

Curriculum Vitae

Notarization. I have read the following and certify that this *curriculum vitae* is a current and accurate statement of my professional record.

Signature _____

Date _____

In general, do not list a work or activity more than once.

I. Personal Information

I.A. UID, Last Name, First Name, Middle Name, Contact Information

113965906; Tikekar Rohan V.; 301-405-4509; rtikekar@umd.edu

I.B. Academic Appointments at UMD

January 2015

I.C. Other Employment

September 2011-December 2014, assistant professor, Department of culinary arts and food science, Drexel University, Philadelphia, PA

Jan 2010-August 2011, Post-doctoral research associate, University of California, Davis, CA

I.D. Educational Background

2010, Ph.D., Food Science, the Pennsylvania State University

2006, M.S., Food Science, Rutgers-the State University of New Jersey

2004, B.Tech., Department of Food Engineering, Institute of Chemical Technology, Mumbai, India

II. Research, Scholarly, Creative and/or Professional Activities

II.A. Chapters

II.A.1. Books

Tikekar R.; Karwe M. V. Extrusion and texturization of fruits. Edited by Rosenthal A.; Barbosa-Canovas, G. In Fruit Preservation Novel and Conventional Technologies. Springer Publications. ISBN: 978-1-4939-3309-9

Tikekar R. Characterization of nanoscale delivery systems. In Nano- and micro-scale vehicles for effective delivery of bioactive ingredients in functional foods. Edited by Sabliov C.; Chen H.; Yada R. ;Wiley-Blackwell Publishing. ISBN 978-1-118-46220-1

Tikekar R.; Nitin N. Real Time Analysis of Oxidative Barrier Properties of Encapsulation Systems. In Microencapsulation in the Food Industry: A Practical Implementation Guide. Edited by Gaonkar A., Vasisht N., Khare A., and Sobel R. Elsevier Publications. ISBN-13: 978-0-12-404568-2.

II.A.2. Encyclopedia

Tikekar R.; LaBorde L.; Anantheswaran R. Fruit juice: Ultraviolet light processing. In Encyclopedia of Agricultural, Food and Biological Engineering. Edited by Heldman D. 2nd edition. Taylor and Francis Publications, New York, NY USA.

II.B. Refereed Journals

II.B.1. Refereed Journal Articles (33 published)

* indicates corresponding author, ^ advisee from Dr. Tikekar's lab

Wang Q.^; De Oliveira E.; Alborzi S.^; Bastarrachea L.^; **Tikekar R.*** (2017). On mechanism behind UV-A light enhanced antibacterial activity of gallic acid and propyl gallate against Escherichia coli O157:H7. *Scientific Reports*. Available online Aug 16, 2017.

Bastarrachea, L.^; Walsh M.; Wrenn S.; **Tikekar R.*** (2017). Enhanced antimicrobial effect of ultrasound by the food colorant Erythrosin B. *Food Research International*. Accepted, published online ahead of print.

De Oliveira, E.; Cossu A.; **Tikekar R.**; Nitin N. (2017). Enhanced Antimicrobial Activity Based on a Synergistic Combination of Sub-Lethal Levels of Stresses Induced by UV-A Light and Organic Acids. *Applied and Environmental Microbiology*. 83(11), e00383-17.

Luchansky, J.; **Tikekar R.**; Chen Y.; et al. (2017). Survey for Listeria monocytogenes in and on Ready-to-Eat Foods from Retail Establishments in the United States (2010 through 2013): Assessing Potential Changes of Pathogen Prevalence and Levels in a Decade. *Journal of Food Protection*. 80(6), 903-927.

Cossu A.; Ercan D.^; Wang Q.^; Peer W.; Nitin N.; **Tikekar R.*** (2016). Antimicrobial effect of synergistic interaction between UV-A light and Gallic Acid against Escherichia coli O157:H7 in fresh produce wash water and biofilm. *Innovative Food Science and Innovative Technologies*. 37 (part A), 44-52.

Pan Y.; **Tikekar R. V.**; Nitin N. (2016). Distribution of a model bioactive within solid lipid nanoparticles and nanostructured lipid carriers influences its loading efficiency and oxidative stability. *International Journal of Pharmaceutics*. 511(1), 322-330.

Nayak S.^; O'Donnell S.-E.; Sales C. M.; **Tikekar R. V.*** (2016). Fructose accelerates UV-C induced photochemical degradation of pentachlorophenol in low and high salinity water. *Journal of Agricultural and Food Chemistry*, 64(21), 4214-4219.

