Articles

1. Arunkumar KP (2020) Behavioral Genomics: a way to study insect behavior in the post-genomics era. *Indian Entomologist* 1: 6-14.

2. Arunkumar KP, Kalita S, Mahesh DS and Vijay n (2021) *Xanthopimpla predator* endoparasitoid: a minor pest on *Antheraea assamensis* in muga ecosystem, *Indian Silk,* 11(59-5):24-25.

3. Devi B., **M. Chutia**, N. Bhattacharyya (2021) Food plants diversity, distribution and nutritional aspects of the endemic golden silk producing silkworm, *Antheraea assamensis* (Helfer) – a review. *Entomologia Experimentalis et Applicata.*169:237–248.

4. Debbarma J, Saikia B, Singha DL, Maharana J, Velmurugan N, Dekaboruah H, **Arunkumar KP** and Chikkaputtaiah C (2021) XSP10 and SlSAMT, Fusarium wilt disease responsive genes of tomato (Solanum lycopersicum L.) express tissue specifically and interact with each other at cytoplasm in vivo. *Physiol Mol Biol Plants* (In press).

5. Vishaka G. V., T. K. Narayanaswamy, D. N. Vidyashree, R. Muthuraju and D. S. Mahesh. (2020),Investigations on utilization prospects of silkworm (*Bombyxmori*L.) pupal residue bio soft descent (SPRBD) as nutrient source for tomato crop, *J. Exp. Zool. India*, 23(2): 1165-1170.

6. Nale JY, M Chutia, JKJ Cheng, M Clokie (2020) Refining the *Galleria mellonella* model by using stress markers genes to assess *Clostridioides difficile* infection and recuperation during phage therapy. *Microorganisms (MDPI),* 2020, 8, 1306; doi:10.3390/microorganisms8091306.

7. Kumar A, Yadav AN, Mondal R, Kour D, Subrahmanyam G, Shabnam AA, Khan SA, Yadav KK, Sharma GK, Cabral-Pinto M, et al. (2021), Myco-remediation: A mechanistic understanding of contaminants alleviation from natural environment and future prospect. *Chemosphere*, 284: 131325. https://doi.org/10.1016/ j. *Chemosphere*: 131325. (***IF=7.9; NAAS=13.9***)

8. Kumar, A., Jigyasu, D.K., Kumar, A., Subrahmanyam, G., Mondal, R., Shabnam, A.A., Cabral-Pinto, M.M.S., Malyan, S.K., Chaturvedi, A.K., Gupta, D.K., Fagodiya, R.K., Khan, S.A., Bhatia, A., (2021). Nickel in terrestrial biota: Comprehensive review on contamination, toxicity, tolerance and its remediation approaches. *Chemosphere*, 275: 129996. http://dx.doi.org/10.1016/j.chemosphere.2021.129996 (***IF=7.9; NAAS=13.9***).

9. Kumar, A., Medhi, K., Fagodiya, R. K., Subrahmanyam, G., Mondal, R., Raja, P.,..& Pathak, H. (2020). Molecular and ecological perspectives of nitrous oxide producing microbial communities in agro-ecosystems. *Reviews in Environmental Science and Bio/Technology*, 1-34.

10. Kumar, A., Subrahmanyam, G., Mondal, R., Cabral-Pinto, M. M. S., Shabnam, A. A., Jigyasu, D. K., ...& Yu, Z. G. (2021). Bio-remediation approaches for alleviation of cadmium contamination in natural resources. *Chemosphere*, *268*, 128855.

11. Liu J, Chen Z, Xiao Y, Asano T, Li S, Peng L, Chen E, Zhang J, Li W, Zhang Y, Tong X, Kadono-Okuda K, Zhao P, He N, Arunkumar KP, Gopinathan KP, Qingyou Xia, Willis J, Goldsmith MR, Mita M (2021) Lepidopteran wing scales contain abundant cross-linked film-forming histidine-rich cuticular proteins. *Communications Biology* 4: 1-10 (***NAAS: 12.27, Impact factor – 6.27***)

12. Madhu, H.R., A.D. Ranganatha, G. Nagesha., and Mahesh, D.S. (2020), Knowledge difficulty index and attitude level of farmers about soil health card in Mandya district of Karnataka, *Ind. J. Pure App. Biosci.*8(3):594-601.

