



TAGEM
R&D AND INNOVATION

CENTRAL FISHERIES RESEARCH INSTITUTE
SUMAE / TRABZON

AHMET FARUK YEŞİLSU, PhD Food Engineer

EDUCATION

- PhD**
2011-2018 Çukurova University
 Department of Fishing and Processing
- MSc**
2002-2006 Ondokuz Mayıs University
 Department of Food Engineering
- Bachelor's Degree**
1998-2002 Ondokuz Mayıs University
 Department of Food Engineering
- LANGUAGE** English YDS 75

ABOUT ME

He worked as a project leader and researcher in several projects at the institute he came to in 2010.

He has been working as managing editor since 2015 in the scientific journal "Turkish Journal of Fisheries and Aquatic Sciences", which he started as a technical editor in 2011. He also serves as the managing editor of the scientific journal "Genetics of Aquatic Organisms", which was launched in 2017.

In addition, Yeşilsu, who has been working as the Technical Deputy Director of SUMAE since October 2018, is married and has 3 children.

CAREER

- 2018 Technical Deputy Director, SUMAE - TRABZON
- 2010-2018 Researcher, SUMAE - TRABZON
- 2004-2010 Food Inspector, Vezirköprü Agricultural Directorate - Samsun

CONTACT

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■ **PROJECTS**

■ **Projects Conducted**

1. TAGEM - Development of Farming Methods of Turbot (*Psetta maxima*) – Researcher - (2011-2013)
2. TAGEM - Development and Farming of Protection Strategy of Sturgeon) – Researcher - (2011-2013)
3. TAGEM - TAGEM - Determination of Storage Stability and Consumer Acceptance of Some Smoked Fish Species in Eastern Black Sea Preliminary) – Researcher - (2013-2015)
4. TAGEM - Determination of Quality Criterias and Shelf Life of Trout Coated with Whey Protein Isolated Nanocomposite Films) – Researcher - (2014-2015)
5. TAGEM - TAGEM - Examination of Oxidative Stability of Microencapsulated Anchovy Oil by Adding Natural Antioxidants – Project Leader - (2015-2018)
6. TAGEM - Use of Alternative Marinating Sources in Utilization of Anchovies - Project Leader - (2016-2018)
7. TAGEM - Antimicrobial effects of Lactoferrin - Fish Gelatine Nanofiber Membranes - Researcher - (2017-2018)
8. TAGEM - Possibilities of using some phytobiotic added diets in nutrition of Black sea trout (*Salmo labrax* Pallas, 1811) – Researcher (2017-2020)
9. TAGEM - Determination of Storage Stability of Protein Isolates and Hydrolyzates Obtained from Sprat (*Sprattus sprattus* L., 1758) - Researcher (2018-2020)
10. TAGEM - The Effect of Ultrasound Assisted Protein Hydrolyzate Production and the Possibility of Use in Some Processed Foods – Researcher (2019-2022)



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▪ **Ongoing Projects**

1. TAGEM - The Ultrasound Assisted Fish Gelatin Extraction - Researcher (2022-2025)
2. TAGEM - Investigation of Intensive Production Possibilities of Local Microalgae Isolates Isolated from the Black Sea – Researcher -2021-2024.
3. TAGEM - Establishment of Turkish Traditional Cheese Inventory - Researcher (2021-2024)
4. EU-H2020 - Advancing Black Sea Research and Innovation to Co-Develop Blue Growth within Resilient Ecosystems (BRIDGE-BS) - Researcher (2021-2026)

▪ **PUBLICATIONS**

▪ **INTERNATIONAL ARTICLES AND PAPERS**

▪ **Articles Published in International Indexed Journals (SCI, SCI-Expanded)**

Benjakul, S., Singh, A., Hong, H., Zhang, B., **Yesilsu, A.F.**, Temdee, W. **2023**. Influence of Epigallocatechin Gallate on Quality of Cooked Harpiosquillid Mantis Shrimp (*Harpiosquilla raphidea*) Subjected to Multiple Freeze-Thaw Cycles. *Turkish Journal of Fisheries and Aquatic Sciences*, 23, TRJFAS23374. <http://doi.org/10.4194/TRJFAS23374>

Baloch, K.A., Patil, U., **Yesilsu, A.F.**, & Benjakul, S. **2023**. Characteristics and Application of Lipase from Asian Seabass Liver Fractionated Using Aqueous Two-phase Partition Technique for Defatting Fish Skin before Collagen Extraction. *Turkish Journal of Fisheries and Aquatic Sciences*, 23, TRJFAS24000. <http://doi.org/10.4194/TRJFAS24000>

Yesilsu, A.F., Alp-Erbay, E., Kutlu, S. & Ozyurt, G. **2023**. The Effect of Different Plant Extracts on the Oxidative Stability of Microencapsulated Anchovy Oil. *International Journal of Food Engineering* 19(5), 143-157. <https://doi.org/10.1515/ijfe-2022-0097>.

