

ROSALEE S. HELLBERG, PH.D.

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Associate Director, Food Science Program	Ph: 714-628-2811
Schmid College of Science and Technology	Maiden name: Rosalee S. Rasmussen
Chapman University, Orange, CA 92866	Pronouns: she/her

EDUCATION

- Ph.D. 2010 Oregon State University, Corvallis, OR, Food Science and Technology, GPA 3.99
Thesis: DNA-based methods for the identification of commercial salmon and trout species
- M.S. 2006 Oregon State University, Corvallis, OR, Food Science and Technology, GPA 4.0
Thesis: Mercury levels in albacore tuna and the effects of canning
- B.A. 2002 Lewis & Clark College, Portland, OR, Biochemistry/Pre-Med, GPA 3.85, Magna Cum Laude
Thesis: Use of the phosphatase inhibitor, okadaic acid, to study transport of tissue plasminogen activator (tPA)/enhanced green fluorescent protein (EGFP) in hippocampal neurons

PROFESSIONAL APPOINTMENTS

- 2020-present Associate Director, Food Science Program, Schmid College of Science and Technology, Chapman University, Orange, CA
- 2019-present Associate Professor, Food Science Program, Schmid College of Science and Technology, Chapman University, Orange, CA
- 2012-2019 Assistant Professor, Food Science Program, Schmid College of Science and Technology, Chapman University, Orange, CA
- 2010-2012 Commissioner's Fellow, Microbiology Branch, Office of Regulatory Affairs/Pacific Regional Laboratory Southwest, U.S. Food and Drug Administration, Irvine, CA
- 2010 Post-Doctoral Scholar, Department of Food Science and Technology, Oregon State University Food Innovation Center, Portland, OR
- 2004-2009 Graduate Research Assistant, Department of Food Science and Technology, Oregon State University Seafood Research and Education Center, Astoria, OR
- 2003-2004 Laboratory Technician, Department of Food Science and Technology, Oregon State University Seafood Research and Education Center, Astoria, OR

TEACHING EXPERIENCE

(All courses taught at Chapman University)

- Interterm 2020 – Present Food Industry Tour (FSN 510)
Spring 2017 – Present Food Fraud (FSN 551)

Fall 2013 – Present	Essentials of Food Science (FSN 500, co-taught)
Fall 2012 – Present	Food Microbiology Lecture and Lab (FSN 530/530L)
Fall 2020	Introduction to Food Science (FSN-120)
Spring 2013 – Spring 2017	General Microbiology Lecture and Lab (BIOL 417/417L)

Average Student Course Evaluation Scores for Fall 2012-Fall 2023, Chapman University (range: 1-5, max score = 5)

All courses combined	Graduate courses only	Undergraduate courses only
4.6	4.6	4.5

HONORS AND AWARDS

- 2020-2021 Outstanding Service Award, Institute of Food Technologists Aquatic Food Products Division
 - Honors a current section member who has exemplified a history of service to the section or field
- 2018-2019 Award in Mentorship of Undergraduate Research & Creative Activity, Chapman University
 - Recognizes exceptional work by faculty in guiding student research and providing high-impact learning experiences to students.
- 2017-2018 Faculty Excellence Award for Achievement in Scholarly and Creative Activity, Chapman University.
 - Recognizes exceptional contributions to the university and is given to faculty who demonstrate excellence in scholarly and creative activity.
- 2017 Emerging Leaders Network Award, Institute of Food Technologists.
 - International award given to emerging leaders in food science who have demonstrated a high potential for success in leadership roles and a strong commitment to the profession.
- 2015-2017 Wang-Fradkin Assistant Professorship Award, Chapman University.
 - Recognizes exceptional merit in scholarly and creative activity and is the highest award for research given at Chapman University.
- 2012-2013 Outstanding Volunteer Award, Institute of Food Technologists Aquatic Food Products Division
- 2010 Association for Laboratory Automation Young Scientist Poster Award
- Most-Cited Paper of 2008 Award, Comprehensive Reviews in Food Science and Food Safety, Institute of Food Technologists

GRANTS RECEIVED

1. “Promoting Access to Thriving Careers in Food Science for Underrepresented Students” National Institute of Food and Agriculture/USDA. December 2023-December 2028. (PI, \$246,000 total award).
2. “Single-Laboratory Validation for the Detection of Salmonella enterica in Meat Analog Products” Chapman University’s Faculty Grant for Research, Scholarship and Creative Activity. July 2023 – May 2024. (PI, \$14,954 total award).

