

Lynne A. McLandsborough Ph.D.

Interim Director of the Center of Agriculture, Food and the Environment
Interim Assistant Vice Chancellor for Research and Engagement for the College of Natural
Sciences

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The mission of the Department of Food Science at University of Massachusetts Amherst:
The education of undergraduate, graduate and nontraditional students in the field of Food Science and the study and application of science and technology to further basic knowledge, add value, foster economic development and provide a safe, healthful and high quality food supply consistent with the mission of a Land Grant University.

Education and Professional Development

Education

1993 Ph.D., Food Science, University of Minnesota
1989 MS, Food Science, University of Minnesota
1986 BA., Microbiology, Miami University (Ohio)

Leadership and Professional Development

2019 HERS Leadership Institute, Golden CO.
2017 Lead Instructor of the FSPCA Preventive Controls for Human Food Course
2016 Qualified Individual FSPCA for Preventive Controls for Human Food
2010 Certified HACCP Trainer, Meat and Poultry, International HACCP Alliance

Professional Positions

Sept 2023 – Present Interim Director of the Center for Agriculture, Food, and the Environment (CAFE)
Interim Assistant Vice Chancellor for Research and Engagement for the College of Natural Sciences

Sept 2020-Aug 2023 Department Head, Department of Food Science
Co-Chair, UMass Food Science Advisory Board
Director, UMass FUEL Scholar Program

2016- Present Professor, Dept. of Food Science

- Adjunct Professor, Dept of Microbiology
Associate Faculty Member, Molecular and Cellular Biology
Interdisciplinary Program
IALS Delivery System Working Group
University of Massachusetts, Amherst, MA
- 2001-2016 Associate Professor, Dept. of Food Science
University of Massachusetts, Amherst, MA
- 1995 – 2001 Assistant Professor, Dept. of Food Science
University of Massachusetts, Amherst, MA
- 1993-1995 Post-Doctoral Fellow, Dept. of Microbiology,
University of Minnesota Medical School, Minneapolis, MN
- 1986-1993 Research Assistant, Dept. of Food Science and Nutrition, University of
Minnesota, St. Paul, MN

SUMMARY OF CV

Leadership Experience (page 3). I have leadership experience by serving as the UMass Food Science Department Head and the co-Chair of the Food Science Industrial Advisory Board, participating in HERS leadership training, and running the Food Science undergraduate program. As of Sept 1, 2023, I will be stepping down from the Food Science Department Head Role and will assume the role of the Director of CAFE at UMass.

Research (page 4) Current research projects in my laboratory use *Salmonella* sp. *Listeria monocytogenes* and *E. coli* O157:H7 and as the model organisms to study a variety of questions relevant to Food Safety. I have been associated with over 8 million dollars of research funding at UMass Amherst, with \$2,032,055 funded as a PI. I have two US patents, and published 70 papers in peer reviewed journals. In addition, I have 76 published abstracts, authored 4 book chapters, given 22 invited talks and been interviewed for general media (TV, print, podcasts).

Professional Activities, Outreach and Service (page 23) I have been very active in my scientific specialty, by being active in IFT, serving on editorial boards and as an ad hoc reviewer, serving on a state Food Safety committee, and participating on national and international grant review panels. I have also been active in service at the University, College and Departmental levels. At the University level, I was the chair of the Institutional Biosafety Committee (member 13 years, chair 9 years) and at the College level, I have served on a variety of committees (including Curriculum committee, and Personnel Committee). At the Departmental level, was an administrative role as the Chief Undergraduate Advisor since 2001, served and chaired a large number of committees (Departmental Personnel Committee and Search Committees). Fall 2020,

I took over as the Food Science Department Head . I collaborate with UMass Extension on giving workshops and trainings and have a consulting relationship with a number of companies.

[Mentorship and Teaching Experience \(page 27\)](#). To date, I have mentored 9 Post-Doctoral Researchers, 10 PhD students, 23 MS students, 23 Undergraduate Researchers, and 5 Visiting Scholars. I have been the department chief undergraduate advisor since 2001 and have won college awards for advising and teaching. I have written a laboratory textbook that has been adopted by both national and international institutions, and I have constantly obtained high teaching evaluations.

Leadership Experience and Development

Interim Director of the Center for Food, Agriculture, and the Environment (CAFE) (Sept 2023 – August 2024). Starting September 1, 2023, I will take on the following roles: Director of the Massachusetts Agriculture Experiment Station and Director of Massachusetts Extension. Under this umbrella, I will be responsible for the administration of the Administration office (8 staff members), Extension (17 Extension Faculty), the Extension Agriculture Program (Agriculture Program Director and 26 Agriculture Program Staff), 4-H Youth Development program (Director and 22 4-H Youth Development Staff), Clean Energy Extension (Director and 4 Clean Energy Staff), and the University-owned farm and research station facilities (5 facilities in total with 28 staff).

Interim Assistant Vice Chancellor for Research and Engagement for the College of Natural Sciences (Sept 2023 – August 2024). In this role, I will represent CNS to the Vice Chancellor for Research and Engagement leadership committee. I will also interact with University personnel who interact with the legislature and the press, and communicate to the general public about research and resources.

Food Science Department Head (Sept 2020-Aug 2023). UMass Food Science is a global leader in Food Science. Our program was ranked by US News & World Report as the top in the US, and third globally: <https://www.usnews.com/education/best-global-universities/food-science-technology> As the department head, I was responsible for all administrative aspects of the Food Science Department. During my time as the Department head, I led faculty and staff through the faculty through a new building feasibility study, transitioned the laboratory courses from the professor/graduate teaching assistant (TA) to the professional lecturer model, hired two lecturers, negotiated retention packages, wrote strategic plans, guided faculty through the tenure and promotion, or promotion process, and advocated for funding for an additional Food Safety Extension faculty member. Under my leadership, the department has our first teaching retreat.

UMass Food Science Industrial Advisory board (Co-Chair, Sept 2020- Aug 2023). The department instituted an Industrial Advisory Board in 1989. This Board has 27 active members and 9 communicating members, most of whom are Alumni plus representatives from Massachusetts food companies. The Board meets twice a year formally and often informally. The Advisory Board is a valuable resource for support, advice, and counsel. It has been instrumental in aiding the department in fundraising advancement activities raising over \$10.5 million dollars for departmental support to date.

Director UMass Food Science Undergraduate Experiential Learning (FUEL) Scholars Program (April 2020 – present). The FUEL Scholar program is funded by a USDA NIFA grant to give undergraduate students a 1-year educational experience, including two semesters of scientific research and a summer internship with housing at Mt Ida.

HERS Leadership Development Program, Golden CO, June 2019. I was selected by the University of Massachusetts to attend the HERS Leadership Development Program, along with 63 others from all over the country. The current HERS curriculum covers many aspects of how to successfully lead a change initiative: general leadership principles, higher education trends, change management, budgets and financial statements, career planning, legal issues, equity, strategic enrollment management, talent management, and fundraising.

Institutional Biosafety Committee (Chair 2009-2018). This is an NIH mandated committee to provide review and oversight of all forms of research utilizing recombinant or synthetic nucleic acid molecules at UMass Amherst. *Responsibilities* chairing monthly meeting, reviewing faculty research registration, writing registration letters and acting as a faculty liaison. Under my leadership, the UMass IBC committee switched from paper registration to an electronic registration system.

