



# SEEMA VIJAY MEDHE

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## PROFESSIONAL APPOINTMENT

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**Instructor** **Present**  
ASEAN Institute for Health Development, Mahidol University (Thailand)

## EDUCATION

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**Ph.D., Food Engineering and Bioprocess Technology** **2019**  
Asian Institute of Technology, Bangkok, Thailand.

**M. Sc., Food and Nutrition** **2011**  
College of Home Science, Marathwada Krushi Vidyapeeth, Parbhani, Maharashtra, India

**B. Sc., Food and Nutrition** **2009**  
College of Home Science, Marathwada Krushi Vidyapeeth, Parbhani, Maharashtra, India

## EXPERTISE / AREAS OF RESEARCH INTEREST

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- Food and Nutrition Biotechnology
- Sustainable Food Systems and Innovations
- Food Security, Public Health Nutrition, and Policy
- Environmental and Planetary Nutrition
- One Health and Holistic Nutrition

## WORKING & RESEARCH EXPERIENCE

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**Member of the AUN-QA Organizing Committee** **2024**  
Veterinary Science and Technology Program (VST), Faculty of Veterinary Science, Chulalongkorn University, Bangkok, Thailand

**Moderator (Oral Presentation Session)** **2024**  
International Hybrid Conference on Aquaculture Sustainability 2024. 24- 26 July 2024, Organized by Faculty of Veterinary Science, Chulalongkorn University, Bangkok, Thailand.

**Member of the Editorial Committee** **2024**  
Book of Abstract, International Hybrid Conference on Aquaculture Sustainability (AquaSustain 2024), 24-26th July, 2024, Samyan Mitrtown, Bangkok, Thailand.

<b>Member</b>	<b>2024</b>
Academic and Proceedings Co-communication, International Hybrid Conference on Aquaculture Sustainability (AquaSustain 2024), 24-26th July, 2024, Samyan Mitrtown, Bangkok, Thailand.	
<b>Member of the Organizing Committee</b>	<b>2024</b>
International Hybrid Conference on Aquaculture Sustainability (AquaSustain 2024), 24-26 <sup>th</sup> July, 2024, Samyan Mitrtown, Bangkok, Thailand.	
<b>Member of the Editorial Committee</b>	<b>2024</b>
ITAF 2023 Output titled “Sustainable Aquaculture: Comprehensive ITAF Guide”, Faculty of Veterinary Science, Chulalongkorn University, Bangkok, Thailand	
<b>Member of the Editorial Committee</b>	<b>2023</b>
ITAF 2023 Output titled “Water Quality and Fish Health Management”, Dr. Balasaheb Sawant Konkan Agricultural University, Dapoli, Ratnagiri, Maharashtra, India.	
<b>Member of the Organizing Committee</b>	<b>2023</b>
One-day International Conference on "Recent Advances in Sustainable Tilapia Farming (RASTF)", Online platform, 19 October, 2023, Faculty of Veterinary Science, Chulalongkorn University, Bangkok, Thailand.	
<b>Member of the Organizing Committee</b>	<b>2023</b>
One-month International Training on Aquaculture and Fisheries, 21 September to 20 October, 2023, Faculty of Veterinary Science, Chulalongkorn University, Bangkok, Thailand	
<b>C2F Postdoctoral Researcher (Track A)</b>	<b>2023 - 2024</b>
Center of Excellence in Wildlife, Exotic, and Aquatic Animal Pathology, Faculty of Veterinary Science, Chulalongkorn University, Bangkok, Thailand	
<b>Postdoctoral Researcher</b>	<b>2021</b>
Department of Food Chemistry, Institute of Nutrition, Mahidol University, Salaya, Nakhon Pathom, Thailand.	
<b>Student Assistantship</b>	<b>2019</b>
Yunus Center, Asian Institute of Technology, Thailand	
<b>Senior Dietitian</b>	<b>2013</b>
D.Y. Patil Hospital and Research Center, Pimpri Pune, Maharashtra, India.	
<b>Nutritionist</b>	<b>2013</b>
Talwalkar’s Hi-Fi Gym, waked, Pune, Maharashtra, India	
<b>Assistant Professor</b>	<b>2011 - 2013</b>
Shardabai Pawar Mahila Mahavidyalaya, Baramati, Pune, Maharashtra, India.	
<b>Instructor, Product Development Training</b>	<b>2012</b>
Arranged by Agriculture Development Trust Baramati, Pune, India.	
<b>Examiner</b>	<b>2011</b>
Nutritious Millet Recipe Competition, Malegaon Sahakari Sakhar Karkhana Shivnagar, Malegaon (Bk) Baramati Agro, Pune, Maharashtra, India.	
<b>Trainer</b>	<b>2010</b>
Spices/Curry powders Product Development for Entrepreneurship, Women Economic Development Forum, Parbhani District office, Maharashtra, India.	