3. “Seafood Mislabeling Meta-Analysis: An Investigation into Seafood Mislabeling Rates Reported in the United States Relative to Consumption Data for Individual Species Categories” Seafood Industry Research Fund. June 2023 – August 2024. (PI, \$30,490 total award).
4. “Purchase of a NanoDrop UV-Vis Spectrophotometer for use in Food Safety and Food Authentication Testing” 2023 Southern California Institute of Food Technologists Education/Research Grant. June 2023 – May 2024. (PI, \$16,596 total award).
5. “Detection and Disinfection of Enterotoxigenic *Escherichia coli* (ETEC) on Food Contact Surfaces” USDA Non-Assistance Cooperative Agreement #58-8042-1-043. August 2021 – July 2024. (PI, \$197,130 total award).
6. “Rapid Detection of Fish Species and Quality in the Marketplace” (Co-Investigator, in collaboration with SafetySpect, Inc). NOAA-SBIR Phase II Award Number NA21OAR0210305. July 2021 – June 2023. (co-Investigator, \$499,826 total award; \$69,578 to Chapman University).
7. “Purchase of a Qubit 4 Fluorometer for use in Food Safety and Food Authentication Testing” 2022 Southern California Institute of Food Technologists Education/Research Grant. June 2022 – May 2023. (PI, \$6,997 total award).
8. “Purchase of an E-Gel Imager System for use in Food Safety and Food Authentication Testing” 2021 Southern California Institute of Food Technologists Education/Research Grant. June 2021 – May 2022. (PI, \$12,712 total award).
9. “Rapid Detection of Fish Species and Quality in the Marketplace” (Co-Investigator, in collaboration with SafetySpect, Inc). NOAA-SBIR Phase I Award Number NA20OAR0210327. July 2020 – December 2020. (co-Investigator, \$149,264 total award; \$39,422 to Chapman University).
10. “Purchase of a Mastercycler Nexus Gradient for use in Food Safety and Food Fraud Testing” 2020 Southern California Institute of Food Technologists Education/Research Grant. June 2020 – May 2021. (PI, \$8,139 total award).
11. “Application of Whole-Genome Sequencing to Enhance Norovirus Outbreak Investigations and Protect Public Health” Kay Family Foundation Data Analytics Program. August 2018 – July 2020. (PI, \$98,675 total award).
12. “Use of Multimode Hyperspectral Imaging Technology for the Rapid Authentication of Fish Species” Chapman University 2018-2019 Faculty Opportunity Fund Grant. June 2018 – May 2019. (PI, \$14,582 total award).
13. “REU Site: Summer Undergraduate Research Fellowships in Earth and Environmental Sciences (SURFEES)” National Science Foundation - Research Experiences for Undergraduates (NSF-REU) Site Award Number 1757991. May 2018 – April 2023. (Senior Personnel, \$405,267 total award)
14. “Purchase of a Thermomixer for use in Food Safety and Food Fraud Testing” 2017 Southern California Institute of Food Technologists Education/Research Grant. June 2017 – May 2018. (PI, \$6,763 total award).
15. “Rapid Detection of *Salmonella* in Pet Food using a Combination of Immunological and DNA-Based Methodologies” Chapman University 2017-2018 Scholarly/Creative Activity Grant. June 2017 – May 2018. (PI, \$3,500 total award).
16. “Use of a Molecular Detection System based on Isothermal DNA Amplification and Bioluminescence for Rapid Detection of Foodborne Pathogens and Food

- Mislabeling” 2016 Southern California Institute of Food Technologists Education/Research Grant. June 2016 – May 2017. (PI, \$10,843 total award).
17. “Examination of Rapid Methodologies for the Detection of Mycotoxins and DNA Markers of Mycotoxigenic Fungi in Pet Foods” Chapman University 2016-2017 Scholarly/Creative Activity Grant. June 2016 – May 2017. (PI, \$3,800 total award).
 18. “Purchase of a Microplate Washer for use in Food Science Research and Teaching” 2015 Southern California Institute of Food Technologists Education/Research Grant. June 2015 – May 2016. (PI, \$6,335 total award).
 19. “Comparison of DNA- and Protein-Based Methods for Species Detection in Ground Meat Products” Chapman University 2015-2016 Scholarly/Creative Activity Grant. June 2015 – May 2016. (PI, \$3,000 total award).
 20. “Use of DNA Mini-Barcoding Combined with Next-Generation Sequencing to Identify Fish Misbranding in Mixed-Species Products” Chapman University 2014-2015 Scholarly/Creative Activity Grant. June 2014 – May 2015. (PI, \$4,995 total award).
 21. “REU Site: Summer Undergraduate Research Fellowships in Earth and Environmental Sciences (SURFEES)” National Science Foundation - Research Experiences for Undergraduates (NSF-REU) Site Award Number 1359500. May 2014 – April 2017. (Senior Personnel, \$347,330 total award)
 22. “Purchase of a Seward Stomacher for use in Microbiology Research and Teaching” 2013 Southern California Institute of Food Technologists Education/Research Grant. June 2013 – May 2014. (PI, \$6,925 total award).

PEER-REVIEWED JOURNAL PUBLICATIONS

*(mentored graduate students are underlined; †indicates mentored undergraduate/community college student; *indicates corresponding author)*

1. Everstine K, Hellberg RS*. Managing food fraud risk in practice. Food Safety Management in Practice, In Press
2. Rivers MC, Campbell AB†, Lee CH†, Kapoor P†, **Hellberg RS***. 2024. Short-weighting, species authentication, and labeling compliance of prepackaged frozen shrimp sold in grocery stores in Southern California. *Food Control*, 155: 110101. <https://doi.org/10.1016/j.foodcont.2023.110101>
3. Harris CM, Kim DY†, Jordan CR†, Miranda MI†, **Hellberg RS***. DNA barcoding of herbal supplements on the US commercial market associated with the purported treatment of COVID-19. *Phytochemical Analysis*. 2023; 1-14. <https://doi.org/10.1002/pca.3320>.
4. Sueker M, Daghighi A, Akhbardeh A, MacKinnon N, Bearman G, Baek I, Hwang C, Qin J, Tabb AM, Roungchun JB, **Hellberg RS**, Vasefi F, Kim M, Tavakolian K, Kashani Zadeh H. 2023. A novel machine learning framework based on a hierarchy of dispute models for the identification of fish species using multi-mode spectroscopy. *Sensors*, 23(22): 9062. <https://doi.org/10.3390/s23229062>
5. Emmi AJ†, Fatusin B†, **Hellberg RS***. 2023. Comparison of DNA extraction methods for the detection of canned tuna species with DNA mini-barcoding. *Journal of Food Quality*, 2023: 7121260. <https://doi.org/10.1155/2023/7121260>
6. Marquis GE, Covaia SM†, Tabb AM†, Kitch CJ, **Hellberg RS***. 2023. Microbiological safety and quality of ceviche, poke, and sushi dishes sold at retail