Pudtikajorn, K., Sae-leaw, T., **Yesilsu, A. F.**, Sookchoo, P., & Benjakul, S. **2023**. Process Development and Characteristics of Biocalcium from Skipjack Tuna (*Katsuwonus pelamis*) Eyeball Scleral Cartilage. Waste and Biomass Valorization, 1-14. <https://doi.org/10.1007/s12649-023-02075-x>

Nilsuwan, K., Chantakun, K., Zhang, B., Ma, L., **Yesilsu, A. F.**, & Benjakul, S. **2022**. Ammonium Sulfate and Repeated Freeze-Thawing Recover Oil from Emulsion Separated from Salmon Skin Hydrolysate. *European Journal of Lipid Science and Technology*, 2200027. <https://doi.org/10.1002/ejlt.202200027>

Singh, A., Putri, G.A.U., Mittal, A., Hong, H., **Yesilsu, A.F.**, & Benjakul, S. **2022**. Protein Hydrolysate from Splendid Squid (*Loligo formosana*) Fins: Antioxidant, Functional Properties, and Flavoring Profile. *Turkish Journal of Fisheries and Aquatic Sciences*, 22, TRJFAS21005. <http://doi.org/10.4194/TRJFAS21005>



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Yesilsu, A.F. & Alp-Erbay, E., Dagtekin, B.B., Dagtekin, M., Ozyurt, G., & Benjakul, S. **2021.** Effect of Partial Replacement of NaCl with KCl on Quality of Marinated Anchovies, *Journal of Aquatic Food Product Technology*, <https://doi.org/10.1080/10498850.2021.1936325>

Singh, A., Benjakul, S., Olatunde, O.O., & **Yesilsu, A.F.** **2021.** The Combined Effect of Squid Pen Chitooligosaccharide and High Voltage Cold Atmospheric Plasma on the Quality of Asian Sea Bass Slices Inoculated with *Pseudomonas aeruginosa*. *Turkish Journal of Fisheries and Aquatic Sciences*, 21, 41-50. http://doi.org/10.4194/1303-2712-v21_1_05

Sinthusamran, S., Idowu, A. T., Benjakul, S., Prodpran, T., **Yesilsu, A.F.**, & Kishimura, H. **2020.** Effect of proteases and alcohols used for debittering on characteristics and antioxidative activity of protein hydrolysate from salmon frames. *Journal of Food Science and Technology*, 57(2), 473-483. <https://doi.org/10.1007/s13197-019-04075-z>

Olatunde, O.O., Benjakul, S., & **Yesilsu, A.F.** **2020.** Antimicrobial Compounds from Crustaceans and Their Applications for Extending Shelf-Life of Marine-Based Foods. *Turkish Journal of Fisheries and Aquatic Sciences*, 20, 629-646. http://doi.org/10.4194/1303-2712-v20_8_06

Yesilsu, A.F. & Özyurt, G. **2019.** Oxidative Stability of Microencapsulated Fish Oil with Rosemary, Thyme and Laurel Extracts: A Kinetic Assessment. *Journal of Food Engineering*, 240C, 171-182. <https://doi.org/10.1016/j.jfoodeng.2018.07.021>

Alp-Erbay, E., **Yesilsu, A.F.**, Türe, M., **2019.** Fish Gelatin Antimicrobial Electrospun Nanofibers for Active Food-Packaging Applications. *Journal of Nano Research*. 56, 80-97. <https://doi.org/10.4028/www.scientific.net/JNanoR.56.80>

Alp-Erbay, E., Dağtekin, B. B. G., Türe, M., **Yesilsu, A.F.**, & Torres-Giner, S. **2017.** Quality improvement of rainbow trout fillets by whey protein isolate coatings containing electrospun poly (ϵ -caprolactone) nanofibers with *Urtica dioica* L. extract during storage. *LWT-Food Science and Technology*, 78, 340-351. <https://doi.org/10.1016/j.lwt.2017.01.002>