Ercan D.^; Cossu A.; Nitin N.*; **Tikekar R.*** (2016). Synergistic interaction of ultraviolet light and zinc oxide photosensitizer for enhanced microbial inactivation in simulated wash-water. *Innovative Food Science and Emerging Technologies*, 33, 240-250.

Wang Q.^; Durand E.; Elias R.; **Tikekar R.*** (2016). Generation of reactive oxidative species from thermal treatment of sugar solutions. *Food Chemistry*. 196, 301-308. *Experimental work completed at Drexel, manuscript preparation, revision and review occurred at UMD.*

Nayak, S.[^]; Muniz J.; Sales C. M.; **Tikekar R.*** (2016) Fructose as a novel photosensitizer: Characterization of reactive oxygen species and an application in degradation of Diuron and Chlorpyrifos. *Chemosphere*. 144, 1690-1697.

Cossu, A.; Ercan D.[^]; **Tikekar R.***; Nitin N.* (2016), Antimicrobial Effect of Photosensitized Rose Bengal on Bacteria and Viruses in Model Wash Water. *Food and Bioprocess Technology*. 9(3), 441-451.

Pan Y.; **Tikekar R.**; Wang M. S.; Avena-Bustillos R. J.; Nitin N. (2015). Effect of barrier properties of zein colloidal particles and oil-in-water emulsions on oxidative stability of encapsulated bioactive compounds. *Food Hydrocolloids*. 43, 82-90.

Haddouche L.[^]; Phalak A.[^]; **Tikekar R.*** (2015). Inactivation of polyphenol oxidase using 254 nm ultraviolet light in a model system. *LWT-Food Science and Technology*. 62(1), 97-103. *Experimental work completed at Drexel, manuscript preparation, revision and review occurred at UMD.*

Zhao Y.[^]; Guan Y.; Pan Y.; Nitin N.; **Tikekar R.*** (2015). Improved oxidative barrier properties of emulsions stabilized by silica-polymer microparticles for enhanced stability of encapsulants. *Food Research International*. 74, 269-274. *Experimental work completed at Drexel, manuscript preparation, revision and review occurred at UMD.*

Davis S.[^]; Haldipur J.[^]; Zhao Y.[^]; Dan N.; Pan Y.; Nitin N.; **Tikekar R.*** (2015). Effect of distribution of solid and liquid lipid domains on transport of free radicals in nanostructured lipid carriers. *LWT-Food Science and Technology*. 64(1), 14-17. *Experimental work completed at Drexel, manuscript preparation, revision and review occurred at UMD.*

Zhao Y.[^]; Pan Y.; Nitin N.; **Tikekar R.*** (2014). Enhanced stability of curcumin in colloidosomes stabilized by silica aggregates. *LWT-Food Science and Technology*. 58(2), 667-671.

Elsinghorst A.[^]; **Tikekar R.*** (2014). Generation of oxidative species from ultraviolet light induced photolysis of fructose. *Food Chemistry*. 154, 276-281.

Luo Z.; **Tikekar R.**; Nitin N. (2014). Click Chemistry approach for imaging intracellular and intratissue distribution of Curcumin and its nanoscale carrier. *Bioconjugate Chemistry*. 25(1), 32-42.

Tikekar R.; Hernandez M.; Land D.; Nitin N. (2013). "Click chemistry" based conjugation of lipophilic curcumin to hydrophilic ϵ -polylysine for enhanced functionality. *Food Research International*. 54(1), 44-47.

Zhao Y.[^]; Pan Y.; Nitin N.; Dan N.; **Tikekar R.*** (2013). Enhancing the barrier properties of colloidosomes using silica nanoparticle aggregates. *Journal of Food Engineering*. 118(4), 421-425.

