

FACULTY PROFILE



Dr. Gijo Ittoop

Assistant Professor,

Ph.D (University of Kerala)

Fish Pathology

Contact details



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Dr. Gijo Ittoop, an Assistant Professor specializing in Fish Pathology at Kerala University of Fisheries and Ocean Studies (KUFOS), serves as the Course Coordinator for BSc. She is a highly enthusiastic teacher and handles different courses under fish and shellfish pathology for UG, PG and PhD programs.

She is a dedicated researcher and has handled two projects as Principal Investigator “Development of immunodiagnostics for the rapid detection of *Vibrio alginolyticus* pathogenic to farmed fish/shellfish”; at CMFRI Kochi (2004-2009) and KBC YIPB project – Development and Standardization of enrichment protocol of micro algae for larval rearing of the Indian edible oyster *Crassostrea madrasensis* (Preston) at CUSAT, Kochi (2009). She is the Co-PI of the NSPAAD project on disease surveillance (2022-2025) and KSCSTE project on Development of drug delivery system for fishes (2022-2025). She is also working on the development of herbal medicines for fish diseases as an alternative to antibiotics. She has published 32 articles in peer reviewed journals and has presented her research in national and international conferences.

She has organized International Fisheries Congress and Expo at KUFOS as organizing secretary, in which almost 12 countries and 34 organization round the world participated. The recommendations derived from the technical programme, panel discussions, farmer fishermen conclave etc were submitted to the ministry and was published.

As part of extension activities, she is the principal investigator of Village Adoption project of Kerala University of Fisheries and Ocean Studies and has installed several demonstration units for cage and pen culture in Ernakulam and Thrissur districts of Kerala. She has organized several training programmes and awareness classes for farmers throughout the state.

Teaching:

- ❖ Fish and Shellfish Pathology
- ❖ Microbial and Parasitic diseases of Fish and Shellfish
- ❖ Bacterial and Fungal Diseases of Finfish and Shellfish
- ❖ Parasitic Diseases of Finfish and Shellfish
- ❖ Non Infectious diseases and Disorders of Finfish and Shellfish
- ❖ Bacterial Disease Mechanisms

Research Areas:

- Toxicology of pollutants in Cultivable fishes
- Toxicology of Chemotherapeutants in Cultivable fishes
- Use of herbal ingredients as an alternative to antibiotics in Aquaculture
- Studies on the suitability of natural water resources for cage and pen culture

Key Management Roles:

- Course Coordinator, B.F.Sc
- Assistant Patron, University Students' union
- Presiding Officer of Internal Complaints Committee for the prevention, Prohibition and Redressal of sexual harassment against women employees and students.
- Faculty Coordinator of "Undergraduate Development Programme Club".
- Nodal officer, ICAR Virtual Classrooms

Publications:

- **Research Publications**-Google Scholar: <https://tinyurl.com/442nvtvy>

Book editorial

1. Magazine: Chief editor : Sisira bindukkal- GVHSS Kadamakkudy

2. Book- Member Editorial board-Silver Jubilee Souvenir Fish for all through quality education
3. Editorial board member: Book of Abstracts – National Seminar “Reorienting strategies towards the sustainable aquaculture and fisheries 6th and 7th January 2022
4. Gijo Ittoop & Safeena M P, 2022. Advanced Techniques in Aquaculture- Training manual. (Malayalam). Published by Directorate of Extension. p 117.
5. Divya P. R., Sreenath K. R., Gijo Ittoop, Anuraj A., Rajeev Raghavan, Madhu V. R., Binsi P. K., Remya S., Unnikrishnan S., Sreekanth G. B., Muhammed Safeena P., Ratheesh Kumar R., Afsal E. M., Daisy Kappan (2024). Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, 244 pp.
6. Divya P. R., Sreenath K. R., Gijo Ittoop et al (2024) Souvenir INTERNATIONAL FISHERIES CONGRESS & EXPO 2024 12 to 14 January 2024, Panangad, Kochi 94pp