Özyurt, G., Şimşek, A., Karakaya, B. T., Aksun, E. T., and **Yesilsu, A. F.** **2015.** Functional, Physicochemical and Nutritional Properties of Protein from Klunzinger's Ponyfish Extracted by the pH Shifting Method. *Journal of Food Processing and Preservation*. 39(6), 1934-1943. <http://doi.org/10.1111/jfpp.12432>

Özyurt, G., Özkutuk, A.S., Şimşek, A., **Yesilsu, A.F.**, Erguvan, M., **2014.** Quality and shelf life of cold and frozen rainbow trout (*Oncorhynchus mykiss*) fillets: Effects of fish protein based biodegradable coatings. *International Journal of Food Properties*, 18(9), 1876-1887. <https://doi.org/10.1080/10942912.2014.971182>

Temiz, H., **Yesilsu A.F.** **2010.** Effect of Pekmez Addition on the Physical, Chemical, and Sensory Properties of Ice Cream. *Czech Journal of Food Science*, 28(6): 538-546. <https://doi.org/10.17221/80/2008-CJFS>



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Articles Published in Other International Journals

Yeşilsu, A.F. 2023. A Review: Use of Plants for Antioxidant Purposes in Fish Oil Microencapsulation. *Aquatic Food Studies*, 3(2), AFS210. <https://doi.org/10.4194/AFS210>

Alp-Erbay, E., **Yeşilsu, A.F.**, Türe, M. 2022. Antimicrobial Activity of Ovotransferrin Loaded Fish Gelatin Electrospun Nanofibers Against Some Pathogens Originated from Fish Products. *Aquatic Food Studies*, 2(1), AFS92. <https://doi.org/10.4194/AFS92>

Massa, F., Aydin, I., Fezzardi, D., Akbulut, B., Atanasoff, A., Beken, A.T., Bekh, V., Buhlak, Y., Burlachenko, I., Can, E., Carboni, S., Caruso, F., Dağtekin, M., Demianenko, K., Deniz, H., Fidan, D., Fourdain, L., Frederiksen, M., Guchmanidze, A., Hamza, H., Harvey, J., Nenciu, M., Nikolov, G., Niță, V., Özdemir, M.D., Petrova-Pavlova, E., Platon, C., Popescu, G., Rad, F., Seyhaneyildiz Can, Ş., Theodorou, J.A., Thomas, B., Tonachella, N., Tribilustova, E., Yakhontova, I., **Yeşilsu, A.F.**, Yücel-Gier, G. 2021. Black Sea Aquaculture: Legacy, Challenges & Future Opportunities. *Aquaculture Studies*, 21, 181- 220. https://doi.org/10.4194/2618-6381-v21_4_05

Özyurt, G., **Yeşilsu, A.F.** 2021. Microencapsulation of Anchovy Fish Oil (*Engraulis encrasiculus*) with Fish Protein (*Equulites klunzingeri*) Isolate: Nutritional Assessment. *Aquatic Food Studies*, 1(1). AFS16. <https://doi.org/10.4194/AFS16>

Alp Erbay, E., **Yeşilsu, A.F.**, 2021. Fish Protein and Its Derivatives: Functionality, Biotechnology and Health Effects. *Aquatic Food Studies*, 1(1), AFS-13. <https://doi.org/10.4194/AFS-13>

Yeşilsu, A.F., Özyurt, G., Dağtekin, M., & Alp-Erbay, E. 2019. Wild Fish vs. Farmed Fish: Consumer Perception in Turkey. *Aquaculture Studies*, 19, 37-43. http://doi.org/10.4194/2618-6381-v19_1_04

Yeşilsu, A.F., Ture, M., Alp-Erbay, E., Dagtekin, B.B., Eroglu, O. 2018. Identification of Lactic Acid Bacteria from Spoiled Marinated Anchovy (*Engraulis encrasiculus*) Using 16S rRNA Gene Sequence Analysis. *Genetics of Aquatic Organisms*, 2: 11-15. http://doi.org/10.4194/2459-1831-v2_1_05

Yeşilsu, A.F. 2017. Fortification of Foods with Fish Components. Editorial. *Nutrition and Food Toxicology* 1(6): 216-217.

▪ International Symposia, Seminars, etc.

Alp-Erbay, E., & **Yeşilsu, A.F.** 2019. Fabrication and Optimization of Poly (ε-caprolactone) /Rosemary Extract Electrospun Nanofibers by Electrospraying Using Response Surface Methodology for Active Food Packaging Applications. 3th International Conference on Agriculture, Food, Veterinary and Pharmacy Sciences, April, 16-18, 2019, Trabzon, Turkey (Oral).