- outlets in Orange County, CA. *Heliyon*, 9: e16862.
<https://doi.org/10.1016/j.heliyon.2023.e16862>
7. Kashani Zadeh H, Hardy M, Sueker M, Li Y, Tzouchas A, MacKinnon N, Bearman G, Haughey SA, Akhbardeh A, Baek I, Hwang C, Qin J, Tabb AM†, **Hellberg RS**, Ismail S, Reza H, Vasefi F, Kim M, Tavakolian K, & Elliott CT. 2023. Rapid assessment of fish freshness for multiple supply-chain nodes using multi-mode spectroscopy and fusion-based artificial intelligence. *Sensors*, 23(11): 5149.
<https://doi.org/10.3390/s23115149>
 8. Jordan CR†, Harris CM, Miranda MI†, Kim DY†, **Hellberg RS***. 2023. Labeling compliance and online claims for Ayurvedic herbal supplements on the U.S. market associated with the purported treatment of COVID-19. *Food Control*, 148: 109673.
<https://doi.org/10.1016/j.foodcont.2023.109673>
 9. Kitch CJ, Tabb AM†, Marquis GE, **Hellberg RS***. 2023. Species substitution and mislabeling of ceviche, poke, and sushi dishes sold in Orange County, California. *Food Control*, 146: 109525. <https://doi.org/10.1016/j.foodcont.2022.109525>
 10. Sampson GL, Ruelle SB, Phan L, Williams-Hill D, **Hellberg RS***. 2023. Effectiveness of selected pre-enrichment broths for the detection of *Salmonella* spp. in meat analogs. *Food Control*, 143: 109282.
<https://doi.org/10.1016/j.foodcont.2022.109282>
 11. Roungchun JB, Tabb AM†, **Hellberg RS***. 2022. Identification of tuna species in raw and processed products using DNA mini-barcoding of the mitochondrial control region. *Food Control*, 134: 108752. <https://doi.org/10.1016/j.foodcont.2021.108752>
 12. Chauvin J, Duran R, Tavakolian K, Akhbardeh A, Mackinnon N, Qin J, Chan D, Hwang C, Baek I, Kim MS, Isaacs R, Yilmaz AG, Roungchun J, **Hellberg RS**, Vasefi F. 2021. Simulated annealing-based hyperspectral data optimization for fish species classification: can the number of measured wavelengths be reduced? *Applied Sciences*, 11(22): 10628. <https://doi.org/10.3390/app112210628>
 13. Peterson AM, McBride GE†, Jhita SK†, **Hellberg RS***. 2021. An investigation into country of origin labeling, species authentication and short weighting of commercially sold frozen fish fillets. *Heliyon*, 7(4): e06713.
<https://doi.org/10.1016/j.heliyon.2021.e06713>
 14. Silva AJ, Yang Z, Wolfe J, Hirneisen KA, Ruelle SB, Torres A, Williams-Hill D, Kulka M, **Hellberg RS***. 2021. Application of whole-genome sequencing for norovirus outbreak tracking and surveillance efforts in Orange County, CA. *Food Microbiology*, 98: 103796. <https://doi.org/10.1016/j.fm.2021.103796>
 15. Dahm OJ, Sampson GL†, Silva AJ, **Hellberg RS***. 2021. Use of molecular methods to authenticate animal species and tissue in bovine liver dietary supplements. *Journal of Dietary Supplements*, <https://doi.org/10.1080/19390211.2021.1887424>
 16. Scales ZM, Narbay E†, **Hellberg RS***. 2021. Use of DNA barcoding combined with PCR-SFLP to authenticate species in bison meat products. *Foods*, 10(2): 347.
<https://doi.org/10.3390/foods10020347>
 17. Silva AJ, Dahm OJ, **Hellberg RS***. 2020. Bovine liver supplement labeling practices and compliance with U.S. regulations. *Journal of Dietary Supplements*, Published Online 11/5/2020. <https://doi.org/10.1080/19390211.2020.1834048>

18. **Isaacs RB, Hellberg RS***. 2020. Authentication of red snapper (*Lutjanus campechanus*) fillets using a combination of real-time PCR and DNA barcoding. *Food Control*, 118: Article 107375. <https://doi.org/10.1016/j.foodcont.2020.107375>
19. Qin J, Vasefi F, **Hellberg RS**, Akhbardeh A, **Isaacs RB**, Yilmaz AG, Hwang C, Baek I, Schmidt WF, Kim MS. 2020. Detection of fish fillet substitution and mislabeling using multimode hyperspectral imaging techniques. *Food Control*, 114: Article 107234. <https://doi.org/10.1016/j.foodcont.2020.107234>
20. **Rosen DK**, Gallardo M†, Vail M†, **Hellberg RS***. 2020. Microplate immunocapture coupled with the 3M molecular detection system and selective plating for the rapid detection of *Salmonella infantis* in dry dog food and treats. *Journal of Microbiological Methods*, 172: Article 105881. <https://doi.org/10.1016/j.mimet.2020.105881>
21. **Silva AJ**, Kawalek MD, Williams-Hill DM, **Hellberg RS***. 2020. PCR cloning combined with DNA barcoding enables partial identification of fish species in a mixed-species product. *Frontiers in Ecology and Evolution* 8: 28. <https://doi.org/10.3389/fevo.2020.00028>
22. **Liou P**, Banda A†, **Isaacs RB**, **Hellberg RS***. 2020. Labeling compliance and species authentication of fish fillets sold at grocery stores in Southern California. *Food Control* 112: 107137. <https://doi.org/10.1016/j.foodcont.2020.107137>
23. **Chung SM**, **Hellberg RS***. 2020. Effects of poor sanitation procedures on cross-contamination of animal species in ground meat products. *Food Control* 109: Article 106927. <https://doi.org/10.1016/j.foodcont.2019.106927>
24. **Zahn RJ**, Silva AJ†, **Hellberg RS***. 2020. Development of a DNA mini-barcoding protocol targeting COI for the identification of elasmobranch species in shark cartilage pills. *Food Control* 109: Article 106918. <https://doi.org/10.1016/j.foodcont.2019.106918>
25. **Isaacs RB†**, **Hellberg RS***. 2019. Shark cartilage supplement labeling practices and compliance with U.S. regulations. *Journal of Dietary Supplements* Published online 06 December 2019. <https://doi.org/10.1080/19390211.2019.1698687>
26. **Naaum AM**, **Hellberg RS**, **Okuma TA**, Hanner RH. 2019. Multi-instrument evaluation of a real-time PCR assay for identification of Atlantic salmon: a case study on the use of a pre-packaged kit for rapid seafood species identification. *Food Analytical Methods* 12: 2474–2479. <https://doi.org/10.1007/s12161-019-01584-7>
27. **Hellberg RS***, **Isaacs RB†**, **Hernandez EL†**. 2019. Identification of shark species in commercial products using DNA barcoding. *Fisheries Research* 210: 81-88. <https://doi.org/10.1016/j.fishres.2018.10.010>
28. **Rogers SA**, Calicchia M, **Hellberg RS***. 2018. Concentration of *Listeria monocytogenes* in skim milk and soft cheese through microplate immunocapture. *Journal of Microbiological Methods* 153: 54-59. <https://doi.org/10.1016/j.mimet.2018.09.005>
29. **Bosko SA**, Foley DM, **Hellberg RS***. 2018. Species substitution and country of origin mislabeling of catfish products on the U.S. commercial market. *Aquaculture* 495: 715-720. <https://doi.org/10.1016/j.aquaculture.2018.06.052>
30. **Okuma TA**, Huynh TP, **Hellberg RS***. 2018. Use of enzyme-linked immunosorbent assay to screen for aflatoxins, ochratoxin A, and deoxynivalenol in dry pet foods. *Mycotoxin Research* 34(1): 69-75. <https://doi.org/10.1007/s12550-017-0300-3>