## PUBLICATIONS LIST

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- **Medhe, S. V.**, Kettawan, A. K., Kamble, M. T., Monboonpitak, N., Thompson, K. D., Kettawan, A., & Pirarat, N. (2023). Modification of physiochemical and techno-functional properties of Stink bean (*Parkia speciosa*) by germination and hydrothermal cooking treatment. *Foods*, 12(24), 4480
- **Medhe, S. V.**, Kamble, M. T., Kettawan, A. K., Monboonpitak, N., & Kettawan, A. (2022). Effect of hydrothermal cooking and germination treatment on functional and physicochemical properties of *Parkia timoriana* bean flours: An underexplored legume Species of *Parkia* genera. *Foods*, 11(13), 1822.
- **Medhe, S. V.**, Kamble, M. T., Kettawan, A. K., Monboonpitak, N., & Kettawan, A. (2022). Effect of hydrothermal cooking and germination treatment on functional and physicochemical properties of *Parkia timoriana* bean flours: An underexplored legume Species of *Parkia* genera. *Foods*, 11(13), 1822.
- **Medhe, S.**, Jain, S., & Anal, A. K. (2019). Effects of sprouting and cooking processes on physicochemical and functional properties of moth bean (*Vigna aconitifolia*) seed and flour. *Journal of food science and technology*, 56, 2115-2125
- **Medhe, S. V.**, & Medhe, M. V. (2013). Effect of Fiber Supplement on Blood Glucose Level of NIDDM Subjects. *International Journal of Bioassays*, 2(04), 705-707.
- Nirmal, N. P., **Medhe, S.**, Dahal, M., Koirala, P., Nirmal, S., Al-Asmari, F., & Xu, B. (2024). Betalains protect various body organs through antioxidant and anti-inflammatory pathways. *Food Science and Human Wellness*, 13(3), 1109-1117.
- Kamble, M. T., Soowannayan, C., Chaicherd, S., **Medhe, S. V.**, Rudtanatip, T., Pissuwan, D., & Wongprasert, K. (2024). Bimetallic nanoparticles with sulfated galactan eliminate *Vibrio parahaemolyticus* in shrimp *Penaeus vannamei*. *Fish & Shellfish Immunology*, 151, 109753.
- Yostawonkul, J., Kitiyodom, S., Kamble, M. T., Supchukun, K., Saengkrit, N., Sukkarun, P., **Medhe, S.V.**, Thompson, K.D., Boonrungsiman, S., Temisak, S., Fleck, R.A., & Pirarat, N. (2024). Immersion of nanostructured lipid carriers loaded with 17-alpha methyltestosterone for masculinization of red tilapia (*Oreochromis* sp.). *Aquaculture*, 740780
- Kamble, M. T., Chaiyapechara, S., Salin, K. R., Bunphimpapha, P., Chavan, B. R., Bhujel, R. C., **Medhe, S.V.**, Kettawan, A., Thiyajai, P., Thompson, K.D., & Pirarat, N. (2024). Guava and Star gooseberry leaf extracts improve growth performance, innate immunity, intestinal microbial community, and disease resistance in Nile tilapia (*Oreochromis niloticus*) against *Aeromonas hydrophila*. *Aquaculture Reports*, 35, 101947.
- Kamble, M. T., Salin, K. R., Chavan, B. R., **Medhe, S. V.**, Thompson, K. D., & Pirarat, N. (2024). Lengthweight relationship and condition factor of Nile tilapia (*Oreochromis niloticus*) fed diets supplemented with guava and star gooseberry leaf extract. *F1000Research*, 13, 540.
- Kamble, M. T., Gallardo, W., Salin, K. R., Pumpuang, S., Chavan, B. R., Bhujel, R. C., **Medhe, S.V.**, Kettawan, A., Thompson, K.D., & Pirarat, N. (2024). Effect of *Moringa oleifera* leaf extract on the growth performance, hematology, innate immunity, and disease resistance of Nile tilapia (*Oreochromis niloticus*) against *Streptococcus agalactiae* Biotype 2. *Animals*, 14(6), 953.