Dagtekin, B.B., Balcık Misir, G., Kutlu, S., & **Yeşilsu, A.F.** 2019. A Preliminary Study on Protein Isolates and Hydrolyzate Production from Sprat (*Sprattus sprattus* L., 1758). 3th International Conference on Agriculture, Food, Veterinary and Pharmacy Sciences, April, 16-18, 2019, Trabzon, Turkey (Oral).

Kutlu, S., Balcık Misir, G., Dagtekin, M., **Yeşilsu, A.F.**, Alp-Erbay, E., & Erteken, A. 2019. Determination of Consumer Preferences on Trout, Seabass, Shad, and Bonito Smoked with Beech and Oak Sawdust. 3th International Conference on Agriculture, Food, Veterinary and Pharmacy Sciences, April, 16-18, 2019, Trabzon, Turkey (Oral)



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Yeşilsu, A.F. and Özyurt, G. **2017.** Some Physical Properties of Microencapsulated Fish Oil with Bay Leaf Extracts ICENS May 3-7, 2017 Budapest, Hungary, 3rd International Conference on Engineering and Natural Sciences Book of Abstracts: 676

Kutlu, S., Dağtekin, M., Mısır-Balçık, G., **Yeşilsu, A.F.**, Alp, E., Erteken, A., **2015.** Determination of Consumer Trends on Shad an Seabass Smoked with Beech and Oak Sawdust. 1st International Conference on Sea and Coastal Development in the Frame of Sustainability, (MACODESU-2015), 18-20 September 2015, Trabzon, Turkey. Abstract Book, p:186. (Poster).

Kutlu, S., **Yeşilsu, A.F.**, Mısır-Balçık, G., Alp, E., Erteken, A., Türe, M., Dağtekin, M., **2015.** Determination of Storage Stability of Hot Smoked Atlantic Bonito and Trout with Different Wood Chips. 1st International Conference on Sea and Coastal Development in the Frame of Sustainability, (MACODESU-2015), 18-20 September 2015, Trabzon, Turkey. Abstract Book, p:189. (Poster).

Yeşilsu, A.F., and Temiz H. **2015.** Some Physicochemical and Sensory Properties of Ice Cream Used at Different Rates Mulberry Pekmez, The 3rd International Symposium on Traditional Foods from Adriatic to Caucasus. TF3_P297. p. 187 (Poster).

Alp, E., **Yeşilsu, A.F.**, Gözü-Dağtekin, B.B., Türe, M., **2014.** Electrospinning Parameters to Obtain Nanaofibers from Stinging Nettle (*Urtica dioica* L.) to Reinforce Edible Coatings for Fish: A Novel Method. International Symposium on Fisheries and Aquatic Sciences, 25-27, September 2014, Trabzon, Turkey, Symposium Abstract Book, 462-463. (Poster).

▪ NATIONAL ARTICLES AND PAPERS

▪ Articles Published in National Journals

Yeşilsu, A.F., Alp-Erbay, E. & Dağtekin, B.B. **2023.** Bitki ekstraktlarının marine hamsinin depolama stabilitesi üzerine etkisi. Gıda ve Yem Bilimi Teknolojisi Dergisi, DOI: 10.56833/gidaveyem.1315720

Yeşilsu, A.F. ve Polat, A. **2014.** Su Ürünlerinin Bozulmasında Enzimlerin Rolü. Gıda Teknolojileri Elektronik Dergisi, 8(3): 10-21.

Yeşilsu, A.F. ve Özyurt, G. **2013.** Su Ürünlerinin Tazeliğinin Değerlendirilmesinde Elektronik Burun ve Yapay Görme Sistemlerinin Kullanımı, Yunus Araştırma Bülteni, 2013(3): 39-45.

Yeşilsu, A.F. ve Özyurt, G. **2013.** Su Ürünlerinin Kalite ve Güvenliği için Türkiye ve Dünyada Uygulanan Mevzuatlar. Journal of FisheriesSciences.com, 7(1): 58-71.

Akulut, B., Janka, B. ve **Yeşilsu, A.F.** **2012.** Mersin Balıklarının Beslenmesinde Yağ Asitlerinin Önemi, Yunus Araştırma Bülteni, 2012(2): 17-23.

Kutlu, S., **Yeşilsu, A.F.** ve Firdin, Ş. **2011.** Su Ürünleri Kaynaklı Zehirlenmeler. Yunus Araştırma Bülteni. 2011 (3): 20-25.