13. Madhu, H.R., A.D. Ranganatha, G. Nagesha., and Mahesh, D.S. (2020), Personal, socio-economic and psychological characteristics of the soil health card beneficiaries in Mandya district of Karnataka, International Journal of Agriculture Sciences. 12(13): 10008-10011.

14. Madhu, H.R., A.D.Ranganatha, G. Nagesha., and Mahesh, D.S. (2020), A study on knowledge and attitude of farmers and constraints faced by them on soil health cards in Mandya district of Karnataka, *Ind. J. Pure App. Biosci.*8(3):727-736.

15. Mahesh, D. S. and Arunkumar, K. P. (2020), Status of ericulture in Northeast India, *Insect Environment,* 22:68-69.

16. Mahesh, D.S.,Muthuraju, R., Vidyashree, D.N., Vishaka, G.V., Narayanaswamy, T.K. and Subbarayappa, C.T. (2020), Silkworm pupal residue products foliar spray impact in silkworm (*Bombyxmori*L .), *Journal of Entomology Zoology Studies*, SP-8(4):38-41.

17. Malyan, S.K., Kumar, S.S., Fagodiya, R.K., Ghosh, P., Kumar, A., Singh, R., Singh, L. 2021. Biochar for environmental sustainability in the energy-water-agroecosystem nexus. *Renew. Sustain. Energy Rev.* 2021, *149*, 111379 (***IF=14.9; NAAS=20***)

18. Mech, D. and Vijay, N. (2020). Hybridization of improved technology with indigenous technical knowledge (ITK) for improvement of muga cocoon yield. Journal of Pharmacognosy and Phytochemistry, 9(3): 1645-1648

19. Mondal, R.; **Kumar, A.** Crop Germplasm: Molecular and physiological perspective towards achieving global crop sustainability. *Preprints* 2021, 2021070359 (doi: 10.20944/preprints202107.0359.v1).

20. Rana, K. L., Kour, D., Kaur, T., Devi, R., Yadav, N., **Subrahmanyam, G**.,. and Yadav, A. N. (2020). Biotechnological applications of seed microbiomes for sustainable agriculture and environments. *Trends of microbial biotechnology for sustainable agriculture and biomedicine systems: diversity and functional perspectives. Elsevier, Amsterdam*, 127-143.

21. Reeta Luikham, T. James Keisa, L. Bidyapati Devi and A.K. Sinha (2020) *Antheraea frithi* Moore: A potential silkmoth of Manipur. Indian Silk (September-October), vol.11 (Old 59) No.3: 28-31.

22. Reeta Luikham, T. James Keisa, Subadas Singh, G. Subrahmanyam, Jalaja S. Kumar (2020). Photoperiodic effect on diapausing pupae of *Antheraea proylei* during seed cocoon preservation period. Sericologia 60 (1&2): 55-61.

23. Saikia B, Debbarma J, Maharana J, Singha DL, Velmuruagan N, Dekaboruah H, **Arunkumar KP**, Chikkaputtaiah C (2020) SlHyPRP1 and DEA1, the multiple stress responsive eight-cysteine motif family genes of tomato (*Solanum lycopersicum* L.) are expressed tissue specifically, localize and interact at cytoplasm and plasma membrane in vivo. *Physiology and Molecular Biology of Plants* 26: 2553-2568

24. Saikia, B., Singh, S., Debbarma, J. Velmurugan N, Dekaboruah H, *Arunkumar KP*, Chikkaputtaiah (2020) Multigene CRISPR/Cas9 genome editing of hybrid proline rich proteins (HyPRPs) for sustainable multi-stress tolerance in crops: the review of a promising approach. *Physiol. Mol. Biol. Plants* 26: 857–869.