31. Pollack SJ, Kawalek MD, Williams-Hill DM, **Hellberg RS***. 2018. Evaluation of DNA barcoding methodologies for the identification of fish species in cooked products. *Food Control* 84: 297-304. <https://doi.org/10.1016/j.foodcont.2017.08.013>
32. **Hellberg RS***, Hernandez BC†, Hernandez EL†. 2017. Identification of meat and poultry species in food products using DNA barcoding. *Food Control* 80: 23-28. <https://doi.org/10.1016/j.foodcont.2017.04.025>
33. Perestam AT, Fujisaki KK†, Nava O†, **Hellberg RS***. 2017. Comparison of real-time PCR and ELISA-based methods for the detection of beef and pork in processed meat products. *Food Control* 71: 346–352. <https://doi.org/10.1016/j.foodcont.2016.07.017>
34. Mitchell JK†, **Hellberg RS***. 2016. Use of the mitochondrial control region as a potential DNA mini-barcoding target for the identification of canned tuna species. *Food Analytical Methods* 9(10): 2711-2720. <https://doi.org/10.1007/s12161-016-0460-3>
35. Quinto CA, Tinoco R†, **Hellberg RS***. 2016. DNA barcoding reveals mislabeling of game meat species on the U.S. commercial market. *Food Control* 59: 386-392. <https://doi.org/10.1016/j.foodcont.2015.05.043>
36. Kane DE, **Hellberg RS***. 2016. Identification of species in ground meat products sold on the U.S. commercial market using DNA-based methods. *Food Control* 59: 158-163. <https://doi.org/10.1016/j.foodcont.2015.05.020>
37. **Hellberg RS***, Chu E. 2016. Effects of climate change on the persistence and dispersal of foodborne bacterial pathogens in the outdoor environment: A review. *Critical Reviews in Microbiology* 42(4): 548-72. DOI: [10.3109/1040841X.2014.972335](https://doi.org/10.3109/1040841X.2014.972335)
38. Shokralla S, **Hellberg RS**, Handy SM, King I, Hajibabaei M. 2015. A DNA mini-barcoding system for authentication of processed fish products. *Scientific Reports* 5: Article number 15894. <https://doi.org/10.1038/srep15894>
39. Okuma TA†, **Hellberg RS***. 2015. Identification of meat species in pet foods using a real-time polymerase chain reaction (PCR) assay. *Food Control* 50: 9-17. <https://doi.org/10.1016/j.foodcont.2014.08.017>
40. Levy DJ, Beck NK, Kossik AL, Patti T†, Meschke JS, Calicchia M, **Hellberg RS***. 2015. Microbial safety and quality of fresh herbs from Los Angeles, Orange County, and Seattle farmers' markets. *Journal of the Science of Food and Agriculture* 95(13): 2641-5. DOI: [10.1002/jsfa.6996](https://doi.org/10.1002/jsfa.6996)
41. **Hellberg RS***, Li F, Sampath R, Yasuda I, Carolan H, Wolfe J, Brown M, Alexander R, Williams-Hill DM, Martin WB. 2014. Rapid detection and differentiation of human noroviruses using RT-PCR coupled to electrospray ionization mass spectrometry. *Food Microbiology* 44: 71-80. DOI: [10.1016/j.fm.2014.05.017](https://doi.org/10.1016/j.fm.2014.05.017)
42. **Hellberg RS***, Kawalek MD, Van KT, Shen Y, Williams-Hill DM. 2014. Comparison of DNA extraction and PCR setup methods for use in high-throughput DNA barcoding of fish species. *Food Analytical Methods* 7(10): 1950-1959. <https://doi.org/10.1007/s12161-014-9865-z>
43. **Hellberg RS***, Martin KG, Keys AL, Haney CJ, Shen Y, and Smiley RD. 2013. 16S rRNA partial gene sequencing for the differentiation and molecular subtyping of *Listeria* species. *Food Microbiology* 36: 231-240. DOI: [10.1016/j.fm.2013.06.001](https://doi.org/10.1016/j.fm.2013.06.001)
44. **Hellberg RS***, Haney CJ, Shen Y, Cheng C-M, Williams-Hill DM, Martin WB. 2012. Development of a custom 16S rRNA gene library for the detection and