- Pan Y.; **Tikekar R.**; Nitin N. (2012). Effect of antioxidant properties of emulsifiers on oxidative stability of encapsulated materials within emulsion. [*International Journal of Pharmaceutics*](#). 450(1-2), 129-137.
- Tikekar R.**; Pan Y.; Nitin N. (2012) Fate of curcumin encapsulated in silica nanoparticles stabilized Pickering emulsion during storage and simulated digestion. [*Food Research International*](#). 51(1), 370-377.
- Tikekar R.**; Ananteswaran R.; LaBorde L. (2012) Patulin degradation in a model apple juice system during ultraviolet light processing. [*Journal of Food Processing and Preservation*](#). 38(3), 924-934.
- Luo Z.; **Tikekar R.**; Nitin N. (2012). Optical molecular imaging approach for rapid assessment of response of individual cancer cells to chemotherapy. [*Journal of Biomedical Optics*](#). 17(10), 106006-1.
- Tikekar R.**; Nitin N. (2012) Distribution of encapsulated materials in colloidal particles and its impact on oxidative stability of encapsulated materials. [*Langmuir*](#). 28(25), 9233-9243.
- Tikekar R.**; Ananteswaran R.; Elias R.; LaBorde L. (2011). Ultraviolet-induced oxidation of ascorbic acid in a model juice system: Identification of degradation products. [*Journal of Agricultural and Food Chemistry*](#). 59(15), 8244-8248.
- Tikekar R.**; Nitin N. (2011). Effect of physical state (solid vs. liquid) of lipid core on the rate of transport of oxygen and free radicals in solid lipid nanoparticles and emulsion. [*Soft Matter*](#). 7, 8149-8157.
- Tikekar R.**; Ananteswaran R.; LaBorde F. (2011). Ascorbic acid degradation in a model apple juice system and in apple juice during ultraviolet processing and storage. [*Journal of Food Science*](#). 76(2), H62-H71.
- Tikekar R.**; Johnson A.; Nitin N. (2011). Fluorescence imaging and spectroscopy for real-time in-situ characterization of radical interaction with oil-in-water emulsion. [*Food Research International*](#). 44(1), 139-145.
- Altan A.; McCarthy L; **Tikekar R.**; McCarthy J; Nitin N. (2011). Image analysis of microstructural changes in almond cotyledon as a result of processing. [*Journal of Food Science*](#). 76(2), E1-E10.
- Tikekar R.**; Johnson A.; Nitin N. (2011). Real time measurement of oxygen transport across an oil-water emulsion interface. [*Journal of Food Engineering*](#). 103(1), 14-20.
- Tikekar R.**; Karwe M. (2009). Development of a continuous method for puffing amaranth seeds. [*Journal of Food Process Engineering*](#). 32(2), 265-277.
- Tikekar R.**; Ludescher R.; Karwe M. (2008). Processing stability of squalene in amaranth and antioxidant potential of amaranth extract. [*Journal of Agricultural and Food Chemistry*](#). 56(22), 10675-10678.

II.C. Conferences, Workshops, and Talks

II.C.1. Invited Talks (Total 5)

2017, Tikekar R. V., Synergistic interactions between UV light and food-grade compounds to improve microbial inactivation and degrade xenobiotic compounds. IFT Annual Meeting and Food Expo, Las Vegas, NV, June 27 2017.

2016, Tikekar R. V., Photodynamic processes to improve the safety of wash water used in the fresh produce industry. 13th Conference of Food Engineering, Columbus, OH. Sept 8, 2016.

2015, Tikekar R. V., Generation of reactive oxidative species during thermal and UV processing of sugars, 250th ACS National Meeting, Boston, MA

2014, Pan Y.; Tikekar R.; Nitin N., Effect of antioxidant properties of emulsifiers on oxidative stability of encapsulated materials within emulsion, Phospholipids section of AOAC Conference, San Antonio, TX.

2012, Tikekar R.; Nitin N., Comparative evaluation of zein nanoparticles and casein stabilized emulsion for controlling oxidation and release kinetics of encapsulants, 11th annual hydrocolloids conference, West Lafayette, IN.

II.C.2. Refereed Presentations (total 6, underline indicates presenter)

2017, Alborzi S.; Rebmann M.; Tikekar R. V. Incorporation of high-oleic and high-linoleic lecithin can improve the oxidative stability of vegetable oils. 2017 AOCS annual meeting, Orlando, FL.

2016, Bastarrachea L.; Tikekar R. Enhanced antimicrobial effect of ultrasound by the food colorant Erythrosin B. 13th Conference of Food Engineering, Columbus, OH.

2016, Dolan H.; Bastarrachea L.; Tikekar R. V.; Synergistic interaction between low-frequency ultrasound and sonocatalytic compounds – ZnO and Erythrosine-B – to inactivate microorganisms. IUFOST-18th world congress of food science and technology, Dublin, Ireland.

2014, Zhao, Y.; Guan, Y.; Pan, Y.; Nitin N.; Tikekar R., Enhanced oxidative barrier properties of colloidosomes stabilized by silica aggregates and silica-polymer hybrid microparticles, 248th ACS national meeting and exposition, San Francisco, CA.