Paper presented in seminar/symposia – Published in Book of Abstracts

1. Avanish Dixit, Gijo Ittoop*, Devika Pillai, Rehna A, Leena Chandrasekhar, Suresh N Nair (2023), Toxicity of chemotherapeutics hydrogen peroxide and formalin in Nile tilapia (*Oreochromis niloticus*) in Strategies and Challenges in Agriculture and Life science for Food Security and Sustainable Environment (SCALFE-2023) April 28-30, 2023, at Himachal Pradesh University, Summer Hill, Shimla, HP, India ISBN: 978-93-91872-31-1.
2. Ishwar Chandra, Gijo Ittoop*, Devika Pillai, Rehna A, Leena Chandrasekhar, Suresh N Nair (2023) Toxicity Of Epsom Salt (Magnesium Sulphate) In *Oreochromis niloticus*; in Strategies and Challenges in Agriculture and Life science for Food Security and Sustainable Environment (SCALFE-2023) April 28-30, 2023, at Himachal Pradesh University, Summer Hill, Shimla, HP, India ISBN: 978-93-91872-31-1.
3. Shailendra Kumar, Gijo Ittoop*, Devika Pillai, Rehna A, Leena Chandrasekhar And Suresh N Nair (2023) Role Of Alkalinity In The Toxicity Of Copper Sulphate In *Anabas Testudineus*; in Strategies and Challenges in Agriculture and Life science for Food Security and Sustainable Environment (SCALFE-2023) April 28-30, 2023, at Himachal Pradesh University, Summer Hill, Shimla, HP, India ISBN: 978-93-91872-31-1.
4. Gowtham Kumar E ¹, Madeena S¹, Gijo Ittoop^{1*}, Devika Pillai¹ And Suresh N Nair (2023), In Silico Characterization and Homology Modelling Of Bam A Protein Of *Aeromonas hydrophila*; in Strategies and Challenges in Agriculture and Life science for Food Security and Sustainable Environment (SCALFE-2023) April 28-30, 2023, at Himachal Pradesh

University, Summer Hill, Shimla, HP, India ISBN: 978-93-91872-31-1.

5. Neha Padole, Lekshmi S.R., Bharath Jayaram, Gijo Ittoop* and Devika Pillai (2023), Phytochemicals In Aquaculture -A Review; in Strategies and Challenges in Agriculture and Life Science for Food Security and Sustainable Environment (SCALFE-2023) April 28-30, 2023, at Himachal Pradesh University, Summer Hill, Shimla, HP, India ISBN: 978-93-91872-31-1.
6. Theja Kannan, Athul S Kumar , Emmanuel Joseph Antony, Meril Mary Mathew, Aliya S, Anitta Antony, and Gijo Ittoop* (2024) Unveiling nature's bounty: Piscicidal plants in tribal fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, p. 28
7. Abdullah Bin Abdul Nazar, Anusree Suraj, Gijo Ittoop* (2024) Salinity adaptation of *Heteropneustes fossilis*: A histopathological investigation. fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, P. 95
8. Bharath Jayaram, Lekshmi S. R, Gijo Ittoop* (2024) Growth performance and toxicity evaluation of *Etroplus suratensis* fed with aqueous leaf extract of *Murraya koenigii* fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, p. 112
9. Archana C , Ayush Chandravanshi, Adarsh Jayanth A B, Avanish Dixit, Bharath Jayaram, Gijo Ittoop *, Rahul Krishnan (2024) Phytochemical analysis and evaluation of antibacterial, anti inflammatory and anti oxidant activities of methanolic extract of *Coleus amboinicus*, fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, p. 115
10. Eldho J. Paul., Sreekanth G.B., Renjith R. and Gijo Ittoop* (2024) Experimental cage culture of Asian Seabass, *Lates calcarifer* and Pearlsnout, *Etroplus suratensis* in a tropical estuary- Kodungallur-Azhikode. fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, P. 125
11. Padole Neha Narendra, Gowtham Kumar E., Ankitha, C. S., Gijo Ittoop* (2024) Immune gene expression and haematological profiling of *Anabas testudineus* fed with aqueous leaf extract of *Psidium guajava* and *Murraya koenigii* and its survivability against *Aeromonas hydrophila*. fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, p. 148
12. Gowtham Kumar E., Madeena Raheem, Padole Neha Narendra, Gijo Ittoop* and Devika Pillai. (2024) In silico pharmacokinetic and drug likeness screening of phytochemicals from *Murraya koenigii* and *Psidium guajava* for potential