- molecular subtyping of *Salmonella enterica*. *Journal of Microbiological Methods* 91: 448-458. DOI: [10.1016/j.mimet.2012.09.018](https://doi.org/10.1016/j.mimet.2012.09.018)
45. Pierce SE, Bell RL, **Hellberg RS**, Cheng C-M, Chen K-S, Williams-Hill DM, Martin WB, Allard MW. 2012. Detection and identification of *Salmonella enterica*, *Escherichia coli*, and *Shigella* spp. via PCR-ESI-MS: isolate testing and analysis of food samples. *Applied and Environmental Microbiology* 78(23): 8403-8411. DOI: [10.1128/AEM.02272-12](https://doi.org/10.1128/AEM.02272-12)
 46. **Hellberg RS***, Mireles DeWitt CA, Morrissey MT. 2012. Risk-benefit analysis of seafood consumption: a review. *Comprehensive Reviews in Food Science and Food Safety* 11(5): 490-517. <https://doi.org/10.1111/j.1541-4337.2012.00200.x>
 47. **Rasmussen Hellberg RS***, Morrissey MT. 2011. Advances in DNA-based techniques for the detection of seafood species substitution on the commercial market. *Journal of the Association of Laboratory Automation* 16(4): 308-321. DOI: [10.1016/j.jala.2010.07.004](https://doi.org/10.1016/j.jala.2010.07.004)
 48. **Rasmussen Hellberg RS***, Naam AM, Handy SM, Hanner RH, Deeds JR, Yancy HF, Morrissey MT. 2011. Interlaboratory evaluation of a real-time multiplex polymerase chain reaction method for identification of salmon and trout species in commercial products. *Journal of Agricultural and Food Chemistry* 59: 876-884. <https://doi.org/10.1021/jf103241y>
 49. **Rasmussen Hellberg RS***, Morrissey MT, Hanner RH. 2010. A multiplex PCR method for the identification of commercially important salmon and trout species (*Oncorhynchus* and *Salmo*) in North America. *Journal of Food Science* 75(7): C595-C606. DOI: [10.1111/j.1750-3841.2010.01752.x](https://doi.org/10.1111/j.1750-3841.2010.01752.x)
 50. **Rasmussen RS***, Morrissey MT, Walsh J. 2010. Application of a PCR-RFLP method to identify salmon species in U.S. commercial products. *Journal of Aquatic Food Product Technology* 19(1): 3-15. <https://doi.org/10.1080/10498850903297576>
 51. Litz MNC, Brodeur RD, Emmett RL, Heppell SS, **Rasmussen RS**, O'Higgins L, Morris MS. 2010. Effects of variable oceanographic conditions on forage fish lipid content and fatty acid composition in the northern California Current. *Marine Ecology Progress Series* 405: 71-85. DOI: <https://doi.org/10.3354/meps08479>
 52. **Rasmussen RS***, Morrissey MT, Hebert PDN. 2009. DNA barcoding of commercially important salmon and trout species (*Oncorhynchus* and *Salmo*) from North America. *Journal of Agricultural and Food Chemistry* 57: 8379-8385. <https://doi.org/10.1021/jf901618z>
 53. **Rasmussen RS***, Morrissey MT. 2009. Application of DNA-based methods to identify fish and seafood substitution on the commercial market. *Comprehensive Reviews in Food Science and Food Safety* 8: 118-154. <https://doi.org/10.1111/j.1541-4337.2009.00073.x>
 54. **Rasmussen RS**, Morrissey MT. 2008. DNA-based methods for the identification of commercial fish and seafood species. *Comprehensive Reviews in Food Science and Food Safety* 7(3): 280-95. <https://doi.org/10.1111/j.1541-4337.2008.00046.x>
 55. **Rasmussen RS**, Morrissey MT, Roblero J. 2008. Fatty acid composition of U.S. West Coast albacore tuna (*Thunnus alalunga*) and the effects of canning and short-term storage. *Journal of Aquatic Food Product Technology* 17(4): 441-458. <https://doi.org/10.1080/10498850802369211>

56. **Rasmussen RS**, Morrissey MT. 2007. Biotechnology in aquaculture: transgenics and polyploidy. *Comprehensive Reviews in Food Science and Food Safety* 6: 1-16. <https://doi.org/10.1111/j.1541-4337.2007.00013.x>
57. **Rasmussen RS**, Morrissey MT. 2007. The effects of processing methods and storage on cadmium levels in Pacific Oysters (*Crassostrea gigas*). *Journal of Aquatic Food Product Technology* 16(3): 3-17. https://doi.org/10.1300/J030v16n03_02
58. **Rasmussen RS**, Morrissey MT, Cheney D. 2007. Effect of age and tissue weight on the cadmium concentration in Pacific oysters (*Crassostrea gigas*). *Journal of Shellfish Research* 26(1): 1-7. DOI: 10.2983/0730-8000(2007)26[173:EOAATW]2.0.CO;2
59. **Rasmussen RS**, Morrissey MT. 2007. Effects of canning on total mercury, protein, lipid, and moisture content in troll-caught albacore tuna (*Thunnus alalunga*). *Food Chemistry* 101: 1130-1135. <https://doi.org/10.1016/j.foodchem.2006.03.013>
60. **Rasmussen RS**, Morrissey MT, Carroll S. 2006. Effect of seasonality, location, and size on lipid content in North Pacific troll-caught albacore tuna (*Thunnus alalunga*). *Journal of Aquatic Food Product Technology* 15(2): 73-86. https://doi.org/10.1300/J030v15n02_07
61. **Rasmussen RS**, Nettleton J, Morrissey MT. 2005. A review of mercury in seafood: special focus on tuna. *Journal of Aquatic Food Product Technology* 14(4): 71-100. https://doi.org/10.1300/J030v14n04_06
62. Morrissey MT, **Rasmussen RS**, Okada T. 2004. Mercury content in Pacific troll-caught Albacore tuna (*Thunnus alalunga*). *Journal of Aquatic Food Product Technology* 13(4): 41-52. https://doi.org/10.1300/J030v13n04_04

BOOK CHAPTERS

(*indicates corresponding author; mentored students are underlined)