2013, Zhao Y., Nitin N., Tikekar R., Engineering of interfacial permeability in silica nanoparticles stabilized oil-in-water Pickering emulsion to control transport across emulsion interface, 245th ACS national meeting and exposition, Louisiana, LA.

2013, Shah N., Zhao Y., Pan Y., Nickolov Z., Nitin N., Tikekar R., Distribution of Curcumin within colloidal nanoparticles and its impact on stability and release kinetics of curcumin, 245th ACS national meeting and exposition, Louisiana, LA

2012, Nitin N.; Tikekar R., Intra-particle distribution of encapsulated material in colloidal particles and its impact on oxidative stability, 243rd ACS national meeting and exposition, San Diego, CA.

II.C.3. Refereed Workshop Papers

2015, Tikekar R. V., Gordon Research Conference, Nanoscale Science & Engineering for Agriculture & Food Systems, Waltham, MA

II.C.4. Refereed Posters (Total 25)

2017, Gilbert A.; Tikekar R. V., Photoirradiated caffeic acid as an antimicrobial treatment for water and fresh produce, 2017 IFT-EFFoST International Nonthermal Processing Conference and Workshop.

2016, Gilbert A.; Tikekar R. V. Photoirradiated Caffeic Acid as an Antimicrobial Treatment. 13th Conference of Food Engineering, Columbus OH.

2016, Cossu A.; Ercan D.; Wang Q.; Nitin N.; Tikekar R. V., Antimicrobial efficacy and mechanism of ultraviolet light exposed gallic acid against Escherichia Coli O157:H7 in fresh-produce wash water, IFT-AMFE, Chicago, IL.

2016, Wang Q.; Tikekar R. V., The ability of gallic acid to generate reactive oxidative species (Ros) upon exposure to UV light, IFT-AMFE, Chicago, IL.

2016, Dolan H.; Tikekar R. V., Ability of ZnO to produce reactive oxygen species upon exposure to low-frequency ultrasound, IFT-AMFE, Chicago, IL, E07.

2015, Wang Q; Tikekar R. V., Generation of reactive oxidative species (ROS) from thermal treatment of sugar solutions, IFT-AMFE, Chicago, IL, 098-83.

2015, Ercan D.; Tikekar R. V., Synergistic interaction of ultraviolet light and zinc oxide photosensitizer for enhanced microbial inactivation in model wash-water, IFT-AMFE, Chicago, IL, 094-135.

2014, Haddouche L.; Tikekar R., Ultraviolet light induced inactivation of polyphenol oxidase activity, IFT-AMFE, New Orleans, LA.

2014, Guan Y.; Zhao Y.; Pan Y.; Tikekar R.; Nitin N., Effect of the barrier properties of silica-polyethylenimine aggregates stabilized pickering emulsion, IFT-AMFE, New Orleans, LA.

2014, Pan Y.; Tikekar R.; Avena-Bustillos R.J.; Wang M.S.; Nitin N., Effect of barrier properties of zein nanoparticles and Oil-In-Water emulsions on oxidative stability of encapsulated bioactive compounds, IFT-AMFE, New Orleans, LA.

2013, Elsinghorst A.; Tikekar R., Interaction of fructose with other Molecules under UV light, IFT-AMFE, Chicago, IL.

2013, Zhao Y, Pan Y, Nitin N, Tikekar R., Engineering of barrier properties of interface to reduce oxidation in emulsions and control the release of encapsulants, IFT-AMFE, Chicago, IL.

2012, Tikekar R.; Nitin N., Encapsulation systems with tunable permeability for improved stability and release profile of encapsulated materials of biomedical importance, IFT-AMFE, Las Vegas, NV.

2012, Tikekar R.; Pan Y.; Nitin N., Evaluation of silica nanoparticle stabilized oil-in-water Pickering emulsion for encapsulation of curcumin, IFT-AMFE, Las Vegas, NV.

2012, Tikekar R.; Nitin N., Distribution of encapsulated materials in colloidal particles and its impact on oxidative stability of encapsulated materials, IFT-AMFE, Las Vegas, NV.

2012, Pan Y.; Tikekar R.; Nitin N., Impact of antioxidant property of interfacial barriers on oxidation of encapsulated bioactive compounds in oil-in-water emulsions, IFT-AMFE, Las Vegas, NV.

2011, Tikekar R.; Nitin N., Effect of physical state of core material on oxygen and free radical transport rate across solid lipid nanoparticles interface, IFT AMFE, New Orleans, LA.