- drug development against BamA protein of *Aeromonas hydrophila*. fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, p. 149
13. Gowtham Kumar E1, Padole Neha Narendra1, Gijo Ittoop1*, Devika Pillai1, Suresh N Nair (2024) Computational Approach for Virtual Screening of *Murraya koenigii* and *Psidium guajava* Phytochemicals Against D-alanyl-D-alanine Ligase Enzyme of *Streptococcus agalactiae*. fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, P. 153.
 14. Gowtham Kumar E1, Padole Neha Narendra1, Gijo Ittoop1*, Devika Pillai1, Suresh N Nair (2024) Deciphering Phytochemicals of *Murraya koenigii* as Potential Therapeutic Agents targeting Pir A and Pir B Proteins of *Vibrio parahaemolyticus*. fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, P. 154.
 15. Gowtham Kumar E., Madeena Raheem, Padole Neha Narendra, Gijo Ittoop* and Devika Pillai (2024) Structural Elucidation and In Silico Drug Screening of *Aeromonas hydrophila* BamA Protein: Targeting β -Barrel Outer-Membrane Proteins for Therapeutic Intervention. fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, P. 154.
 16. Gowtham Kumar E., Gijo Ittoop*, Devika Pillai, Suresh N Nair (2024) Phytochemical Profiling of *Psidium guajava* for identification of potential drug candidates for Treatment of Acute Hepatopancreatic Necrosis Disease: An in silico approach. fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, P. 155.
 17. Rahul Hansraj Thaware, Gijo Ittoop*, Devika Pillai, Suresh N Nair (2024) Temporal Dynamics of Oxytetracycline Residue in the Muscle Tissue of *Anabas testudineus* Following Oral Administration and Assessment of its Withdrawal Period. fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, P. 156.
 18. Avanish Dixit, Bharath Jayaram, Adarsh Jayanth, A. B., Archana, C., Ayush Chandravansi and Gijo Ittoop* (2024) Qualitative phytochemical screening and antibacterial activity of aqueous extracts of *Phyllanthus niruri* and *Asparagus racemosus* against five bacterial pathogens of fish fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, p. 157.

19. Suresh N. Nair¹, Angel Benny¹, Gijo Ittoop² and Sanis Juliet¹ (2024) Strategies for development of sustainable antibiotic delivery systems in aquaculture for therapeutic efficacy and preservation of ecosystem. fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, P. 161
20. Ayush Chandravansi, Adarsh Jayanth, A. B., Archana, C., Avanish Dixit, Bharath Jayaram and Gijo Ittoop* (2024) Exploring antibacterial, anti-inflammatory and antioxidant property of methanolic extract of whole plant of *Boerhaavia diffusa* and determination of minimum inhibitory concentration against some bacterial pathogens of fish. fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, P. 167.
21. Seetha Lekshmi D.S, Archa S Prem, Amrutha S.,Gijo Ittoop* (2024) Evaluation of Calcium Oxide toxicity in Nile Tilapia *Oreochromis niloticus* fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, p. 173
22. Srilekshmi A S, Sneha M Romieo, Thulasi Soman, Gijo ittoop* (2024) Evaluating the toxicological profile of formalin in *Pangasius (Pangasianodon hypophthalmus)* In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, p. 173.
23. Anjana Pradeep, Anjana V, Arya J .V, Dhanusha K. P, Shijina P. Nambiar*, Gijo Ittoop (2024) Evaluating the use of potassium permanganate in *Pangasius (Pangasianodon hypophthalmus)* culture systems. fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, P. 174
24. Angel Benny 1, Suresh N Nair 1, Gijo Ittoop 2, Sanis Juliet³ (2024) Estimation of Acute Toxicity of Doxycycline in *Artemia salina*. fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, P. 176
25. Adarsh Jayanth, A. B., Archana, C., Ayush Chandravansi, Avanish Dixit, BharathJayaram and Gijo Ittoop*, Rahul Krishnan (2024) Evaluation of therapeutic potential of methanolic extract of whole plant of *Cyanthillium cinereum* and its minimum inhibitory concentration against some fish bacterial pathogens. fisheries In: Book of abstracts of International Fisheries Congress 2024. Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA), Panangad, Kochi, ISBN 978-81-969118-2-9, P. 178
26. Safeena M. P, Gijo Ittoop, Shijina. P. Nambiar, Ardhra Vijayan, Rahul Krishnan, Devika Pillai * (2023) Concurrent Occurrence of Infectious Spleen and Kidney Necrosis Virus (ISKNV) and Red Seabream Irido Virus (RSIV) in cultures Asian Seabass (*Lates Calcarifer* from Kerala : First Evidence : In Book of Abstracts 3rd International Conference on