Chief Undergraduate Advisor, Chair Food Science Undergraduate Program Committee (2000-Sept 2020). I was committed to make the UMASS Food Science Undergraduate Program to be an outstanding learning environment. I held this administrative position for 20 years. During this time, our Undergraduate program increased from 30 to 100 students. Responsibilities included running all aspects of the Undergraduate program. I had my own academic advisees; meet with advisees of other faculty members who have academic difficulties, award departmental scholarships, maintaining IFT accreditation of the program with yearly reports, maintenance of the Undergraduate portion of the departmental web page, provide catalog updates, graduation clearance and attending the college graduation celebration. In addition, I was involved in interacting with companies recruiting students for internships, as well as being involved in undergraduate recruiting, hosting and providing prospective students and their families' tours and information about our program. In this role, I also served on the College of Natural Science (CNS) Curriculum Committee, CNS Chief Undergraduate Advisors Committee, and CNS Scholarship Committee.

Acting Department Head (May – August 2008). I was the acting Department Head and Search chair in 2008. In this position, I dealt with personnel issues with the support staff, coordinated building renovations, utilized departmental budgets to repair and maintain equipment, and worked with a faculty member who had an offer from another University. We successfully hired an internal candidate, Eric Decker, was the Department Head until September 2020..

Search Committee Chair. I have chaired five academic search committees, both within my department and elsewhere in the University. In 2020, I am currently chairing a CNS search to hire two Assistant Deans, In 2018-2019, I lead a search committee to implement evaluation rubrics in an attempt to reduce implicit bias and encourage diversity. Our committee gathered feedback from faculty, staff and students, and utilized the data in the decision making process.

Personnel Committee Chair (Departmental and College). I have served as the Personnel Committee Chair for our department numerous times, and have also served and chaired the College

Personnel Committee (CFNR). At UMass Amherst, these committees are responsible for personnel recommendations (tenure, promotion) at the departmental and college levels, along with input from the Department Head and Deans. I am knowledgeable with issues of faculty tenure, promotion, and retention.

HONORS

2019	Finalist University of Massachusetts Distinguished Teaching Award
2018	Nominated, University of Massachusetts Distinguished Teaching Award
2009	College of Food and Natural Resources Outstanding Advisor Award
2001	College of Food and Natural Resources Outstanding Teaching Award

RESEARCH

Summary: Current research projects in my laboratory use Salmonella sp. Listeria monocytogenes and E. coli O157:H7 and as the model organisms to study a variety of questions relevant to Food Safety.

Research Interests

- Bacterial ecology in foods and processing surfaces
 - Influence of bacterial surface structures to microbial adhesion
 - Mechanisms of bacterial adhesion
 - Mechanisms of biofilm formation on food processing surfaces
 - Ecology of biofilm formation
 - Bacterial survival under desiccated conditions
- Cross contamination and Cleaning and Sanitation
 - Antimicrobial delivery systems including non-water based systems
 - Mechanisms of physical transfer of bacteria between foods and surfaces
 - Methods of biofilm destruction and removal
 - Antimicrobial surfaces

Funded Research Grants

Summary: I have been associated with over 8 million dollars of research funding at UMass Amherst, with \$2,032,055 funded as a PI.

Development and validation of nonpolar liquid antimicrobial delivery systems for dry cleaning and sanitation of food processing equipment. The Institute for the Advancement of Food and Nutritionals Sciences (IAFNS) PI McLandsborough \$140,555 (9/1/2023 – 3/31/2025)

Improving sanitation practices in food processing facilities using fluorescent visual tools. USDA NIFA CARE PI Kinchla, Co PI, Moore, McClements and McLandsborough \$293,992 (4/1/22-3/31/2025)

Enhancing The Next-Generation Washing Strategy For Fresh-Cut Produce By An Artificial Intelligence Assisted Hurdle Technology USDA AFRI NIFA A1332 PI Jiakai Lu, Co PI, McLandsborough and Nolden \$454,896 (1/1/2021 -12/31/2023)

Development and validation of oil based antimicrobial delivery systems for dry cleaning and sanitation of food processing equipment USDA AFRI-NIFA A1332, PI L. McLandsborough \$434,215, (5/2020 – 4/2024)

Food Science Undergraduate Learning (FUEL Scholars Program: a yearlong REEU to propel students into a career in Food Science. USDA AFRI-NIFA, A7401 PI McLandsborough, co PI, E. Decker and M. Moore. \$482,648, (5/2020-4/25)

Risky Business? Conducting a risk assessment of postharvest operations using washing machines for leafy greens. Massachusetts Department of Agricultural Resources (MDAR) Specialty Crop grant. A. Kimchla PI, Co-PI M. Moore and L. McLandsborough \$71,294 (10/1/2019-9/20/2022)

Development of a label-free SERS mapping based platform for multi-bacteria detection. PI. He. Co-PI McLandsborough. USDA AFRI-NIFA A1511 \$444,200 (1/15-1/18)

Preventing Spoilage of Packaged Foods by Non-Migratory Active Packaging PI Goddard, CoPI: Decker and McLandsborough. USDA AFRI-NIFA A1361 \$498,165 (1/15-1/18)

Fabrication, Characterization & Toxicology of Antimicrobial Nanoparticle Delivery Systems. PI. McClements Co-PI McLandsborough, L. and Xiao, H. United States Department of Agriculture, Agriculture and Food Research Initiative Competitive Grants Program area A1511. \$454,000(12/10 – 11/15)

Survival, Transfer, and Inactivation of Salmonella on Plastic Materials Used in Tomato Harvest. PI. McLandsborough, Co PI: Goddard J and Autio W. Center for Produce Safety Grant Program. \$250,695 (1/11 – 12/12)

Development Of Antimicrobial Food Processing Surfaces By Nanoscale Surface Modification PI. Goddard, J. Co-PI: R. Hotchkiss and L. McLandsborough. United States Department of Agriculture, Agriculture and Food Research Initiative Competitive Grants Program area A1511. \$488,000 (12/10-11/13)

Autoclave Purchase for Food Science Department L. McLandsborough UMASS Hatch Equipment Funding Grant 2010. \$35,000

Bioactive Foods Research for Health and Food Safety, MA P: Park, Y Co-PI: Xiao, H.; Nugen, S.R.; Goddard, J., McClements, D.J.; Decker, E.A.; Shetty, K.; Levin, R.E.; Labbe, R.G.; McLandsborough, L. USDA Special Grant \$488,601 (5/1/10- 4/30/12)

Biofilm inactivation and removal using micellular encapsulated antimicrobial. PI J. Weiss and L. McLandsborough (amended 8/08 – PI McLandsborough). National Research Competitive Grants Program. United States Department of Agriculture. \$255,914 (7/1/07 – 6/30/09)

Characterization of the transfer of Listeria monocytogenes between processing surfaces and foods. PI National Research Competitive Grants Program. United States Department of Agriculture. \$244,113 (9/1/03 – 8/30/07)

Assessment of biofilm production on stainless steel by reduced biofilm production (RBP) mutants. PI. National Cattlemen’s Beef Association. \$33,968 (funding withdrawn by granting agency due to IP issues with the University of Massachusetts)

Seafood Safety 7. PI. R. E. Levin Co-PI: L. McLandsborough, K. Shetty, R. Labbe, F. Clydesdale, E. Decker, D. J. McClements, J. Weiss and Y. Park. Special Research Grants Program. United States Department of Agriculture. \$423,293. (7/1/06 – 6/30/08)

Seafood Safety 6. PI. R. E. Levin Co-PI: L. McLandsborough, K. Shetty, R. Labbe, F. Clydesdale, E. Decker, D. J. McClements, J. Weiss and Y. Park. Special Research Grants Program. United States Department of Agriculture. \$406,508 (7/1/05 - 6/30/07) .