2010, Tikekar R.; Johnson A.; Nitin N., Real time measurement of oxygen transport across an oil-water emulsion interface, IFT AMFE, Chicago, IL.

2009, Tikekar R.; Anantheswaran R.; LaBorde F., Ultraviolet light induced degradation of ascorbic acid in a model juice system, IFT AMFE, Anaheim, CA.

2008, Tikekar R.; Anantheswaran R.; LaBorde F., Modeling inactivation of patulin by UV irradiation in model apple juice system, FIESTA 2008, Brisbane, Australia.

2007, Tikekar R.; Anantheswaran R.; LaBorde F., Modeling inactivation of patulin by UV irradiation in model apple juice system, IFT-AMFE, New Orleans, LA.

2007, Kokkinidou S.; Tikekar R.; Floros J.; LaBorde L., Modeling ascorbic acid induced degradation of patulin in model juice system, IFT-AMFE, Chicago, IL.

2006, Tikekar R.; Ludescher R.; Karwe M., Effect of processing on the squalene content and antioxidant potential in amaranth extract, CFFN, Istanbul, Turkey.

2006, Tikekar R.; Karwe M., Development of a novel technique to puff amaranth seeds, IFT-AMFE, Orlando, FL.

2006, Tikekar R.; Ludescher R.; Karwe M., Effect of processing on the squalene content and antioxidant potential in amaranth extract, IFT AMFE, Orlando, FL.

II.C.5. Non-Refereed Posters

2017, Wang Q.; Tikekar R. On mechanism behind UV-A light enhanced antibacterial activity of gallic acid and propyl gallate against Escherichia coli O157:H7. UMD NFSC Research day.

2017, Ding Q.; Tikekar R. The Antimicrobial effect of benzoic acid or propyl paraben treatment combined with UV-A light on Escherichia Coli O157:H7. UMD NFSC Research Day.

2017, Dolan H.; Tikekar R. Antimicrobial potential of combined mild heating and medium chain fatty acids. NFSC Research Day.

2017-2016, Gilbert A.; Tikekar R. Photoirradiated caffeic acid as an antimicrobial treatment for water and fresh produce. UMD NFSC Research day.

2016, Ding Q.; Tikekar R. The generation of Reactive Oxygen Species (ROS) and antimicrobial effect from the synergistic interaction between benzoic acid and ultraviolet (UV-A) light. UMD NFSC Research Day.

2016, Wang Q.; Tikekar R. The ability of gallic acid to generate reactive oxidative species (ROS) and enhance antibacterial activity upon exposure to ultraviolet (UV) light. UMD NFSC Research Day.

2015, Wang Q.; Tikekar R. Generation of Reactive Oxidative Species (ROS) from Thermal Treatment of Sugar Solutions. UMD NFSC Research Day.

II.D. Sponsored Research and Programs – Administered by the Office of Research Administration (ORA)

II.D.1. Grants

August 2016-August 2018, USDA-NIFA-Food Safety Outreach Program, Develop & implement a hybrid workshop in FSMA produce safety & preventive controls rules for stakeholders growing & processing high-risk produce, USDA-NIFA, USD 57,000, Role: PI, Co-PIs: Henley S.; Myers G.; Martin D.

January 2016- December 2018, USDA-NIFA Foundational program, Sonochemical Processes for inactivation of spoilage microorganisms on surface of fresh produces and food-contact surfaces, USD 469,470, Role: PI Co-PI: Wrenn S.; Nitin N.

May 2015-April 2020, USDA-NIFA Coordinated Agricultural Program, An Integrated Approach to Eliminate Cross-Contamination during Washing, Conveying, Handling and Packaging of Fresh Produce, USDA-NIFA, Total award 4.75 M, Tikekar's share \$30,000 Y1, \$58,000 Y2, \$58,000Y3, Role: Co-PI, PI: Nitin N.

January 2014-June 2018, USDA-NIFA Foundational Program, Synergistic interaction between ultraviolet light and a novel photosensitizer for enhanced microbial food safety of fresh produce, USD 382,000, Role: PI, Co-PI: Dr. Nitin.

July 2014-December 2015, Drexel Institute for Energy and Environment, Novel Photochemical and Biological Processes for Decontamination of flow-back water from hydraulic fracturing of the marcellus shale, USD 50,000, Role: PI, Co-PI: Sales C.