Aquatic Animal Epidemiology (AquaEpi III) at ICAR NBFGR Lucknow Nov 29 to Dec 1 2023

27. Shijina. P. Nambiar, Ardhra Vijayan, Divya Haridas, Rahul Krishnan, Safeena M. P, Gijo Ittoop, Devika Pillai *(2023) First detection of Tilapia parvovirus (TiPV) associated with massive mortalities of farmed Nile tilapia (*Oreochromis niloticus*) in Kerala. In Book of Abstracts 3rd International Conference on Aquatic Animal Epidemiology (AquaEpi III) at ICAR NBFGR Lucknow Nov 29 to Dec 1 2023
28. Aswathy T, Arundas NH, Gijo Ittoop (2022), One time protein-rich feed in cage culture, growth and economic analysis; in Fish for Nutritional Security and Economic Sustainability- Book of abstracts 12th Indian Fisheries and Aquaculture Forum, 5-7 May 2022, Chennai India paper Id- 15592.
29. Ferolin Jessina, Rehna Abdul Vahab, Gijo Ittoop, Devika Pillai, (2022), In vitro assessment of antibacterial activity and time -killed kinetics of Zinc Oxide nanoparticle- A potential environment – friendly therapeutic strategy for the replacement of antibiotics used in aquaculture; in Fish for Nutritional Security and Economic Sustainability- Book of abstracts 12th Indian Fisheries and Aquaculture Forum, 5-7 May 2022, Chennai India paper Id- 16407.
30. Ferolin Jessina, G., Rehna A., Nair, S. N., Gijo Ittoop and Devika Pillai- Invitro Assessment of Antibacterial activity of environmental safe compounds as a potential replacement for Antibiotics used in Aquaculture. Presentations of Annual National Conference on Sustainable Ecosystems, Aquaculture, Fisheries and Fisherflok ANCOSEAFF, 28th and 29th January 2022).
31. Shijina P.N., Rehna, A., Nair, S, N., Gijo Ittoop and Devika Pillai - Improvement of therapeutic efficacy and Pharmaceutical incompatibility of Clove oil for water borne anaesthesia in fish using ethanol. Presentations of Annual National Conference on Sustainable Ecosystems, Aquaculture, Fisheries and Fisherflok ANCOSEAFF, 28th and 29th January 2022).
32. Bharath Jayaram, Lekshmi S.R., Gijo Ittoop, Rehna A.V., Devika Pillai (2022), Phytochemical profiling and analysis of in-vitro antibacterial effects of aqueous extracts of curry leaf, *Murraya koenigii* against fish pathogen *Aeromonas hydrophilia*; in Abstract book of National Webinar of Surviving the pandemic through Aquaculture 24th-25th February 2022, abstract 1, Dept. of Aquatic Biology and Fisheries, University of Kerala.
33. Lekshmi S.R., Baharat Jayram, Gijo Ittoop, Rehna A.V., Devika Pillai (2022), Phytochemical profiling and analysis of in-vitro antibacterial effects of aqueous extracts of curry leaf, *Murraya koenigii* against fish pathogen *Aeromonas hydrophilia*; in Abstract book of National Webinar of Surviving the pandemic through Aquaculture 24th-25th February 2022, abstract 8, Dept. of Aquatic Biology and Fisheries, University of Kerala.
34. Gayathri C S, Aswathy T, Arun Das N H, Gijo Ittoop, Devika Pillai (2022), The Growth performance of red cap Oranada type Gold fish (*Carassius auratus auratus*) in a small scale biofloc system; in Book of Abstracts National Seminar on Reorienting The Strategies Towards Sustainable Aquaculture And Fisheries 6th -7th Jan-2022, PSA 04.
35. Rakesh C.G., Rehna A., Gijo Ittoop, Divya Haridas, Keerthana K.M. and Devika Pillai (2022), A case study of Digenean trematode metacercaria parasite infestation in nursery reared *Catla catla* and *Labeo rohita* (2022), Book of Abstracts