25. Sharaff, M. S., **Subrahmanyam, G**., Kumar, A., & Yadav, A. N. (2020). Mechanistic understanding of rootmicrobiome interaction for sustainable agriculture in polluted soils. *Trends of microbial biotechnology for sustainable agriculture and biomedicine systems: diversity and functional perspectives. Elsevier, Amsterdam*, 61-84.

26. Subharani, S., Priyadarshini, O. and Debaraj, Y. (2020) Biology of semilooper, *Hyblea puera*: An important pest of *Quercus serrata* Thunb. *Annals of Plant Protection Science*, 28 (2): 123-126.

27. Subrahmanyam G, Chutia M and Arunkumar KP (2020) Book review of the *Annual Review of Genetics* 2018, Nanci Bonini et al., (eds) *Current Science* 118: 142-143

28. Subrahmanyam G., Kumar, A., Luikham R., Kumar, J.S., Yadav, A.N. 2021. Global Scenario of Soil Microbiome Luikham, R., Keisa ,TJ., Singh, S., Subrahmanyam, G.,

Kumar JS. 2020. Photoperiodic effect on diapausing pupae of *Antheraea proylei* during seed cocoon preservation period. *Sericologia*, 60(1-2), 55-61.

29. Zhang J, Li S, Li W, Chen Z, Guo H, Liu J, Xu Y, Xiao Y, Zhang L, Arunkumar KP, Smagghe G, Xia Q, Goldsmith MR, Takeda M, Mita K (2021) Circadian regulation of night feeding and daytime detoxification in a formidable Asian pest *Spodopteralitura*. *Communications Biology* 4: 1-11. (***NAAS: 12.27, Impact factor – 6.27***)

Books/ Book Chapter

1. G. Subrahmanyam, A. Kumar, R. Luikham, JS Kumar. (2020). Global Scenario of Soil Microbiome Research: Current Trends and Future Prospects, Chapter 18, In: Soil Microbiomes for Sustainable Agriculture-Functional Annotation", Springer Nature book (Accepted for publication).

2. Hota S; Sharma, Gulshan Kumar; Subrahmanyam, Gangavarapu; Kumar, Amit; Shabnam, Aftab A.; Baruah, Padmini; Kaur, Tanvir; Yadav, Ajar Nath (2021) Fungal Communities for Bioremediation of Contaminated Soil for Sustainable Environments. In: Yadav A.N. (eds) Recent Trends in Mycological Research. Fungal Biology. Springer, Cham. https://doi.org/10.1007/978-3-030-68260-6_2

3. Manjunath RN, Kumar A and Arunkumar KP (2020) Utilization of sericulture waste by employing possible approaches. In: Contaminants in agriculture: Sources, impacts and management pp 385-398.

Booklets/ leaflets/ News items

1. Rahman, S.A.S., Choudhury, B.N. and Deka.M.,(2021), Muga xilpor Bikaxot Baigyanik Poddhoti Xomuh, An assamese booklet published by RSRS, Boko, Assam.

2. Somen,L ., Subharani, S. and Debaraj, Y. (2021) Package and practices for muga rearing pp. 12

3. Subharani, S., , Somen, L., Priyadarshini, O. , Debaraj, Y., Jalaja, S. Kumar (2021) Management of major insect pests infesting *Quercus serrata* pp. 8.

4. Subharani, S., Debaraj, Y., Somen, L., Priyadarshini, O. and Singh, N.I. (2020) Integrated Pest Management of Uzi fly: A serious pest of oak tasar silkworm. pp. 10.

5. Subharani, S., Ponnuvel, K.M., Singh, N.I. and Mishra, R.K. Sodium hypochlorite disinfection: An effective disinfection for silkworm eggs to protect against tiger band disease pp11.

6. Subharani, S., Somen, L. and Debaraj, Y. (2021) Oak tasar silkworm rearing technology pp10.

7. Subharani, S., Somen, L., Priyadarshini, O. and Debaraj, Y. (2021) Management of insect pests infesting *Quercus serrata*pp8.