September 2013-Aug 2015, American Chemical Society-Petroleum Research Fund, Engineering of physical properties of interface to reduce oxidation in emulsions, USD 50,000, Role: PI.

Jan 2013-Dec 2014, Center for Produce Safety, Rapid assessment of oxidative stress induced in microbes to evaluate efficacy of sanitizers in wash water, Total award: USD 130,000, Tikekar's share \$29,000, Co-PI, PI: Nitin N.

Aug 2011-July 2012, Pennsylvania Department of Health, Encapsulation systems with tunable permeability for improved stability and release profile of encapsulated materials of biomedical importance, USD 92,000, Co-PI: Dan N.

II.D.2. Contracts

July 2017- June 2020, MARS Inc., Potential enhancement of thermal treatments of human and pet foods by the use of approved food additives, USD 332,894, Role: PI, Co-PI: Buchanan R.

September 2012- December 2014, USDA-ARS (Specific cooperative agreement), Prevalence, levels and types of Listeria monocytogenes in higher risk foods, USD 439,545, Role: PI.

II.E. Gifts and Funded Research not administered by ORA

Jan 2017-June 2018, Maryland Agricultural Experiment Station, Sanitizers for egg and poultry industry developed using a rational combination of approved food ingredients, USD 30,000, Role: PI.

June 2017-March 2018, UM Ventures seed grant, Use of Surface Micro-Discharge Plasma (SMD) as a Sanitation Treatment, USD 15000, PI: Tikekar R., Co-PI: Oehrlein G.

Jan 2017-June 2018, Maryland Agricultural Experiment Station, Use of nanoparticles to enhance performance and viability of anaerobic digesters, USD 30,000, Role: Co-PI, PI: Lansing, S.

II.F. Patents

II.F.1. Other

Bastarrachea L.; Luan P.; Oehrlein G.; Tikekar R. V. Surface micro-discharge plasma (SMD) system and sanitation method. USPTO provisional patent number 62/539,420. July 31, 2017.

III. Teaching, Extension, Mentoring, and Advising

III.A. Courses Taught

University of Maryland Spring 2017

NFSC 412/679, Food Processing Technology, enrollment 33

NFSC799, Masters Thesis Research, enrollment 3

NFSC 898, Pre-candidacy Research, enrollment 1

University of Maryland Fall 2016

NFSC 799, Maters Thesis Research, enrollment 2

NFSC386, Experiential Learning, enrollment 1

University of Maryland Spring 2016

NFSC 414, Mechanics of Food Processing, enrollment 27

NFSC 898, Pre-candidacy Research, enrollment 1

NFSC 498A, Individual Study, enrollment 3

NFSC 799, Maters Thesis Research, enrollment 2

University of Maryland Fall 2015

NFSC 799, Maters Thesis Research, enrollment 1

NFSC 898, Pre-candidacy Research, enrollment 1

University of Maryland Spring 2015

NFSC 898, Pre-candidacy Research, enrollment 1

NFSC 412/679, Food Processing Technology, enrollment 31

Drexel University

FDSC 669, Reading in Food Science, (S13, 14 average enrolment 15)

FDSC 506, Food Comp. and Behavior, (F11, 12, 13 W12 Average enrolment 15)

FDSC 480/680, Food Engineering, (F11, 12, 13, 14 Average enrolment 12)

FDSC 480/680, Food Manufacturing Technology, (S12, enrolment 12)

FDSC 480/680, Seminar in Food Science, (F12, enrolment 7)

FDSC 461/561, Food Analysis, (W12, 13 average enrolment 14)

FDSC 460/560, Food Chemistry, (W13, 14 average enrolment 20)

FDSC 456/556, Food Preservation Processes, (F12, 13, 14 average enrolment 20)

III.B. Advising

III.B.1. Undergraduate

Summer 2017, **David Stein**, undergraduate research advisor.

Summer 2017, **Marc Blitzstein**, undergraduate research advisor.

Fall 2015-Spring 2016, **Melanie Butler**, undergraduate research advisor, ORISE fellow at US FDA.

Summer 2015-Fall 2015, **Nathaniel Hartten**, undergraduate research mentor, food scientist at Itaberco Inc.

Spring 2016, **Ziyi Li**, undergraduate research mentor, pursuing MS in food safety and toxicology at the University of Hong-Kong.

Fall 2015-Spring 2015, **Ann Nguyen**, undergraduate research mentor, ORISE fellow at US FDA

Fall 2015-Spring 2016, **Zhujun Gao**, undergraduate research advisor, MS candidate at University of Maryland.