National Seminar on Reorienting The Strategies Towards Sustainable Aquaculture And Fisheries 6th -7th Jan-2022, EHFA08.

36. Nibin.O, Karthika S Panicker, Satkar Sarkar Gorakh, Gijo Ittoop, Devika Pillai (2022), Effect of inoculum preparation method on the growth and health parameter of *Oreochromis niloticus*; In Biofloc Culture, Book of Abstracts National Seminar on Reorienting The Strategies Towards Sustainable Aquaculture And Fisheries 6th -7th Jan-2022, EHFA14.
37. Satkar S. G., Nibin O., Vineetha V. P., Gijo Ittoop, Devika Pillai (2022), Comparative haematology and immunological study of Nile tilapia in different culture system; In Book of Abstracts National Seminar on Reorienting The Strategies Towards Sustainable Aquaculture And Fisheries 6th -7th Jan-2022, EHFA17.
38. Shijina P. N., Ferolin Jessina, Surya C, Nair S. N., Rehna A., Gijo Ittoop, Devika Pillai (2022), Aute Toxicity of Potassium permanganate in *Eutroplus suratensis*; In Book of Abstracts National Seminar on Reorienting The Strategies Towards Sustainable Aquaculture And Fisheries 6th -7th Jan-2022, EHFA20.
39. Karthika S Panicker, Nibin. O, Gijo Ittoop and Devika Pillai* (2022) The Pathological condition of *Anabas testudineus* in culture ponds: a case study; In Book of Abstracts National Seminar on Reorienting The Strategies Towards Sustainable Aquaculture And Fisheries 6th -7th Jan-2022, EHFA21.
40. Gio Ittoop*, K.C. George, Rani Mary George, K.S. Sobhana, N.K. Sanil, P.C. Nisha (2016), Effect of an Oranophosphorous Pesticide, Nuvan on the Selected Hemolymph Factors and Phagocytosis in the Indian Edible Oyster, *Crassostrea madrasensis* ; In abstract book of National Seminar On Marine Biodiversity And Bioprospecting For Sustainable Livelihood (MBBSL 2016) 21st and 22nd March 2016, MBBSL/TI/PP01.
41. Nisha P.C., K.C. George, K.S. Sobhana, N.K. Sanil, Gio Ittoop (2016), Characterization of Haemocyte of Indian White Shrimp, *Fenneropenaeus indicus*; In abstract book of National Seminar on Marine Biodiversity And Bioprospecting For Sustainable Liveihood (MBBSL 2016) 21st and 22nd March 2016, MBBSL/TI/PP04.
42. Anisha .K.A., Gijo Ittoop., Naseera.K, Lakshmi Devi.P and Aneyakutty Joseph, Biochemical variations of microalga *Nannochloropsis aculata* in different culture media; In abstract bookmof 1st Kerala Women's Science Congress.
43. Naseera .K., Gijo Ittoop, Anisha .K.A., Lakshmi Devi.P and Aneyakutty Joseph, Biochemical variations of microalga *Isochrysis galbana* in different culture media; In abstract book of 1st Kerala Women's Science Congress.
44. Gijo ittoop, K.S. Shobhana, K.C.George and R.Paulraj(2007), Characterization and pathogenicity evaluation of *Vibrio alginolyticus* isolates from diseased fish and shellfish; In book of abstracts of 8th fisheries forum, 20th to 23rd November, FHP 015.
45. K.S. Shobana , K.C. George, G.Venkata Ravi, Gijo Ittoop and R. Paul Raj, Development of a cell culture system from gill explants of grouper, *Epinephelus malabaricus*(Bloch and Schneider); In book of abstracts of 8th fisheries forum, 20th to 23rd November, ABP 034.