1. **Hellberg RS***. *In Press*. DNA barcoding methodologies for the identification of fish species in cooked products. In: Toldra F, Nollet L, editors. *Handbook of Seafood and Seafood Products Analysis*, 2nd Ed. Boca Raton: CRC Press.
2. Everstine K, **Hellberg RS**, Sklare SA. 2021. Introduction to food fraud. In: Hellberg RS, Everstine K, Sklare SA, editors. *Food Fraud: A Global Threat with Public Health and Economic Consequences*. San Diego: Academic Press/Elsevier. p. 1-7.
3. Silva AJ, **Hellberg RS**, Hanner RH. 2021. Seafood fraud. In: Hellberg RS, Everstine K, Sklare SA, editors. *Food Fraud: A Global Threat with Public Health and Economic Consequences*. San Diego: Academic Press/Elsevier. p. 109-137.
4. Silva AJ, **Hellberg RS***. 2021. DNA-based techniques for seafood species authentication. In: Toldra F, editor. *Advances in Food and Nutrition Research*. San Diego: Academic Press/Elsevier. Volume 95: p. 207-255. <https://doi.org/10.1016/bs.afnr.2020.09.001>
5. **Hellberg RS**, Pollack SJ, Hanner RH. 2016. Seafood species identification using DNA sequencing. In: Hanner RH, Naum AM, editors. *Seafood Authenticity and Traceability: A DNA-based Perspective*. San Diego: Academic Press/Elsevier. p. 113-132. <https://doi.org/10.1016/B978-0-12-801592-6.00006-1>
6. Applewhite A, **Rasmussen R**, Morrissey M. 2012. Species identification of seafood. In: Ankenman Granata L, Flick GJ, Martin RE, editors. *The Seafood Industry*:

- Species, Products, Processing, and Safety, Second Edition*. Oxford, England: Wiley-Blackwell. p. 193-219. <https://doi.org/10.1002/9781118229491.ch16>
7. **Rasmussen RS**, Morrissey MT. 2010. DNA-based identification of fish species. In: Alsalvar C, Miyashita K, Shahidi F, Wanasundara U, editors. *Handbook of Seafood Quality, Safety and Health Effects*. Oxford, England: Wiley-Blackwell. p 290-302. <https://doi.org/10.1002/9781444325546.ch24>
 8. **Rasmussen RS**, Morrissey MT. 2007. Chitin and chitosan. In: Barrow C, Shahidi F, editors. *Marine Nutraceuticals and Functional Foods*. Boca Raton: CRC Press. p 155-182. <https://doi.org/10.1201/9781420015812-10>
 9. **Rasmussen RS**, Morrissey MT. 2007. Marine biotechnology for production of food ingredients. In: Taylor SL, editor. *Advances in Food and Nutrition Research*. San Diego: Academic Press/Elsevier. Vol. 52, p 237-292. [https://doi.org/10.1016/S1043-4526\(06\)52005-4](https://doi.org/10.1016/S1043-4526(06)52005-4)

EDITED BOOKS

1. **Hellberg RS**, Everstine K, Sklare SA, editors. 2021. *Food Fraud: A Global Threat with Public Health and Economic Consequences*. San Diego: Academic Press/Elsevier. 401 p.

FOOD AND DRUG ADMINISTRATION INTERNAL PUBLICATIONS

1. **Hellberg RS**, Kawalek MD, Van KT, Shen Y, and Williams-Hill DM. 2012. DNA Extraction and PCR Preparation Methods for use in High-Throughput DNA Barcoding for Species Identification of Fish. Laboratory Information Bulletin No. 4526.
2. **Hellberg RS**, Hanner RH, Naaum AM, Handy SM, Deeds JR, Yancy HF, Morrissey MT. 2012. Real-time multiplex polymerase chain reaction assay for the identification of commercial salmon and trout species in food products. Laboratory Information Bulletin No. 4502.
3. Handy SM, Deeds JR, Ivanova NV, Hebert PDN, Hanner R, Ormos A, Weight LA, Moore MM, **Hellberg RS**, Yancy HF. 2011. Single laboratory validated method for DNA-barcoding for the species identification of fish for FDA regulatory compliance. Standard Operating Procedure.

SERVICE ON GRANT PANELS

1. 2021 USDA- NIFA – Federal Grant Peer Review Panelist – Food and Agricultural Sciences Grant Programs.
2. 2022 USDA- NIFA – Federal Grant Peer Review Panelist – Food and Agricultural Sciences Grant Programs.
3. 2023 National Science Foundation (NSF) – Small Business Innovation Research, Small Business Technology Transfer (SBIR/STTR) program – Ad Hoc Reviewer.

EDITORIAL SERVICE

1. **Hellberg RS** and Hanner R, Guest Editors, Special Issue "Detection of Food Fraud Using Analytical Methods" (2021) *Foods*.

https://www.mdpi.com/journal/foods/special_issues/Detection_Food_Fraud_Using_Analytical_Methods

LEADERSHIP ROLES AND PROFESSIONAL MEMBERSHIPS

- Science Advisor, U.S. Food and Drug Administration, Pacific Southwest Food and Feed Laboratory, Irvine, CA (2022-2023)
- Institute of Food Technologists (2004-present)
 - Emerging Leaders Network (2017-2018)
 - Aquatic Food Products Division (2006-present)
 - Outgoing Chair (2016-2017)
 - Chair (2015-2016)
 - Incoming Chair (2014-2015)
 - Community/Content Team Leader (2011-2013)
 - Competition judge for student presentations (2011-2013)
 - Secretary (2010-2011)
 - Student Representative (2007-2009)
 - Food Microbiology Division (2011-present)
 - Food Microbiology Subpanel Member (2012-2013)
 - Muscle Foods Division (2014-present)
 - Southern California Section (2011-present)
 - Oregon Section (2007-2011)
- Pacific Fisheries Technologists (2008-present)
 - Steering Committee (2020-present)
 - Moderator (2023-2024)
 - Student Competition Chair (2014, 2022-2024)
 - Program Chair (2020)
 - Session Chair (2014)
 - Student Representative (2008-2009)