Spring 2013, **Sharifa Davis**, undergraduate research advisor, Drexel University, Process scientist at Merck Inc.

III.B.2. Master's

Thesis advisor at UMD

Spring 2017-Onhoing, **Robert Sharman-Wood**.

Spring 2016-Ongoing, **Andrea Gilbert**.

Fall 2015-Spring 2017, **Qiao Ding**, the antimicrobial effect of benzoic acid and propyl paraben treatment combined with UV-A light on E. coli O157:H7, enrolled in a Ph.D. program at UMD.

Fall 2015-Spring 2017, **Heather Dolan**, New antimicrobials based on synergistic interactions between physical and chemical stressors, Senior Food Technologist at Edward Marc Brands LLC.

Thesis advisor at UMD/Drexel

Fall 2014-Spring 2015, **Shaila Nayak**, UV Induced Photolysis of Fructose – Generation of Reactive Oxygen Species and their Application in Photo-degradation of Pesticides, thesis advisor/committee member due to relocation to UMD, Research Scientist at Lyons Magnus Inc.

Thesis advisor at Drexel

Fall 2013-Fall 2014, **Qingyang Wang**, Effect of thermal treatment on generation of reactive oxidative species (ROS) from sugar solutions, currently pursuing Ph.D., University of Maryland-College Park.

Fall 2011-Spring 2012, **Yuan Zhao**, Engineering of Barrier Properties of Interface to Reduce Oxidation in Colloidosomes and Control the Release of Encapsulants, Food Technologist at Promotion in Motion Inc.

Fall 2012-Spring 2013, **Aachen Elsinghorst**, 2012-2013, Generation of oxidative species from UV (254 nm) light induced photolysis of food ingredients, R and D Food technologist at Barry Callebaut Chocolate Inc.

Thesis committee member at UMD

Fall 2016, **Kathleen Sanders**, Evaluation of the Simple Wetting Method to Reduce Total Cyanogens in Flaxseed.

Summer 2016, **Luxi Ruan**, Enhancement of thermal inactivation of Cronobacter Sakazaki by inclusion of Parabens.

Spring 2016, **Junchao Lu**, Attachment, Growth and Persistence of Cronobacter on Granular Activated Carbon Filters.

Spring 2016, **Yingying Song**, Size Control and Magnetic Separation of Mono-disperse Carboxyl-functionalized Magnetite Particles: Synthesis Procedures, Characterizations, and Applications.

Fall 2015, **Ruoyang Xu**, Potential low toxicity cross-linker for protein-based nanoparticles.

Graduate research advisor (non-thesis)

Fall 2014, **Aditi Phalak**, Drexel University

Spring 2014, **Lila Haddouche**, Drexel University

III.B.3. Doctoral

Dissertation advisor

Fall 2017-, **Qiao Ding**.

Spring 2015-Ongoing, **Qingyang Wang**, PhD candidate as of spring 2017.

Dissertation committee member

Summer 2017-ongoing, **Saurabh Lele** (Pennsylvania State University), Pulsed light treatment to increase polyphenols in spinach (working title).

Summer 2017-ongoing, **Ruth Oni**, The Development of a Qualitative Risk Assessment and Targeted Thermal Resistance Data as Critical Components for Developing a Full Quantitative Risk Assessment of Salmonella Contamination in Milk Chocolate.

Spring 2017-ongoing, **Robert Korir**, Interactions between Salmonella enterica Newport and plant pathogenic fungi of the genus Fusarium on melons.

Spring 2016-Ongoing, **Angela Ferelli**, Identification of factors positively influencing Salmonella enterica persistence in pre-harvest crop production areas.

Spring 2016- Spring, 2017, **Aixia Xu**, Evaluation and Validation of Various Sampling Plans for the Detection of Pathogenic or Indicator Microorganisms on Pre-harvest Leafy Greens.

Spring 2015-Spring 2016, **Abhinav Mishra**, Development and application of predictive models for survival, growth and death of enteric pathogens in leafy greens supply chain.

III.B.4. Post-doctoral

Spring 2016-Summer 2017, **Dr. Luis Bastarrachea**, currently an assistant professor at Utah State University.

Fall 2015-Ongoing, **Dr. Solmaz Alborzi**.

Fall 2014-Fall 2015, **Dr. Duygu Ercan**.