Seafood Safety 5. PI. R. E. Levin Co-PI: L. McLandsborough, K. Shetty, R. Labbe, and F. Clydesdale, Special Research Grants Program. United States Department of Agriculture. \$353,881 (\$176,441 to UMass) (7/1/04 - 6/30/06) .

Seafood Safety 4. PI. R. E. Levin Co-PI: L. McLandsborough, K. Shetty, R. Labbe, F. Clydesdale, E. Decker, and D. J. McClements. Special Research Grants Program. United States Department of Agriculture. \$394,705 (7/1/03 - 6/30/05)

Seafood Safety 3. PI. R. E. Levin Co-PI: L. McLandsborough, K. Shetty, R. Labbe, F. Clydesdale, E. Decker, P. Chinachoti, and D. J. McClements. Special Research Grants Program. United States Department of Agriculture. \$374, 135 (7/1/02 - 6/30/04)

Seafood Safety 2. PI: R. E. Levin, Co-PI L. McLandsborough, K. Shetty, R. Labbe, F. Clydesdale. Special Research Grants Program. United States Department of Agriculture. \$259,471 (7/1/01 - 6/30/03)

Seafood Safety 1. PI R. E. Levin Co-PI: L. McLandsborough, K. Shetty, R. Labbe, F. Clydesdale and M. Peleg. Special Research Grants Program. United States Department of Agriculture. \$234,000 (7/1/00 - 6/30/03)

Bacterial Adhesion and growth at interphases. PI University of Massachusetts/ USDA Hatch Grant Program (9/1/00 - 8/31/05)

Online Education for Secondary Science Teachers: An Integrated Approach to Food Safety Training. PI N.L. Cohen. Co-PI. L. McLandsborough, W. Mohling and R. Brennan Olson. Integrated Research, Education and Extension Competitive Grants Program, USDA. \$549,994 (10/1/02 – 9/30/05)

Using good agricultural practices (GAP) to integrate food safety principles into small farm production of fresh and minimally processed fruits and vegetables. Research Participant. New England Cooperative Extension Project. Lead Institution: University of Rhode Island. United States Department of Agriculture. Total \$472,926. University of Massachusetts Extension portion \$84,199. (10/1/00-9/31/03).

Development of a microtiter plate biofilm assay and assessment of the ability of L. monocytogenes isolates to produce biofilms. PI. University of Massachusetts Faculty Research Grant, \$10,000 (1/1/00 - 12/31/00).

Enhanced green fluorescent protein expression in Escherichia coli to study adherence to meat. PI National Research Competitive Grants Program. United States Department of Agriculture \$92,000 (10/15/97 - 10/14/99).

Analysis of E. coli removal from beef tissue using laser scanning confocal microscopy. PI National Cattlemen's Beef Association \$22,000 (1/1/98-12/31/98).

Hemin-supplemented media for selection of Escherichia coli O157:H7 from foods. PI National Research Competitive Grants Program. United States Department of Agriculture, \$53,000 (11/1/96 - 10/31/98).

Multiplex nested polymerase chain reaction for the detection of shiga-like toxin producing Escherichia coli in food systems. PI University of Massachusetts/ USDA Hatch Grant Program \$15,000/yr (9/1/95 - 8/31/00)

Research in the area of destruction and injury of foodborne bacteria via pulsed electric field . PI Ion Physics Corp. \$3,915 (6/1/97 - 8/30/97).

Research in the identification and characterization of protein binding receptors on lactic acid bacteria PI Protein Group Inc. \$5,000 (6/1/97 - 8/30/97)

Use of green fluorescent protein to study the behavior of bacteria upon solid meat surfaces by laser scanning confocal microscopy. PI University of Massachusetts Faculty Research Grant, \$5,000 (12/1/96 - 11/30/97)

Publication and Media List

Summary: I have two US patents, and published 61 papers in peer reviewed journals. In addition, I have 76 published abstracts, authored 4 book chapters, given 22 invited talks and been interviewed for general media (TV, print, podcasts) 12 times.

Patents and Patent Applications

McClements, D. J., L. McLandsborough, and Y. Chang. Antimicrobial delivery systems, methods of manufacture, and methods of use thereof. Patent Application No. 13/433,661. March 29, 2012. **Awarded 2017 Patent: US 9,781,949 B2**

McClements, D. J., A. H. Saberi, Y. Chang and L. McLandsborough. Methods for producing optimal stable nanoemulsions and formulation obtained therefrom. Patent application No: 14/458,517. Aug., 13, 2014.

McClements, D. J., L. McLandsborough, and K. Landry. Antimicrobial activity of acidified spontaneous essential oil nanoemulsions and their utilization as a food and surface disinfectant/sanitizer. US Patent Application no 15/216895 July 22, 23016. **Awarded 2019 US Patent: US20 170,020,171 A1**

Peer-Reviewed Publications

1. Gensler, C., K. Harper, S. Stoufer, M. D. Moore, A. J. Kinchla, & L. McLandsborough (2023) Exploring washing procedures for produce brush washer. *J. Food Prot.* 86:100126 <https://doi.org/10.1016/j.jfp.2023.100126>
2. Chuang, S., Ghoshal, M., & McLandsborough, L. (2023). Efficacy of acidified water-in-oil emulsions against desiccated *Salmonella* as a function of acid carbon chain-length and membrane Viscosity. *Front. Microbiol.* <https://doi.org/10.3389/fmicb.2023.1197473>
3. Chuang, S., Ghoshal, M., & McLandsborough, L. (2023). Oil-Based Sanitization in Low-Moisture Environments: Delivery of Acetic Acid with Water-in-Oil Emulsions. *Microbiology Spectrum*, e05293-22. <https://journals.asm.org/doi/10.1128/spectrum.05293-22>
4. Ryu, V, P. Chuesiang, M. G. Corradini, L. McLandsborough, T. Jin, H. Ngo, X. Fan. 2023. Synergistic photoinactivation of *Escherichia coli* and *Listeria innocua* by curcumin and lauric arginate ethyl ester micelles. 173: 114317. <https://doi.org/10.1016/j.lwt.2022.114317>
5. Goshal, M, S. Chuang, Y. Zhang, and L. McLandsborough. 2022. Efficacy of acidified oils against *Salmonella* in low-moisture environments. *Appl Environ Microbiol* 88: e00935-22 <https://doi.org/10.1128/aem.00935-22>
 - i. *Selected for ASM press release 8/8/2022