- Nirmal, S., Olatunde, O. O., **Medhe, S.**, Vitti, S., Khemtong, C., & Nirmal, N. P. (2023). Betalains Alleviate Exercise-Induced Oxidative Stress, Inflammation, and Fatigue and Improve Sports Performance: an Update on Recent Advancement. *Current Nutrition Reports*, 12(4), 778-787
- Yostawonkul, J., Kamble, M. T., Sakuna, K., Madyod, S., Sukkarun, P., **Medhe, S. V.**, Rodkhum, C., Pirarat, N., & Sewaka, M. (2023). Effects of Mangosteen (*Garcinia mangostana*) peel extract loaded in nanoemulsion on growth performance, immune response, and disease resistance of Nile Tilapia (*Oreochromis niloticus*) against *Aeromonas veronii* infection. *Animals*, 13(11), 1798.
- Kamble, M. T., Rudtanatip, T., Soowannayan, C., Nambunruang, B., **Medhe, S. V.**, & Wongprasert, K. (2022). Depolymerized fractions of sulfated galactans extracted from *Gracilaria fisheri* and their antibacterial activity against *Vibrio parahaemolyticus* and *Vibrio harveyi*. *Marine Drugs*, 20(8), 469.
- Chavan, B. R., Yakupitiyage, A., Ataguba, G. A., Kamble, M. T., & **Medhe S. V.** (2015). Tilapia as Food Fish: Enhancement of  $\Omega$ -3 polyunsaturated fatty acids in tilapia (*Oreochromis Spp.*). *International Journal of Agriculture Sciences*, 7 (9), 671-677.
- Ataguba, G., Kamble, M. T., Omeji, S., Azpeitia, T., Chavan, B. R., & **Medhe, S. V.** (2014). Potency of Herbal Extracts for the Treatment of Streptococcus Infection in Tilapia. *International Journal of Basic and Applied Biology*, 2(3), 137-142.
- Kamble, M. T., Chavan, B. R., Gabriel, A., Azpeitia, T., **Medhe, S. V.**, Jain, S., & Jadhav, R. R. (2014). 1511 Application of *Moringa oleifera* for Development of Sustainable and Biosecure Aquaculture. *Aquacultura Indonesiana*, 64-73.

## CONFERENCE PEER-REVIEWED ARTICLE

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- Kamble, M. T., Chavan, B. R., Ataguba, G. A., Azpeitia, T., **Medhe, S.V.**, Jain, S., & Jadhav, R. R. (2015). Application of *Moringa oleifera* for development of Sustainable and Biosecure Aquaculture. *Aquacultura Indonesiana* 15 (2), 64-73.

## CONFERENCE ORAL PRESENTATIONS

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- Chavan, B. R., Kamble, M. T., Yadav, S. R., & **Medhe, S.** (2024). Revolutionizing small-scale aquaculture in India: Sustainable nutrient recycling technologies and practices, 24-26th July, 2024, International Hybrid Conference on Aquaculture Sustainability (AquaSustain 2024), Samyan Mitrtown, Bangkok, Thailand.
- Kamble, M. T., Chavan, B. R., Ataguba, G. A., Azpeitia, T., **Medhe, S. V.**, Jain, S., & Jadhav, R. R. (2014) Application of *Moringa oleifera* for Development of Sustainable and Biosecure Aquaculture, 20th-21st June, 2014, International Conference of Aquaculture Indonesia, at Bandung, Indonesia.
- **Medhe SV** and Anal AK. (2018). Effect of sprouting and cooking on physiochemical and functional properties of moth bean seeds (*Vigna aconitifolia*) and flours, 1st International Conference on Innovations in Food Ingredients and Food safety. 12th to 13th September, 2018, at Bangkok, Thailand.