Temiz, H., **Yeşilsu A.F.** **2006.** Bitkisel Protein Kaynaklı Yenilebilir Film ve Kaplamalar. Gıda Teknolojileri Elektronik Dergisi, 2006(2): 41-50

▪ National Symposia, Seminars, etc.

Özyurt, G., Özktük, A.S., Şimşek, A., **Yeşilsu A.F.** ve Ergüven, M. **2014.** Balık Proteinlerinden Hazırlanan Yenilebilir Kaplamaların Soğukta ve Dondurularak Depolanan Gökkuşağı Alabalığı (*Oncorhynchus mykiss*) Filetolarının Raf Ömrü ve Kaliteleri Üzerine Etkileri. 5. Doğu Anadolu Bölgesi Su Ürünleri Sempozyumu Bildiriler Kitabı, Elazığ.



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Akbulut B., S. Kutlu, Aksungur N., E. Çakmak, **Yeşilsu A.F.** ve E. Alp. **2013.** Sivriburun Mersin Balıklarında Besleme Sıklığının Büyüme, Yem Değerlendirme, Et Verimi ve Et Kalitesine Etkisi. 17. Ulusal Su Ürünleri Sempozyumu, 3-6 Eylül, 2013, İstanbul. Bildiri Özetleri Kitabı.

Temiz, H., **Yeşilsu, A. F.**, **2009.** Dondurmanın Fiziksel, Kimyasal ve Duyusal Özellikleri Üzerine Kayısı Pekmezinin Etkisi, Pamukkale Süt ve Süt Ürünleri Sempozyumu, , Denizli: 150-151.

■ **OTHER PUBLICATIONS**

■ **Ph.D. Thesis, Master Thesis, Reports, Books etc.**

Master Thesis : The effect of some pekmez types on physical, chemical, and sensorial properties of ice cream

Ph.D Thesis : The effects of natural antioxidants on oxidative stability of microencapsulated anchovy oil

■ **Membership, Training, Course, Meeting, Congress, Symposium and Other Activities**

1. SCAR-Fish Representative. 2. FAO-ASFA Representative.

Editorial

<u>Ongoing</u>	<u>Past</u>
Turkish Journal of Fisheries and Aquatic Sciences – Editor in Chief (2019)	Turkish Journal of Fisheries and Aquatic Sciences – Manager Editor (2015-2019)
Genetics of Aquatic Organisms – Editor in Chief (2019)	Genetics of Aquatic Organisms - Manager Editor (2016-2019)
Aquaculture Studies – Editor in Chief (2019)	Aquaculture Studies – Manager Editor (2018-2019)
Biotech Studies – Section Editor (2020)	Turkish Journal of Fisheries and Aquatic Sciences – Technical Editor (2011-2015)
	Yunus Research Bulletin - Technical Editor (2012-2015)

Trainings

<u>Title of the Training</u>	<u>Start</u>	<u>Ending</u>	<u>Unit</u>
ISO-9001:2000	26.11.2007	29.11.2007	Samsun Directorate of Agriculture
ISO 17020(=EN 45004	30.11.2007	30.11.2007	Samsun Directorate of Agriculture
ISO 9001: 2000 Quality Management System	13.02.2008	13.02.2008	ISODEM
Official Controls of Genetically Modified Foods and Feeds	28.04.2010	29.04.2010	Samsun Directorate of Agriculture
Fatty Acid Analysis	12.07.2011	13.07.2011	Ankara Food Control Lab.
EU Grant Funds and Project Cycle Management	10.06.2013	14.06.2013	TCD Company
What is EU and EU's Effects on Daily Life	6.02.2014	7.02.2014	Trabzon Governorship
R Statistical Software Program	10.03.2014	21.03.2014	DOKA
Editor and Writer Seminar	27.05.2015	27.05.2015	TUBİTAK
Use of Biosensors for Food Safety and Quality Control	16.01.2017	20.01.2017	IAMZ-CIHEAM / Spain
Sensory Analysis of Bakery Products	3.12.2018	7.12.2018	TFTAK / Estonia
Laboratory Animal Science for Aquatic Research Facilities	17.06.2019	21.06.2019	IMR / Norway
Marine Management and Innovation	9.3.2020	13.3.2020	UiT / Norway
EIT Food NPD Skills: learn through experience	23.6.2022	24.6.2022	University of Warsaw/Poland
Sustainable approaches to inland aquaculture and fisheries-advances in novel technologies	7.11.2022	11.11.2022	FFPW USB / Czech Republic

Social Networks :