6. Ghoshal, M., V. Ryu, and L. McLandsborough. 2022. Evaluation of the efficacy of antimicrobials against pathogens on food contact surfaces using a rapid microbial log reduction detection method. *Intl J. Food Microbiol* 373:109699
7. Ryu, V., Ruiz-Ramirez, S., Chuesiang, P., McLandsborough, L.A., McClements, D.J. and Corradini, M.G., 2021. Use of Micellar Delivery Systems to Enhance Curcumin's Stability and Microbial Photoinactivation Capacity. *Foods*, 10:1777.
8. Chuesiang, P., Ryu, V., Siripatrawan, U., McLandsborough, L. and He, L., 2021. Investigation of factors that impact the label-free surface-enhanced Raman scattering (SERS) for the detection and discrimination of Salmonella Enteritidis. *LWT*, p.111962.
9. Chuesiang, P., Ryu, V., Siripatrawan, U., He, L. and McLandsborough, L., 2021. Aptamer-based surface enhanced Raman spectroscopy (SERS) for the rapid detection of Salmonella Enteritidis contaminated in ground beef. *LWT*, p.111937.
10. Lane, K., McLandsborough, H, L. A., Autio, W. R., & Kinchla, A. J., 2020. Efficacy of ATP Monitoring for Measuring Organic Matter on Postharvest Food Contact Surfaces. *J Food Prot.* 83:1829-1837.
11. Ryu, V., M. Corradini, D. J. McClements, L. McLandsborough. 2019. Impact of ripening inhibitors on molecular transport of antimicrobial components from essential oil nanoemulsions. *J. Coll. Int. Sci.* 556:568-576
12. Hung, Y-T, L. A. McLandsborough, J. M. Goddard and L. J. Bastarrachea. 2018. Antimicrobial polymer coating with efficacy against pathogenic and spoilage microorganisms. *LWT-Food Sci Tech.* 97:546-554.
13. Ryu, V, D. J. McClements, M. G. Corradini, J. S. Yang and L. McLandsborough, 2018. Natural antimicrobial delivery systems: formation, antimicrobial activity, and mechanism of action of quillaja saponin-stabilized carvacrol nanoemulsions. *Food Hydrocolloids.* 82:442-450.
14. Chuesiang P, U Siripatrawan, R Sanguandeeikul, DJ McClements, and L McLandsborough, 2019. Antimicrobial activity of PIT-fabricated cinnamon oil nanoemulsions: Effect of surfactant concentration on morphology of foodborne pathogens. *Food control* 98: 405-411
15. Chuesiang, P, U Siripatrawan, R Sanguandeeikul, JS Yang, D. J. McClements, and L. McLandsborough. 2019 Antimicrobial activity and chemical stability of cinnamon oil in oil-in-water nanoemulsions fabricated using the phase inversion temperature method *LWT* 110:190-196
16. Chuesiang P, U. Siripatrawan, R. Sanguandeeikul. L. McLandsborough. J. D. McClements. 2018. Optimization of cinnamon oil nanoemulsions using phase inversion temperature method: Impact of oil phase composition and surfactant concentration. *J. Col. Interf. Sci.* 154:208-216
17. Pearson B, Mills A, Tucker M, Gao S, McLandsborough L, He L. 2018. Rationalizing and advancing the 3-MPBA SERS sandwich assay for rapid detection of bacteria in environmental and food matrices. *Food Microbiology* 72:89-97.
18. Ryu V, McClements DJ, Corradini MG, McLandsborough L. 2018. Effect of ripening inhibitor type on formation, stability, and antimicrobial activity of thyme oil nanoemulsion. *Food Chemistry* 245:104-111
19. Landry, K. S., Sela, D. A., & McLandsborough, L. (2018). Influence of sprouting environment on the microbiota of sprouts. *Journal of Food Safety*. DOI: 10.1111/jfs.12380

20. Wang, L. J. G. Stoffolano and L. McLandsborough. 2017. Development of the fly “crop vessel” bioassay for fly/microbial studies. *Afr. J. Microbiolol. Res.* 11:1027-1034
21. Pearson, B., Wang, P., Mills, A., Pang, S., McLandsborough, L., & He, L. (2017). Innovative sandwich assay with dual optical and SERS sensing mechanisms for bacterial detection. *Analytical Methods*, 9(32), 4732-4739.
22. Wang, P., Pang, S., Pearson, B., Chujo, Y., McLandsborough, L., Fan, M. and He, L., 2017. Rapid concentration detection and differentiation of bacteria in skimmed milk using surface enhanced Raman scattering mapping on 4-mercaptophenylboronic acid functionalized silver dendrites. *Anal Bioanal Chem.*, 409:2229-2238.
23. Landry, S. K., J. Komaiko, D. Wong, T. Xu, D. J. McClements and L. McLandsborough. 2016 The inactivation of *Salmonella* spp. on sprouting seeds using a spontaneous carvacrol nanoemulsion acidified with organic acids. *J. Food Protection* 79:1115-1126.
24. Huang, K., L. A. McLandsborough, and J. M. Goddard. 2016. Adhesion and removal kinetics of *Bacillus cereus* biofilms on Ni-PTFE modified stainless steel. *Biofouling* 32:523-533
25. Wang P, S. Pang J. Chen, L. McLandsborough, S.R .Nugen, M. Fan, and L. He. 2016. Label-free mapping of single bacterial cells using surface-enhanced Raman spectroscopy. *Analyst* 141:1356-1362
26. Landry, K. S., S. Micheli, D. J. McClements and L. McLandsborough. 2015, Effectiveness of a spontaneous carvacrol nanoemulsion against *Salmonella enterica* Enteritidis and *Escherichia coli* O157:H7 on contaminated broccoli and radish seeds. *J. Food Microbiology*. 51:10-17.
27. Chang, Y., L. McLandsborough, D. J. McClements. 2015. Fabrication, Stability and efficacy of dual component antimicrobial nanoemulsions: essential oil (thyme oil) and cationic surfactant (lauric arginate). *Food Chem.* 172:298-304.
28. Landry, K. S., Y. Chang, D. J. McClements, and L. McLandsborough. 2014. Effectiveness of a novel spontaneous carvacrol nanoemulsion against *Salmonella enterica* Enteritidis and *Escherichia coli* O157:H7 on contaminated mung bean and alfalfa seeds. *Intl. J. Food Microbiol.* 187:15-21.
29. Loeffler, M., D. J. McClements, L. McLandsborough, N. Terjung, Y. Chang, and J. Weiss. 2014. Electrostatic interactions of cationic lauric arginate with anionic polysaccharides affect antimicrobial activity against spoilage yeasts. *J. Appl. Microbiol.* 117:28-39.
30. Talbert, J., K. Seto, J. Cotter, L. McLandsborough, J. M. Goddard. 2014. Effect of cleaning and sanitizing agents on the surface characteristics of new and extended-wear produce picking bins. *J. Sci of Food and Agr.* 94:1681-1687
31. Bastarrachea, L.J., L.A. McLandsborough, M. Peleg, J. M. Goddard. 2014 Antimicrobial N-halamine modified polyethylene, characterization, biocidal efficacy, regeneration, and stability. *J. Food Sci.* 79:E887-E897.
32. Chang, YH, L. McLandsborough, D. J. McClements. 2014. Interaction of cationic antimicrobial (ϵ -polylysine) with food-grade biopolymers: dextran, chitosan, carrageenan, alginate, and pectin. *Food Res. Intl.* 64:396-401
33. Chang, YH, L. McLandsborough, D. J. McClements. 2014. Antimicrobial delivery systems based on electrostatic complexes of cationic ϵ -polylysine and anionic gum arabic. *Food Hydrocolloids.* 35:137-143.