PROFESSIONAL PRESENTATIONS

- U.S. Army Combat Capabilities Development Command, November 2021. “Food Fraud: An Economic Crime with Global Threats to Public Health.” Webinar for the research community at DEVCOM Soldier Center.
- Chapman University, November 2021. “Food Fraud: An Economic Crime with Global Threats to Public Health.” Homecoming Master Class.
- New Jersey Association for Food Protection (NJAFP), June 2021. “Food Fraud.” Webinar for NJAFP members.
- U.S. Food and Drug Administration (FDA), March 2021. “APC and MPN Refresher Training” and “Refresher Training: *S. aureus*, *B. cereus*, and Yeasts and Molds” Series of training webinars on Bacteriological Analytical Manual (BAM) protocols for the Pacific Southwest Food and Feed Laboratory, Food Microbiology Branch.
- NOAA Fisheries, April 2020. “Seafood Fraud and Mislabeling.” Webinar for the U.S. Department of Commerce Seafood Inspection Personnel.

- Pacific Fisheries Technologists Annual Meeting, Invited Speaker, March 2020. “Seafood Fraud and Mislabeling.” PFT President’s Session. Long Beach, CA.
- Institute of Food Technologists Annual Meeting, July 2018. “Seafood fraud: current challenges and solutions.” Session on Food Fraud: Addressing New Standards and Current Challenges. Chicago, IL.
- Natural Health Product Research Society of Canada Annual Conference, May 2018. "DNA Testing of Meat and Poultry Products." Workshop on DNA Testing: Assessing the State of the Science. Guelph, ON, Canada.
- Food & Nutrition Conference & Expo, October 2017. “Seafood Fraud.” Food Fraud Session. Chicago, IL
- Council of Undergraduate Research Conference, June 2016. “The Summer Undergraduate Research Fellowship in Earth and Environmental Sciences (SURFEES) Program: Targeting community college students through research experiences at 4-year colleges.” Panel Discussion. Tampa, FL.
- National Academy of Sciences Distinctive Voices Lecture Series, May 2016. “What’s on Your Plate? Food Fraud Detection through DNA Testing.” Irvine, CA.
- Canadian Institute of Food Science and Technology National Conference, February 2016. “Detection of meat species mislabeling on the commercial market using DNA-based methods.” Food Fraud and Adulteration Workshop. Burnaby, BC, Canada.
- Southern California Coastal Water Research Project Spring Seminar Series, June 2013: “Climate change effects on seafood safety”. Costa Mesa, CA.
- Chapman University Schmid College of Science and Technology Science Forum Series, April 2013. “Effects of Climate Change on Food Safety.” Orange, CA.
- Southern California Institute of Food Technologists meeting, February 2013: “Spotlight on Seafood: benefits, risks, and species substitution.” Torrance, CA.
- Japan Society for the Promotion of Science US Alumni Association, 3rd Multidisciplinary Science Forum, February 2013: “What’s on your Plate?: Use of DNA Barcoding to Detect Fish Fraud.” Orange, CA.
- Western Association of Food and Drug Officials annual meeting, September 2012. “Climate Change and its Effects on Food Safety.” Pleasanton, CA.

TECHNICAL CONFERENCE PRESENTATIONS, ABBREVIATED LIST (*as lead author or co-author*)

- oSTEM Conference, 2023, Poster Presentations
- SPIE Defense + Commercial Sensing Annual Meeting, 2023, Poster Presentation
- Pacific Fisheries Technologists Annual Meetings, 2006-2010, 2014, 2016, 2020, and 2022-2023, Oral and Poster Presentations.
- Institute of Food Technologists Annual Meetings, 2004-2020, 2023, Poster Presentations.
- Food and Drug Administration, Food Office of Research Coordination, Evaluation, and Training (ORCET) Virtual ORCET Research Summit, 2021, Oral Presentation
- Poultry Science Association Annual Meeting, 2018, Poster Presentation.
- Sensing for Agriculture and Food Quality and Safety X, 2018, Oral Presentation.

- American Society for Microbiology Annual Meeting, May 2013, Poster Presentation.
- International Association for Food Protection Annual Meetings 2011-2012, Poster Presentations.
- FDA Foods Program Science and Research Conferences, 2011-2012, Poster Presentations.
- Association of Public Health Laboratories Annual Meetings, 2011-2012, Poster Presentations.
- Society for Laboratory Automation and Screening Annual Meeting, February 2011, Oral Presentation.

TRAININGS AND CERTIFICATIONS

- FDA Course LB 235: Fundamentals of Regulatory Microbiology, August 15-26, 2011, Irvine, CA.
- FDA/Applied Biosystems Course: DNA Sequencing for Microbial and Fish Species Identification, March 21-25, 2011, Foster City, CA.
- Food Emergency Response Network Course: *Salmonella* Real-Time PCR, October 25-26, 2010, Irvine, CA.

COMMUNITY ENGAGEMENT AND OUTREACH

- OakCrest Institute of Science, Pathways in STEM Webinar, February 2023. “Investigating Food Fraud and Food Safety at Chapman University”
- STEAM for Teens and Tweens Workshop Series, Orange Public Library Foundation, January 2020. “Food Fraud 101: What’s on your plate?” Orange, CA.
- The Foodbeast Ketchup Podcast, February 2019. “Exposing Deceptive Food Fraud.” Santa Ana, CA.
- Simon-Orange-Chapman STEM Scholars Program, Lunch & Learn Visit, November 2018. Orange, CA.
- The Summer Undergraduate Research Fellowship in Earth and Environmental Sciences (SURFEES) Program, August 2018. Women in STEM Panel. Orange, CA.
- California State University, Fullerton – Osher Lifelong Learning Institute, Eclectics Class, April 2017. “Investigation of Food Fraud using DNA Testing.” Fullerton, CA.
- Science on Tap, Chapman University Lecture Series, March 2017. “Uncovering Food Fraud.” Orange, CA.
- Santa Ana Kiwanis Club Lunch Meeting, May 2016. “Food Fraud.” Santa Ana, CA.

