DR. NAVEEN KUMAR VATE

Scientist

Meat and Marine Science Department

CSIR-CFTRI

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EDUCATION QUALIFICATION

Sl.No.	Qualification	Institution/University	Percentage	Year
1.	B.F.Sc	College of Fisheries, Mangalore, India	70.5	2009
2.	M.F.Sc	College of Fisheries, Mangalore, India	82.0	2012
3.	Ph.D	Prince of Songkla University, Hat Yai, Thailand	-	2016
4.	Postdoc	Chalmers University of Technology, Sweden	-	2022

Master's Thesis: "Naturally occurring bioactive peptides from fish and shellfish: Isolation and characterization" (Fish Processing Technology)
Supervisor: Prof. Dr. B. A. Shamasundar

Ph.D. Thesis: "Characteristics and applications of active components from squid melanin-free ink" (Food Science and Technology)
Supervisor: Prof. Dr. Soottawat Benjakul

AREA OF INTEREST

- Protein Chemistry
- Bioactive peptides from food proteins
- Rheology of food material
- Textural studies of food products
- Protein gels and films

SKILLS IN HANDLING OF LABORATORY EQUIPMENTS/TECHNIQUES

- Spectrophotometer, FT-IR Spectrometry
- Protein, Fat Analysis (Kjeldahl/Dumas, Soxhlet)
- Gel Electrophoresis Techniques
- Texture Analyzer, Rheometer, Viscometer
- Ultrasound, Pulsed Electric Field
- Atomic Absorption Spectrometer, Differential Scanning Colorimetry
- High Performance Liquid Chromatography, Gas Chromatography
- Protein Isolation and Purification Techniques

EXPERIENCE

- Scientist in the Meat and Marine Science Department, CSIR-CFTRI, Mysuru, Karnataka, India (From 17-01-2025 till now).

- Assistant Professor in the Department of Fish Processing Technology, School of Fisheries, Centurion University of Technology and Management, Odisha, India (From 28-05-2022 to 13-01-2025).

- Post-Doctoral Researcher in the Division of Food and Nutrition Science, Department of Biology and Biological Engineering, Chalmers University of Technology, Gothenburg, Sweden (From 10-12-2020 to 18-03-2022).

- Senior Scientist in R&D Department of Janatha Fish Meal and Oil Products, Kota, Udupi, India (From 09-03-2019 to 30-11-2020).

- Lecturer in PG Dept of Food Science and Nutrition, Alva's college, Moodbidri, India (01-07-2017 to 06-03-2019)

RESEARCH PUBLICATIONS/ BOOK CHAPTERS

Vate, N. K. and Benjakul, S. 2013. Antioxidative activity of melanin-free ink from splendid squid (*Loligo formosana*). Int. Aquat. Res. 5: 1-12.

Vate, N. K., Benjakul, S. and Agustini, T. W. 2015. Application of melanin-free ink as a new antioxidative gel enhancer in sardine surimi gel. J. Sci. Food. Agric. 95: 2201-2207.

Vate, N. K. and Benjakul, S. 2016. Effect of the mixtures of squid ink tyrosinase and tannic acid on properties of sardine surimi gel. J. Food Sci. Technol. 53: 411-420.

Vate, N. K. and Benjakul, S. 2016. Combined effect of squid ink tyrosinase and tannic acid on heat induced aggregation of natural actomyosin. Food Hydrocolloid. 56: 62-70.

Vate, N. K. and Benjakul, S. 2017. Enhancement of gel properties of sardine surimi using squid ink tyrosinase in combination with coconut husk extract. Int. J. Food Eng. 13(3): 1-10.

Vate, N. K., Benjakul, S. and Prodpran, T. 2017. Improvement of properties of sardine myofibrillar films using squid ink tyrosinase in combination with tannic acid. Turk. J. Fish. Aquat. Sci. 17(5): 853-861.

Vate, N. K., Benjakul, S. and Prodpran, T. 2017. Effect of melanin free ink on mechanical properties and yellow discoloration of protein film from washed sardine mince. Food Biophys. 12(2): 164–171.

Elavarasan, K., Naveen Kumar, V. and Shamasundar, B. A. 2014. Antioxidant and functional properties offish protein hydrolysates from fresh water carp (*Catlacatla*) as influenced by the nature of enzyme. J. Food Process. Pres. 38: 1207-1214.

Sae-Leaw, T., Buamard, N., Vate, N. K. and Benjakul, S. 2018. Effect of Squid Melanin-Free Ink and Pre-Emulsification on Properties and Stability of Surimi Gel Fortified with Seabass Oil during Refrigerated Storage. J. Aquat. Food Prod. T. 27(8): 919-933.

Vate, N. K., Abdollahi, M. and Undeland, I. 2022. Resource efficient collagen extraction from common starfishwith the aid of high shear mechanical homogenization and ultrasound. Food Chem. 393: 133426.

Sajib, M., Forghani, B., Vate, N. K. and Abdollahi, M. 2023. Combined effects of isolation temperature and pH on techno-functional and beany flavor properties of pea protein isolates for meat analogue applications. Food Chem. 412:135585.

Vate, N. K., Strachowski, P. P., Undeland, I. and Abdollahi, M. 2023. Structural and functional properties of collagen isolated from lumpfish and starfish using isoelectric precipitation. Food Chemistry: X. 18:100646.

Vate, N.K., Abdollahi, M. 2025. Marine Collagens and Novel Insights in Their Sustainable Extraction. In: Heredia, J.B., Gutiérrez-Grijalva, E.P., Cabanillas-Bojórquez, L.A. (eds) Bioactive Compounds Extraction from Marine Resources and Wastes. Interdisciplinary Biotechnological Advances. Springer, Singapore.

PROCEEDINGS

Vate, N. K. and Benjakul, S. 2013. Antioxidative activity of melanin-free ink from splendid squid (*Loligo formosana*). 13th Asean Food Conference. (AFC-2013), Singapore, 9 – 11th September, 2013. (Poster presentation).

Vate, N. K. Benjakul, S. and Prodpran, T. 2013. Antioxidative activity of melanin-free ink in surimi gel and fish muscle based film. USM-PSU Postgraduate Development Seminar, Malaysia, 25th July, 2016. (Oral presentation).

Vate, N. K., Abdollahi, M. and Undeland, I. 2021. Efficient and sustainable extraction of marine collagens from starfish using high shear homogenization and ultrasound. 7th International Conference on Food Chemistry and Technology (FCT-2021), Paris. 8–10th November, 2021. (Oral Presentation).

Vate, N. K., Avilipsa, D. and Abinash, T. 2023. Extraction of protein from fish processing by-products through isoelectric precipitation and application in value-added products. 9th International Food Convention (IFCon-2023), CFTRI Mysore, India. 7–10th December, 2023. (Poster presentation).

NET; ORCID and H-Index

- ICAR-NET Qualified (Fish Process Technology)
- https://orcid.org/0000-0002-0625-6467
- H-index: 10

REFERENCES

1. Dr. Mehdi Abdollahi, Docent, FNS, Chalmers University of Technology, Gothenburg, Sweden.
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   Telephone: +46768427346
2. Prof. Dr. Soottawat Benjakul, Professor, Department of Food Technology, Prince of Songkla University, HatYai, Thailand
   Email: soottawat.b@psu.ac.th
   Telephone: +6674286334
3. Dr. Archana Prabhat, Professor and Head, PG Dept of Food Science and Nutrition, Alvas College, Moodbidri, Karnataka, India.
   Email: drarchanaprabhat@gmail.com
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