34. Bastarrachea, LJ, M. Peleg, L. McLandsborough and J. M Goddard. 2013. Low density polyethylene modified with antimicrobial N-halamines: Kinetics of inactivation against *Listeria monocytogenes* and N-halamine regeneration. *J. Food Eng.* 117:52-58.
35. Chang, YH, WM Gu, FJ Zhang, and L. McLandsborough. 2013. Disruption of lmo1386, a putative DNA translocase gene, affects biofilm formation of *Listeria monocytogenes* on abiotic surfaces. *Intl. J. Food Microbiol.* 161:158-163.
36. Chang, Y. L. McLandsborough. And D. J. McClements. 2012. Physical properties and antimicrobial efficacy of thyme oil nanoemulsions: influence of ripening inhibitors. *J. Ag. Food Chem.* 60:12056-120563.
37. Y. Chang, W. Gu, N. Fischer and L. McLandsborough. 2012. Identification of genes involved in *Listeria monocytogenes* biofilm formation by *mariner*-based transposon mutagenesis. *Appl. Microbiol. Biotechnol.* 93:2051-2062 DOI10.1007/s00253-011-3719-z. Published on line Nov 27,2011.
38. Y. Chang, L. McLandsborough 2012 Low Concentration of Ethylenediaminetetraacetic Acid (EDTA) Affects Biofilm Formation of *Listeria monocytogenes* by Inhibiting its Initial Adherence. *Food Microbiology* . 29:10-17
39. Chang, Y. H., L. McLandsborough, D. J. McClements. 2012. Cationic Antimicrobial (epsilon-Polylysine)-Anionic Polysaccharide (Pectin) Interactions: Influence of Polymer Charge on Physical Stability and Antimicrobial Efficacy. *J. Ag. Food Chem.* 60:1837-1844
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WU, M. and L. McLandsborough. 1998. Distribution of pathogenic factors among *Escherichia coli* O157:H7 isolate to determine conserved PCR target sequences. 9-3. pp. 13 1998 IFT Annual Meeting Book of Abstracts. IFT. Chicago, IL.

MCLANDBOROUGH, L. A. and P. P. Cleary. 1994. Insertional inactivation of *virR* in *Streptococcus pyogenes* M49 demonstrates that *VirR* functions as a positive regulator of streptococcal C5a peptidase and M protein in OF⁺ strains. *IVth International ASM Conference on Streptococcal Genetics program and abstracts*. ASM, Washington DC.

MCLANDBOROUGH, L. A. L. Sechaud, and L. L. McKay. 1994. Construction of plasmids which confer enhanced bacteriophage resistance by using phage resistance mechanisms isolated from two different strains of lactococci. *IVth International ASM Conference on Streptococcal Genetics program and abstracts*. ASM, Washington DC.

MCLANDBOROUGH, L. A., R. Requena, and L. L. McKay. 1993. Sequencing and *Tn5* mutagenesis of the bacteriophage abortive infection genetic determinants of plasmid pBF61 from *Lactococcus lactis* subsp. *lactis* KR5. O68. p331. *Abstracts of the 93rd General Meeting of the American Society for Microbiology*. ASM. Washington, DC.

MCLANDBOROUGH, L. A., K. M. Kolaetis, and L. L. McKay. 1992. Cloning and analysis of the bacteriophage abortive infection genetic determinants of plasmid pBF61 from *Lactococcus lactis* subsp. *lactis* KR5. O74 p321. *Abstracts of the 92nd General Meeting of the American Society for Microbiology*. ASM. Washington, DC.

MCLANDBOROUGH, L. and S. R. Tatini. 1989. A six hour microslide immunodiffusion assay for detection of staphylococcal enterotoxins. P29 p323. *Abstracts of the 89th General Meeting of the American Society for Microbiology*. ASM. Washington, DC.

Research Presentations and Invited Talks

MCLANDBOROUGH, L. 2023. Dry cleaning of closed product lines. Instructor presentation and research talk. Dry Cleaning Workshop, 2023 IAAP National Meeting, Toronto, ON.

MCLANDBOROUGH, L. 2022. Development of oil-based organic acids for dry cleaning and sanitation. Invited talk to the M&M Mars Corporate Microbiology Community Meeting. 11/8/2022

Berus, N., J. Feirtag, M. G. Corradini, L. A. MCLANDBOROUGH. A Study to Evaluate the Influence of Packaging Materials on Broccoli Quality during Transport. International Association of Food Protection 2019 National Meeting, Louisville, KY 7/22/2019

Biofilm formation and removal. KoSFoST International Symposium and Annual Meeting, Busan, South Korea 6/27/2018

L. Antimicrobial Delivery Systems. Foods for Health Conference; Celebrating the 100th Anniversary of UMass Food Science, Bangkok, Thailand 1/10/2018

Development of delivery systems for essential applications for foods and biofilm removal. Natural & Bio-based Antimicrobials for food applications symposium. 252nd ACS Annual Meeting and Exposition, Philadelphia PA. 9/24/2016

Biological and chemical approaches for sprout safety. UMass Strategic Research Alliance Meeting. April 9, 2015.

Development of Antimicrobial Delivery Systems for Foods and Biofilm removal. Symposium. 2013 IFT Annual Meeting. Chicago, IL

Survival, transfer, and inactivation of Salmonella on plastic materials used in tomato harvest. Research Presentation. 2013 Center for Produce Safety Annual Meeting. Rochester, NY

Survival, Transfer and Inactivation of Salmonella on plastic materials used in Tomato Harvest". Tomato Safety Teleconference 2011, organized by the Food and Drug Administration through the University of Florida, Institute of Food and Agricultural Sciences.

Listeria monocytogenes biofilm formation: remediation and transfer. Invited. 2009. US Military Academy Fifth Annual Microbiology Symposium. West Point, NY.

Listeria monocytogenes biofilm formation. Invited. 44th Annual ASM Region I Meeting, October 22, 2009. Cromwell, CT

Listeria monocytogenes growth, destruction and transfer in the food processing environment. March 6, 2007. Invited. MATFORSK, The Norwegian Food Research Institute, Ås Norway

Listeria monocytogenes growth, destruction and transfer in the food processing environment. Oct. 16, 2006. Invited. Department of Microbiology Lecture Series. UMass Amherst, MA

Biofilm formation by Listeria monocytogenes September 8, 2005. Keynote address. Japanese Society for the Protection of Food. Tokyo University of Marine Science and Technology. Tokyo, JAPAN.

Listeria monocytogenes biofilms adhere to stay. May 5, 2005. Annual Strategic Research Alliance Meeting. Department of Food Science, University of Massachusetts, Amherst

Biofilm formation of Listeria monocytogenes. Sept 25 2002. Invited. Veterinary and Animal Sciences Seminar Series. UMass Amherst, MA

Listeria monocytogenes biofilm formation in the food industry. Oct 20, 2001. Invited Department of Biology Seminar, Rhode Island College, Providence, RI.

Biofilm formation by Listeria monocytogenes. May 3, 2001. Annual Strategic Research Alliance Meeting. Department of Food Science, University of Massachusetts, Amherst

Bacterial adhesion to foods and processing surfaces. November 3, 2000. Invited lecture for the Department of Animal Science, University of Connecticut, Storrs, CT.

Surface Growth: From biofilms to funky colonies. October 11, 2000. Invited lecture for the Department of Food Science, Utah State University, Logan UT.

Bacterial adhesion and implications for food safety. March 31, 2000. Invited lecture as a portion of a Food Safety lecture series hosted by the Department of Food Science and Nutrition, University of Illinois, Urbana IL.