THESIS STUDENTS MENTORED, CHAPMAN UNIVERSITY FOOD SCIENCE PROGRAM

1. Daniel Vovchuk, Class of 2025 (in progress)
2. Ghana Tirpude, Class of 2025 (in progress)
3. Diane Kim, Class of 2024 (in progress)

4. Kylie Sacapano, Class of 2024 (in progress)
5. Sarah Ahles, Class of 2024 (in progress)
6. Jennifer McCoy Sanders, Class of 2023
7. Amanda Tabb, Class of 2023
8. McKenna Rivers, Class of 2023
9. Calin Harris, Class of 2023
10. Courtney Kitch, Class of 2022
11. Grace Marquis, Class of 2022
12. Georgia Sampson, Class of 2021
13. Jiahleen Rounghun, Class of 2021
14. Zerika Scales, Class of 2020
15. Olive Dahm, Class of 2020
16. April (Peterson) Shaw, Class of 2020
17. Anthony Silva, Class of 2019
18. Rowena Zahn, Class of 2019
19. Priscila Liou, Class of 2019
20. Rachel Isaacs, Class of 2019
21. Sunjung (Maggie) Chung, Class of 2019
22. Danielle Rosen, Class of 2018
23. Tara Okuma, Class of 2017
24. Shayna Bosko, Class of 2017
25. Steven Rogers, Class of 2017
26. Adam Perestam, Class of 2016
27. Sophia Pollack, Class of 2016
28. Tushar Sawant, Class of 2015
29. Dawn Kane, Class of 2015
30. Charles Quinto, Class of 2015
31. Donna Levy, Class of 2014

CHAPMAN UNIVERSITY UNDERGRADUATE RESEARCH STUDENTS MENTORED

SURF = Summer Undergraduate Research Fellowship

1. Grace Cho, Biological Sciences Program, Independent Research, Spring 2024
2. Akshay Khetrepal, Biological Sciences Program, Independent Research, Fall 2023-present
3. Adri Ten Cate, Biological Sciences Program, Independent Research, Fall 2023-present
4. Isha Shingre, Health Sciences Program, Independent Research, Fall 2023-present
5. Chloe Castanon, Biological Sciences Program, SURF Program and Independent Research, Spring 2023-present
6. Vanessa Alarcon, Health Sciences Program, SURF Program and Independent Research, Spring 2022-Summer 2023
7. Aubrey Emmi, Biochemistry and Molecular Biology Program, Schmid Summer Research Intern/ Independent Research, Spring 2022-Spring 2023
8. Alexia Campbell, Biochemistry and Molecular Biology Program, Independent Research, Spring 2022-Spring 2023

9. Biola Fatusin, Biological Science Program, Schmid Summer Research Intern/ Independent Research, Spring 2022-Fall 2023
10. Vanna Kizirian, Chemistry Program, Capstone Project, Spring 2021-Spring 2022
11. Amanda Tabb, Biochemistry and Molecular Biology Program, Independent Research, Spring 2021-Spring 2022
12. Diane Kim, Health Sciences Program, Independent Research, Fall 2021-Spring 2022
13. Samantha Covaia, Biological Sciences Program, Independent Research, Summer-Fall 2021, Fall 2022
14. Mo Hijazi, Biological Sciences Program, Independent Research, Summer 2021-Spring 2022
15. Jordyn Margolis, Biological Sciences, Independent Research, Summer 2020-Spring 2021
16. Megan Shieh, Pre-Pharmacy Program, Independent Research, Summer-Fall 2020
17. Elif Narbay, Biochemistry and Molecular Biology Program, Independent Research, 2019-2020
18. Georgia Sampson, Chapman University, Biological Sciences Program, Independent Research, Spring-Fall 2019
19. McClain Vail, Chapman University, Health Sciences Program, Independent Research, Fall 2017
20. Anthony Silva, Chapman University, Biological Sciences Program, Independent Research, Summer 2017
21. Rachel Isaacs, Biological Sciences Program, Independent Research, 2016-2017
22. Brenda Hernandez, Biochemistry and Molecular Biology Program, Capstone Project, 2015-2016
23. Kayleigh Fujisaki, Biochemistry and Molecular Biology Program, Capstone Project, 2015-2016
24. Tara Okuma, Biochemistry and Molecular Biology Program, Capstone Project, 2013-2014
25. Taylor Patti, Biochemistry and Molecular Biology Program, Independent Research, 2013-2014

COMMUNITY COLLEGE RESEARCH STUDENTS MENTORED

SURFEES = Summer Undergraduate Research Fellowships in Earth and Environmental Sciences Program, Funded by the National Science Foundation

1. Denise Hernandez, Santa Ana College, SURFEES Program, Summer 2023
2. Donna Miranda Romo, Santa Ana College, SURFEES Program, Summer 2023
3. Haneul (Chris) Lee, Cypress College, SURFEES Program, Summer 2022
4. Pragati Kapoor, Citrus College, SURFEES Program, Summer 2022
5. Chevon Jordan, Mira Costa College, SURFEES Program, Summer 2021
6. Miranda Miranda, Citrus College, SURFEES Program, Summer 2021
7. Seeret Jhita, Santiago Canyon College, SURFEES Program, Summer 2019
8. Gabrielle McBride, Citrus College, SURFEES Program, Summer 2019
9. Angela Banda, Santa Ana College, SURFEES Program, Summer 2018
10. Miguel Gallardo, Citrus College, SURFEES Program, Summer 2017
11. Brittany Zavala, Santa Ana College, SURFEES Program, Summer 2016

12. Eduardo Hernandez, Santiago Canyon College, SURFEES Program, Summer 2015 & 2016
13. Omar Nava, Santa Ana College, SURFEES Program, Summer 2015
14. Rebecca Tinoco, Santa Ana College, SURFEES Program, Summer 2014
15. Jackie (Mitchell) DeVries, Saddleback College, Summer Undergraduate Research Fellow (SURF) Program, Summer 2014