Extension articles published

1. Gijo Ittoop, 2004. Homestead pond maintenance. In: Training manual on "Homestead pond Aquaculture Practices" (Malayalam). Published by Kerala Agricultural University. p 4-10.
2. Gijo Ittoop, 2004. Management of Aquaculture ponds. In: Training manual on "Environmental Friendly Aquaculture Practices" (Malayalam). Published by Kerala Agricultural University. p 10-15.
3. Gijo Ittoop, 2006. Management of Homestead ponds. In: Kalpadhenu. (Malayalam). p32-35.
4. Gijo Ittoop, 2016. Aquaculture possibilities of Kadamakudy. In: Shishirabindhukal – Magazine of GVHSS Kadamakkudy (Malayalam). p 19-21.
5. Gijo Ittoop, 2016. Role of National Service Schemes in Personality Development of Students. In: Shishirabindhukal– Magazine of GVHSS Kadamakkudy (Malayalam). p 09-11.
6. Shalumol Salas & Gijo Ittoop, 2022. Principles of Aquaculture. In: Training manual on "Advanced Techniques in Aquaculture" (Malayalam). Published by Directorate of Extension. p 1-11.
7. Donna P & Gijo Ittoop, 2022. Prospects and problems of Aquaculture. In: Training manual on "Advanced Techniques in Aquaculture" (Malayalam). Published by Directorate of Extension. p 12-20.
8. Saneer N.S & Gijo Ittoop, 2022. Cage Culture. In: Training manual on "Advanced Techniques in Aquaculture" (Malayalam). Published by Directorate of Extension. p 59-74.
9. Gijo Ittoop & Devika Pillai, 2022. Role of Antimicrobial Resistance in Aquaculture. In: Training manual on "Advanced Techniques in Aquaculture" (Malayalam). Published by Directorate of Extension . p 113-117

Awards & Achievements:

- First Rank for BFSc and MFSc
- ICAR Senior Research Fellow
- ICAR Research Associate
- DST Women Scientist
- KBC-YIPB Young Investigator Award
- Organizing Secretary, International Fisheries Congress and Expo 2024

- Best paper award for co-authored paper- Gayathri C S, Aswathy T, Arun Das N H, Gijo Ittoop, Devika Pillai (2022), The Growth performance of red cap Oranada type Gold fish (*Carassius auratus auratus*) in a small scale biofloc system; in Book of Abstracts National Seminar on Reorienting The Strategies Towards Sustainable Aquaculture And Fisheries 6th -7th Jan-2022, PSA 04.

- Best paper award for co-authored paper -Avanish Dixit, Gijo Ittoop*, Devika Pillai, Rehna A, Leena Chandrasekhar, Suresh N Nair (2023), Toxicity of chemotherapeutics hydrogen peroxide and formalin in Nile tilapia (*Oreochromis niloticus*) in Strategies and Challenges in Agriculture and Life science for Food Security and Sustainable Environment (SCALFE-2023) April 28-30, 2023, at Himachal Pradesh University, Summer Hill, Shimla, HP, India ISBN: 978-93-91872-31-1.

Ongoing Projects:

- Co-Principal Investigator Order No. GA8/6766/2022 dated 01/09/2022 : Co-PI of NBFGR Co-Ordinated project "National Surveillance Programme for Aquatic Animal Diseases (NSPAAD) Phase 2" April 2022 to March 2025 -Total Outlay-Rs. 47,70,000/-
 - Co- Principal Investigator Order No. 322/2022/KSCSTE dated 23/11/2022 "Development of smart organogel based drug delivery system for administration of antibiotics in aquaculture and evaluation of its efficiency as targeted drug delivery system in fishes. Outlay Rs. 17,22,000/-