Use of bioluminescent and fluorescent bacteria to study foodborne pathogens. June 23, 1999
52nd Annual Reciprocal Meat Conference, Oklahoma State University, Stillwater, OK

Food Microbiology Beyond Numbers: interactions between bacteria and foods. April 23, 1998. Annual Strategic Research Alliance Meeting. Department of Food Science, University of Massachusetts, Amherst

PROFESSIONAL ACTIVITIES, OUTREACH AND SERVICE

Summary: I have been very active in my field by being active in IFT, serving on editorial boards and as an ad hoc reviewer, serving on a state Food Safety committee, and participating on national and international grant review panels. I have also been active in service at the University, College and Departmental levels. At the University level, I was the chair of the Institutional Biosafety Committee (member 13 years, chair 9 years) and at the College level I have served on a variety of committees (including chairing CNS Searches for two Assistant Deans, Curriculum committee, and Personnel Committee). At the Departmental level, I have been in an administrative role as the Chief Undergraduate Advisor since 2001, served and chaired a large number of committees (Departmental Personnel Committee and Search Committees). I collaborate with UMass Extension on giving workshops and trainings and have a consulting relationship with a number of companies.

Grant Review Panels

- USDA NIFA Education and Workforce Development Program. *Pre- and Postdoc Fellowship program*. 2018
- EIT Food Expert Grant Reviewer *Added Value Activity*. Knowledge and Innovation Community (KIC) of the European Institute of Innovation and Technology (EIT). March 2018-July 2018.
- New York Sea Grant. 2018-2019. Peer Review.
- US Department of State, Institute of International Education Global Innovation Initiative: *Agriculture, Food Security and Water Panel 1*. Tier 1 Reviewer 2013-2014
- Fulbright Scholar Special Review Committee on Food Technology and Nutrition 2005
- USDA National Research Initiative Grant Program *Food Characterization/Process/Product Research* 2001

- USDA Small Business Innovation Research Grant Program: *Food Science and Nutrition* 1998
- USDA National Research Initiative Grant Program: *Ensuring Food Safety* 1998

Certifications:

- Preventative Controls Qualified Individual
- Lead Instructor of the FSPCA Preventive Controls for Human Food Course
- International HACCP Alliance *HACCP Trainer*

State Committees and Specialty Panels

- Academic Technical Advisor to the Food Establishment Advisory Committee (FEAC), Dept of Public Health, Commonwealth of Massachusetts, Food Protection Program
- Participant in FAO Expert Consultation on the trade impact of *Listeria* in fish products, May 17-20, 1999

Journal Editorial Boards

Food Microbiology (2020 – current)
Food Biotechnology (2001-current)
Food Protection Trends (2006- 2008)
Journal of Food Safety (2006-2009)
Associate Editor Journal of the Science of Food and Agriculture (2004-2007)
Journal of Food Protection (2001- 2003)

Ad Hoc Manuscript Reviewer

Applied and Environmental Microbiology	International Journal of Food Microbiology
Biofouling	Journal of Dairy Science
Critical Reviews in Food Science	Journal of Food Protection
Food Biophysics	Microbiology
Food Microbiology	PIOS One

Professional Memberships

American Society for Microbiology
International Association of Food Protection
Institute of Food Technologists
American Chemical Society

Activities within Professional Organizations

Session Moderator, *Teaching and Learning: Identifying IFT's members current interests and needs*, IFT National Meeting 2019
Member, IFT Teaching and Learning Workgroup, 2019-2022
Judge, IFTSA Smart Snacks Product Development Competition, IFT National Meeting 2019

Member, International Food Science Certification Commission (2014-2017)
Chair, IFT Biotechnology Division (2009-2010)
Session Moderator, Food Biotechnology Division Lecture, IFT National Meeting, 2010
Session Moderator, New Products and Technologies, IFT National Meeting 2010
Session Moderator, International Association of Food Protection National Meeting 2007
Member-at-large, IFT Biotechnology Division Executive Board (2006-2008)
Member, IFT New Products and Technologies Programming Sub-Committee (2006-2009)
Judge, IFT Undergraduate Paper Competition, 2007
Abstract review, IFT Food Microbiology Division (2006)
IFT Continuing Education Initiative Task Force (2006)
Member, IFT Career Development Skills Committee (2004-2006)
National Advisor, Student Association of the Institute of Food Technologists
(1997 - 2000)
Member, IFT Committee on Sections and Divisions (1997 - 2000)
Judge, IFT Food Microbiology Graduate Paper Competition, 1997
Session Chair, Spring 1997 meeting of the New England Society of Industrial Microbiology

University Representative

Planning meetings of the Northeastern Region Land-Grant University Consortium Food Safety Initiative (SAFER). (1997 - 2000)
ISELKI Mundus 2. Internationalization and sustainability of ISEKI Food Network. 1st Overall Meeting. Gothenburg, Sweden (July 2009)

Short Course and Outreach Presentations

FSPCA Preventive Controls for Human Health. UMass Extension. March 12-13, 2019.
January 31-February 2, 2018. UMass Extension.

Better Process Control School. UMass Extension. Taught Introduction to Microbiology and Acidified Foods. 2013 - 2019

Introduction to HACCP. UMass Extension. Taught introduction to microbiology. January 2014 and 2015

Assuring Food Safety of Value-Added Products: Development of HACCP plans for Small Scale or Home Businesses. Feb. 3, 1998. Northeast Farmers' Direct Marketing Conference, Sturbridge, MA.

Food Micro 101 Oct. 22, 1997. Safe Food Processing, First Annual Northeast Conference. Saratoga Springs, NY.

Safe-Serv Across the State: Food Safety. Oct. 1996. Multi-location lecture using Picture-Tel technology from University of Massachusetts, Amherst.

Food Safety: Introduction and Current Issues Jan. 31, 1996; Jan. 17 and 24, 1997; Jan 14 and 22, 1998. Guest Lecture. Nutrition 219. *Food: Technical, Distribution, and Marketing.* Tufts University School of Nutrition Science and Policy, Boston, MA.

Consultation relationships

Chew Innovation, Boston, MA
Park Advertising, Lake Success, NY
Gorton's, Gloucester, MA
Hans Kissle, Haverhill, MA
Parker Hannifin Corporation, Haverhill, MA
Tribe, Mediterranean Foods, Tauton, MA
Stonewall Kitchens, York, ME
Conagra/Lightlife Foods, Turnersfall, MA
Cricket Creek Farm, Williamstown, MA
Expressive Constructs Inc., Worcester, MA
SafeScience, Boston, MA
Garellick Farms Inc, Franklin, MA
Ion Physics Inc, Atkinson, NH
Vicam Inc., Watertown, MA.
Friendly Ice Cream, Wilbraham, MA

Phone consultations to various local Massachusetts companies

Phone consultations to members of the Department's Strategic Research Alliance

University Service

Departmental

- Undergraduate Program Director and Chief Undergraduate Advisor (2000 – Sept 2020)
Responsibilities included:
 - *Curricular Planning*
 - *Preparation of IFT Program Assessment and AQAD Materials*
 - *Advisor Assignments*
 - *Personal Advisees (~20 students)*
 - *Graduation Clearance*
 - *Updating University Catalog and Course Guide*
 - *CNS Undergraduate Committee representation (Curriculum, CUA, and Scholarship Committees)*
- Undergraduate Recruiting Committee (1995 - current), Chair (1996 - 2000)
- Food Science Club Advisor (1996 – 1998, 2000 -2001, 2006 - 2007)
- Graduate Program Committee (1998 - 2000)