- **Medhe SV** and Anal AK. (2018). Effect of sprouting and cooking on physiochemical and functional properties of moth bean seeds (*Vigna aconitifolia*) and flours, 1st International Conference on Innovations in Food Ingredients and Food safety. 12th to 13th September, 2018, at Bangkok, Thailand.

## CONFERENCE POSTER PRESENTATIONS

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- Daunde, V., Chavan, B., Kamble, M. T., **Medhe, S.V.**, Kumar, A., Tayade, S., Ponpornpisit, A., & Pirarat, N. (2024). Impact of higher temperatures on mud crab aquaculture: A mini-review, , 24-26th July, 2024, International Hybrid Conference on Aquaculture Sustainability (AquaSustain 2024), Samyan Mitrtown, Bangkok, Thailand.
- Kumar, A., Chavan, B., Kamble, M.T., **Medhe, S.V.**, Daunde, V., Tayade, S., Pirarat, N., & Rodkhum, C. (2024). Antibiotic resistance in *Pseudomonas aeruginosa*: A critical challenge in Nile tilapia aquaculture, 24-26th July, 2024, International Hybrid Conference on Aquaculture Sustainability (AquaSustain 2024), Samyan Mitrtown, Bangkok, Thailand.
- Tayade, S., Chavan, B., Kamble, M. T., **Medhe, S.V.**, Kumar, A., Daunde, V., Pirarat, N., & Bodake, P. (2024). Gracilaria species as bioremediator of intensive pond waste: A mini review, , 24-26th July, 2024, International Hybrid Conference on Aquaculture Sustainability (AquaSustain 2024), Samyan Mitrtown, Bangkok, Thailand.
- Goud, E. A., Chavan, B., Kamble, M. T., **Medhe, S.V.**, Chhaba, B., Yadav, S. R., Chavhan, S., Aitwar, V., Rodkhum, C., & Pirarat, N. (2024). Role of biofloc in health management and biocontrol in aquaculture, 24 26th July, 2024, International Hybrid Conference on Aquaculture Sustainability (AquaSustain 2024), Samyan Mitrtown, Bangkok, Thailand.
- Chavhan, S. S., Chavan, B., Kamble, M. T., **Medhe, S.V.**, Goud, E. A., Yadav, S. R., Chhaba, B., Rodkhum, C., & Pirarat, N. (2024). Evaluating feeding strategies for enhanced growth performance of Nile tilapia (*Oreochromis niloticus*) in captive condition: A brief review, 24-26th July, 2024, International Hybrid Conference on Aquaculture Sustainability (AquaSustain 2024), Samyan Mitrtown, Bangkok, Thailand.
- **Medhe SV**, Arya A, Choudhary, MM. Impact assessment of fibre rich supplement on blood glucose level of diabetics. 1st International Conference on Innovations in Food Ingredients and Food safety. 12th to 13th September, 2018, at Bangkok, Thailand.

## BOOKS

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- Rodkhum, C., Pirarat, N., Shinn, A., Kamble, M. T., **Medhe, S. V.**, Debnath, P. P., Daunde, V. Y., Kumar, A., & Tayade, S. H. (Eds.) (2024). Book of Abstracts on “International Hybrid Conference on AQUACULTURE SUSTAINABILITY AquaSustain 2024”. Faculty of Veterinary Science, Chulalongkorn University. ISBN: 978- 616-407-969-4
- Pirarat, N., Chavan, B.R., Kamble, M.T., Rodkhum, C., Ponpornpisit, N., Panthukumphol, N., **Medhe, S.**, Pawase, A. S. and Shingare, P.E. (Eds). (2023). Sustainable Aquaculture: Comprehensive ITAF Guide. Faculty of Veterinary Science, Chulalongkorn University. ISBN: 978-616-407-902-1.

- Chavan, B.R., Pawase, A. S., Shingare, P. E., Kamble, M. T., **Medhe, S. V.**, Ponpornpisit, A., & Rodkhum, C. (Eds). (2023). *Water Quality and Fish Health Management*. Dr. Balasaheb Sawant Konkan Agricultural University, Dapoli, India. ISBN: 978-93-58870-01-5.