- Personnel Committee (1996 - 1997, 1999 – 2000, 2003-2004, Chair, 2004-05, Chair 2005-2006, 2007-2007, 2007-2008, 2008-2009, 2009-2011, 2016-2017, Chair 2014-15. 2015-2016. Chair ,2017-2018)
- Teaching Evaluation Coordinator (1996 - 2006)
- Director of UMass Summer Scholar Program (2008)

College of Food and Natural Resources

- College Personnel Committee (2006-2009, Chair Spring 2009)
- Curriculum Committee (1998 – 2001)
- Undergraduate Advisors Committee (2000-2009)

College of Natural Sciences

- Leadership Committee (2020-current)
- Curriculum Committee (2009-2020)
- CNS Awards Committee (2009-2011)
- Undergraduate Advisors Committee (2009-2020)
- Life Sciences Ad-Hoc Curriculum Committee (Spring 2010)

Commonwealth Honors College

Member Grant and Fellowship Selection Committee (2013)

University

- Institutional Biosafety Committee, Member, (2005-2009), Chair (2009-2018)
- Status of Woman Council
- Member, REU Coordinators Council (2008)
- UMass Extension Food Safety Issue Planning Team

Search Committees

Chair

- CNS Assistant Dean for Advising (2020), CNS
- CNS Assistant Dean for Academics (2020), CNS
- Food Engineering Search Committee Chair (2018-2019), Department of Food Science
- IALS Biosensor Search Committee Chair (2016-2017), Department of Food Science
- Food Safety Extension Search Committee Chair (2011), Department of Food Science
- Department Head Search Committee Chair: (2008), Department of Food Science
- Microbiology Department Head (Chair) (2005-2006), Department of Microbiology

Search Committee Member

- Associate Biosafety Officer, UMass Environmental Health and Safety (2013 and 2016)
 - Food Chemist Position (2007), Department of Food Science
 - Food Safety Extension Assistant Professor (2006), Nutrition Department
 - Jack Francis Chair of Food Science(2004) Department of Food Science
 - Assistant Professor (2002), Department of Microbiology
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Mentorship and Teaching Experience

Summary: To date, I have mentored 9 Post-Doctoral Researchers, 8 PhD students, 23 MS students, 23 Undergraduate Researchers, and 5 Visiting Scholars. I have been the department chief undergraduate advisor since 2001 and have won college awards for advising and teaching. I have written a laboratory textbook that has been adopted by both national and international institutions, and I have constantly obtained high teaching evaluations.

ADVISING

Currently advise 2 Undergraduates

Departmental Chief Undergraduate Advisor (2001 – 2020)

National Advisor to the Student Association of the Institute of Food Technologists 1997-2000

Advising Awards

College of Food and Natural Resources Outstanding Advisor Award, 2009

Graduate and Post-Graduate Advising and Mentoring

Post-Doctoral Research Fellows

Galaxie Story (September 2023 – current)

Chuesiang (October 2019 – May 2020)

John Cotter (January 2011 – 2013)

Yuhua Chang (Septemeber 2010 – 2012)

Yumei Dai (September 2008 – July 2009)

Dalal Asker (September 2008 – July 2009)

Weimin Gu (December 2008 – March 2009)

Jun Cao (Fall 2004 –September 2008)

Dario Perez Conesa (Spring 2005 – 2006)

Jack Li (1998 - 1999)

PhD Students

Shihyu Chuang (2020 – current)

Mrinalini Ghoshal (Dept of Microbiology, 2020- current)

Victor Ryu (2018 – 2021)

Kyle Landry (2012- 2016)

Chanelle Adams (2010- 2014)

Imelda Tirtajaya (2009- 2014)

Yuhua Chang (2006 – 2010)

Andres Rodriguez (2004 – 2007)

William Shaw (2001 –2004)

Preyatudsaney Prachiayo (1999- 2003)

MS Students

Nicholas Bernus (2017-2018)

Precious Henshaw (2016-2018)

Madeline Tucker (2016-2018)

Parita Patel (2016-2018)

Brett Boulden (2015- 2016)
Victor Ryu (2015-2016)
Dillon Murray (2013-2015)
Lufan Wang (2013-2015)
Kaitlin Ewald (2011- 2012)
Fujia Zhang (2008 – 2010)
Elsina Hagan (2008 – 2010)
Ejovwoke Ememu (2008 – 2010)
Imelda Tirtajaya (2005 – 2007)
Jessica Lamana (2004 – 2006)
Caroline Cronin (2002 - 2012)
Chris Aurand (2007 –)
Michael Avallone (2003 –2005)
Emmanouil Apostilides (2001 –2003)
William Shaw (1997 –2001)
Darinka Djordjevic (1999 –2001)
Cynthia Amoako-Atta (1997 - 1999)
Preyatudsaney Prachiayo (1996 - 1999)
Michelle Wu (1996 - 1999)

Undergraduate Research Projects

Michaele McGregor (Fall 2016-Spring 2018)
Tim Avery (Summer 2015-Spring 2016)
Ting Xu (Fall 2014-Summer 2015)
Zach Rosenthal (Summer 2014 – Spring 2015)
Nancy Zou (Fall 2014-Spring 2015)
Danielle Faivre (Spring 2013)
Nils Fischer (Summer 2010)
Kaitlin Ewald (Fall 2009)
Lauren Plazek (Spring 2008)
Michael Miller (Fall 2006-Spring 2007)
Faith Rivers (Summer 2004)
Jessica Lamana (Fall 2002-Spring 2003)
Chris Kosteck (Spring 2000)
Emmanouil Apostolidis (Spring 2000)
Igor Gurevich (Summer 1999 - Spring 2000)
Mathew Clark (Fall 1999-Spring 2000) *Honors Thesis*
Karen Pekarski (Fall 1999)
Ulrike Boecker (Spring 1999)
Craig Labadie (Spring 1998 - Fall 1999)
Bukola Adekemi (Fall 1997)
Adebunmi Abdul (Fall 1997 - Fall 1998), *Honors Project*
Jason Coles (Spring 1997)
Mathew Labbe (Fall 1995 - Spring 1997)
Houng K. Huynh (Spring 1996 - Spring 1997)

Visiting Researchers

Rodjana Noptana (October 2022 – current)
Piyanan Chuesiang (June 2016 – May 2017, PhD visiting scholar, October 2019- April 2020, Post-Doctoral visiting scholar)
Natsuki Yamaguchi from Japan (Sept 2018-Aug 2019)
Ying Zhang from China (Sept 2018- Aug 2019)
Yayoi Chujo from Japan (Sept 2015-Aug 2016)
Sachie Nagano from Japan (April 2000 - 2001)
Akiyo Horri from Japan (April 1998-1999)

TEACHING

Teaching Awards

Finalist 2018-2019 UMass Distinguished Teaching Award
College of Food and Natural Resources Outstanding Teacher Award, 2001
College of Food and Natural Resources Certificate for Excellence in Teaching, 2000

Teaching Enhancement

Attended a variety of on-campus teaching seminars
Attended 1996 Northeast Regional Teaching Workshop: *Teaching and Learning through Cases and Discussion*. October 3-5, 1996. University of Maryland, College Park, MD.
Participated in mid-semester teaching evaluations through the University of Massachusetts Center for Teaching.