## BOOK CHAPTERS

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- **Medhe, S.V.**, Kamble, M. T., Daunde, V. Y., Kumar, A., Kettawan, A. K., Nirmal, N., & Pirarat, N. (2024). In Nirmal, N.P., Chalath, S., Alaa El-Din, A. B., Francisco, J., B. (Eds), *Fish protein hydrolysates: From production to food and nutraceutical industry applications: Fish protein hydrolysate as a food and feed ingredient*. Elsevier
- Bambaranda, V. A. S. M. B., **Medhe, S. V.**, & Kamble, M. T. (2024). *Seaweed as an Alternative Plant Source of Preservatives for Aquafeed in Asian Aquaculture*. In N. N., Gabriel, K. P., Abasubong, V. N., Erasmus, & M. T., Kamble (Eds), *Sustainable feed ingredients and additives for aquaculture farming: Perspectives from Africa and Asia* (pp. 565-585). Singapore: Springer Nature Singapore.
- Kamble, M. T., Yostawonkul, J., **Medhe, S. V.**, Chavan, B. R., Kumar, A., Palekar, G. R., Daunde, V. Y., Tayade, S., Gabriel, N. N., Ataguba, G. A., & Pirarat, N. (2024). *Innovative Feed Additives for Sustainable Aquaculture: Phytobiotics Encapsulated in Organic Nanoparticles*. In N. N., Gabriel, K. P., Abasubong, V. N., Erasmus, & M. T., Kamble (Eds.), *Sustainable feed ingredients and additives for aquaculture farming: Perspectives from Africa and Asia* (pp. 501-520). Singapore: Springer Nature Singapore.
- Jain S.S. and **Medhe S.V.**, (2023). *Impact of the Coronavirus Pandemic (COVID-19) on the Organic Food Sector from Transforming Organic Agri-Produce into Processed Food Products Post-COVID-19 Challenges and Opportunities* (2023),
- Shah, F., Alcoba, R., **Medhe, S. V.**, & Farook, S. O. (2020). *Mapping the need for preventive healthcare services in remote South Asian communities. Mobile Technologies for Delivering Healthcare in Remote, Rural or Developing Regions*
- **Medhe S.V.**, Anand M., A. K. Anal, (2017). *Dietary Fibers, Dietary Peptides and Dietary Essential Fatty Acids from Food Processing By-Products* (2017), In: A. K. Anal (Ed.), *Food Processing By-Products and their Utilization* (pp. 570-583), Hoboken, New Jersey, United States, Wiley-Blackwell.

## RESEARCH GRANTS / FELLOWSHIPS

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<b>C2F Postdoctoral Fellowship (Track A)</b>	<b>2023 - 2024</b>
Center of Excellence in Wildlife, Exotic, and Aquatic Animal Pathology, Faculty of Veterinary Science, Chulalongkorn University, Bangkok, Thailand	
<b>International Postdoctoral Fellowship</b>	<b>2021</b>
Department of Food Chemistry, Institute of Nutrition, Mahidol University, Salaya, Nakhon Pathom, Thailand.	
<b>Doctoral Degree Scholarship</b>	<b>2014</b>
Social Justice and Special Assistance Department, Government of Maharashtra, India	

## **Fellowship (Support Ph.D)**

Asian Institute of Technology to complete a Ph.D. in Food Engineering and Bioprocess Technology, Thailand

**2014**

## **AWARDS AND HONORS**

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- Best Poster Presentation Award, International Hybrid Conference on Aquaculture Sustainability (AquaSustain 2024), 24-26th July, 2024, Samyan Mitrtown, Bangkok, Thailand, \$100 Award
- UGC NET Qualified (Qualifying examination for Assistant Professorship in India)

## **TRAININGS**

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- Short Term Training on “**Safety and Quality in Innovative Food Production Systems**” held at Asian Institute of technology, Thailand during 20 to 26th May 2018

## **WORKSHOPS**

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- **Reducing Food Waste: A Step towards Global Food Security**, one day Interactive workshop held at Asian Institute of Technology Thailand on 24th Nov 2016
- **Alternative Proteins and Innovative Processing Techniques**, one day international workshop held by Asian Institute of Technology and NSTDA Thailand on 22nd March 2024

## **PROFESSIONAL AFFILIATIONS**

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- Life Membership of Nutrition Society of India, Hyderabad, India