Teaching Materials

L. McLandsborough. *Food Microbiology Laboratory*. CRC Press, Boca Raton, FL. 2004.

W. K. Shaw Jr and L. McLandsborough. *Instructor's guide to Food Microbiology Laboratory*. CRC Press, Boca Raton, FL. 2004.

Classroom Teaching (University of Massachusetts)

Food Microbiology (FD Sci 467) (both semesters 1995-1999)

Food Microbiology (FD SCI 467), Fall 1995, 4 credits 50% teaching responsibility
Food Microbiology (FD SCI 467), Spring 1996, 4 credits 100%
Food Microbiology (FD SCI 467) Spring 1997, 4 credits 100%
Food Microbiology (FD SCI 467) Fall 1997, 4 credits 100%
Food Microbiology (FD SCI 467) Spring 1998, 4 credits 100%
Food Microbiology (FD SCI 467) Fall 1998, 4 credits 100%
Food Microbiology (FD SCI 467) Fall 1999, 4 credits 100%
Food Microbiology (FD SCI 467) Fall 2000, 4 credits 100%

Hygienic Principles of Food Handling (Fd Sci 466) Spring Semester (1999 – 2009)

Hygienic Principles of Food Handling (FD SCI 466) Spring 1999, 4 credits 50%
Hygienic Principles of Food Handling (FD SCI 466) Spring 2000, 4 credits, 100%

Hygienic Principles of Food Handling (FD SCI 466) Spring 2001, 4 credits, 100%
Hygienic Principles of Food Handling (FD SCI 466) Spring 2003, 4 credits, 50%
Hygienic Principles of Food Handling (FD SCI 466) Spring 2004, 4 credits, 100%
Hygienic Principles of Food Handling (FD SCI 466) Spring 2005, 4 credits, 100%
Hygienic Principles of Food Handling (FD SCI 466) Spring 2007, 4 credits, 100%
Hygienic Principles of Food Handling (FD SCI 466), Spring 2009 4 credits, 100%

Food Microbiology (FD SCI 567/566) Fall Semester (2001-2019)

Food Microbiology (FD SCI 567/566) Fall 2001, 5 credits 100%
Food Microbiology (FD SCI 567/566) Fall 2002, 5 credits 100%
Food Microbiology (FD SCI 567/566) Fall 2003, 5 credits 100%
Food Microbiology (FD SCI 567/566) Fall 2004, 5 credits 100%
Food Microbiology (FD SCI 567/566) Fall 2005, 5 credits 100%
Food Microbiology (FD SCI 567/566) Fall 2006, 5 credits, 100%
Food Microbiology (FD SCI 567/566) Fall 2007, 5 credits, 100%
Food Microbiology (FD SCI 567/566) Fall 2008, 5 credits, 100%
Food Microbiology (FD SCI 567/566) Fall 2009, 5 credits, 100%
Food Microbiology (FD SCI 567/566) Fall 2010, 5 credits, 100%
Food Microbiology (FD SCI 567/566) Fall 2011, 5 credits, 100%
Food Microbiology (FD SCI 567/566) Fall 2012, 5 credits, 100%
Food Microbiology (FD SCI 567/566) Fall 2013, 5 credits, 100%
Food Microbiology (One section FD SCI 567, two sections Fd Sci 566) Fall 2014, 5 credits, 100%
Food Microbiology (One section FD SCI 567, two sections Fd Sci 566) Fall 2015, 5 credits, 100%
Food Microbiology (One section FD SCI 567, two sections Fd Sci 566) Fall 2016, 5 credits, 100%
Food Microbiology (FD SCI 567/566), Fall 2017, 5 credits, 100%
Food Microbiology (FD Sci 567/566), Fall 2018, 5 credits, 100%
Food Microbiology (FD Sci 567/566), Fall 2019, 5 credits, 100%

Food Quality (FD SCI 590B)

Food Quality (FD SCI 590B), Fall 2020, 4 credits, 100%

Survey of Food Science (FD SCI 265)

Survey of Food Science (FD SCI 265) Fall 2003, 4 credits
Survey of Food Science (FD SCI 265), Fall 2009, 4 credits
Survey of Food Science (FD SCI 265), Fall 2010, 4 credits

Topical Problems in Food Microbiology (FD SCI 797M)

Topical Problems in Food Microbiology (FD SCI 797M), Spring 2013, 3 credits, 100%
Topical Problems in Food Microbiology (FD SCI 797M) Spring 2015, 3 credits 100%
Topical Problems in Food Microbiology (FD SCI 797M) Spring 2017, 3 credits 100%

The Science of Food (FD SCI 150, BS)

The Science of Food (Fd Sci 150), Fall 2018, 4 credits, 33%

The Science of Food (Fd Sci 150), Spring 2019, 4 credits, 33%
 The Science of Food (Fd Sci 150), Fall 2019, 4 credits, 33%
 The Science of Food (Fd Sci 150), Spring 2020, 4 credits, 33%
 The Science of Food (Fd Sci 150), Fall 2020, 4 credits, 33%
 The Science of Food (Fd Sci 150), Spring 2021, 4 credits, 33%
 The Science of Food (Fd Sci 150), Fall 2021, 4 credits, 33%
 The Science of Food (Fd Sci 150), Spring 2022, 4 credits, 33%

Student Evaluations of Teaching Performance (overall average for each course)

The Science of Food (FD SCI 150)

Fall 2018: 4.43/5.00
 Spring 2019: 4.21/5.00
 Fall 2019: 4.26/5.00
 Spring 2020 (no eval due to COVID-19)
 Fall 2020 (no eval due to COVID 19)
 Spring 2021 4.28/5.00
 Fall 2021 4.43/5.00
 Spring 2022 4.36/5.00
 Fall 2022 4.09/5.00
 Spring 2023 4.68/5.00

Survey of Food Science (FD SCI 265)

Fall 2009: 4.54/5.00
 Fall 2010: 4.25/5.00

Food Microbiology (FD SCI 567/566)

Fall 2001: 4.61/5.00
 Fall 2002: 4.50/5.00
 Fall 2003: 4.61/5.00
 Fall 2004: 4.57/5.00
 Fall 2005: 4.46/5.00
 Fall 2006: 4.59/5.00
 Fall 2007: 4.55/5.00
 Fall 2008: 4.34/5.00
 Fall 2009: 4.68/5.00
 Fall 2010: 4.34/5.00
 Fall 2011: 4.58/5.00
 Fall 2012: 4.55/5.00
 Fall 2013: 4.46/5.00
 Fall 2014: 4.61/5.00
 Fall 2015: 4.78/5.00
 Fall 2016: 4.53/5.00
 Fall 2017: 4.52/5.00
 Fall 2018: 4.60/5.00
 Fall 2019: 4.15/5.00

Food Microbiology (FD SCI 467)

Fall 1995 5.19/7.00
 Spring 1996: 4.42/5.00
 Spring 1997: 4.36/5.00
 Fall 1997: 4.52/5.00
 Spring 1998: 4.60/5.00
 Fall 1998: 4.61/5.00
 Fall 1999: 4.62/5.00
 Fall 2000 4.76/5.00

Hygienic Principles of Food Handling (FD SCI 466)

Spring 1999: 4.62/5.00
 Spring 2000: 4.49/5.00
 Spring 2001: 4.39/5.00
 Spring 2003: 4.15/5.00
 Spring 2004: 4.57/5.00
 Spring 2006: 4.46/5.00
 Spring 2007: 4.34/5.00
 Spring 2009: 4.46/5.00