III.C. Advising: Other than Directed Research

III.C.1. Undergraduate

Fall 2016-current, a member of academic advising team in the department of nutrition and food science

III.D. Professional and Extension Education

III.D.1. Major Extension Programs

Fall 2016- ongoing; developed a training program for the stakeholders in Food Safety Modernization Act's produce safety and preventive controls for human food rules. In this federally funded program, we set up three workshops across the state to train growers and food processors in in FSMA. We also collaborated with Dr. Chris Walsh (PSLA), Maryland Department of Agriculture and Department of Health and Mental Hygiene to increase the impact of the training program. Through these training programs, we trained 87 individuals in FSMA's preventive control rule and 122 individuals in FSMA's Preventive control rule. The participants were diverse stakeholders including regulators, growers, dairy processors, seafood processors, and other extension educators.

Spring 2015-ongoing; provide technical assistance on ad hoc basis to small and medium scale food processors in nutritional labeling, process validation and product testing.

III.D.2. Workshops

2017, FSMA preventive controls for human food training workshop, Delivered a 3-day workshop to train Cochran fellows from Colombia to train them in becoming 'preventive controls qualified individuals', May 16- May 18, 2017, JIFSAN, College Park, MD.

2017, FSMA hybrid workshop in produce safety and preventive controls rule to train growers, processors and regulators in meeting the requirements of the regulations, Mar 8-11, 2017, Western MD Research and Education Center, MD.

2017, FSMA hybrid workshop in produce safety and preventive controls rule to train growers, processors and regulators in meeting the requirements of the regulations, Feb 22-25, 2017, Wye Research and Education Center, MD.

2017, FSMA hybrid workshop in produce safety and preventive controls rule to train growers, processors and regulators in meeting the requirements of the regulations, Feb 8-11, 2017, Baltimore County extension Office, MD.

2016, FSMA preventive controls for human food training workshop, Delivered a 3-day workshop to train federal and state regulators and industry professionals in becoming 'preventive controls qualified individuals', Nov 29-Dec 1, 2016, JIFSAN, College Park, MD.

2016, FSMA preventive controls for human food training workshop, Delivered a 3-day workshop to train federal and state regulators and industry professionals in becoming 'preventive controls qualified individuals', Sept 20-22, 2016, JIFSAN, College Park, MD.

2016, FSMA preventive controls for human food training workshop, Delivered a 3-day workshop to train federal and state regulators and industry professionals in becoming 'preventive controls qualified individuals', Aug 16-18, 2016, JIFSAN, College Park, MD.

2016, Co-taught a food inspector training (FIT) program curriculum to Food Inspectors from Saudi Arabia, The training was organized by JIFSAN, July 2016.

2016, FSMA preventive controls for human food training workshop, Delivered a 3-day workshop to train federal and state regulators and industry professionals in becoming 'preventive controls qualified individuals', June 15-17, 2016, Maryland 4-H Center, College Park, MD.

2015, Co-taught a course in Commercially Sterilized Packaged Foods organized by JIFSAN, Penang, Malaysia.

III.D.3. Guest Lectures (extension)

2017, Field Crops Twilight, Barbeque & Ice Cream Social Tour, Delivered a talk on New antimicrobial systems for improved fresh produce safety, at, August 10, 2017 at Upper Marlboro Research and Education center.

2017, Agronomy and Horticulture In-service, Delivered a talk on FSMA workshops and GAPs at, June 21, 2017 at Ocean City, MD.

2016, FSMA rule for produce safety, Delivered a presentation on the provisions of produce safety rule to growers and processors at the Mid-Atlantic Aronia Growers' Association (MAARGA) annual meeting on June 28, 2016 at the Wye Agricultural Research and Education center.

2016, Maryland Department of Agriculture- Good Agriculture Practices training workshop, Delivered a lecture on 'how to write SOPs' to farmers and growers intending to get GAP certified at Wye Research and Education Center.

2016, Maryland Department of Agriculture- Good Agriculture Practices training workshop, Delivered a lecture on 'how to write SOPs' to farmers and growers intending to get GAP certified at St. Mary's Ag. Services Center.

2016, Maryland Department of Agriculture- Good Agriculture Practices training workshop, Delivered a lecture on 'how to write SOPs' to farmers and growers intending to get GAP certified at Carroll County Extension Office.

2016, Maryland Department of Agriculture- Advanced GAP training, Presented the ongoing research in food safety to the stakeholders.

2015, Farm diversification: Profitability with specialty fruits and vegetables, Gave an oral presentation titled 'advances in fresh produce safety with highlights to new federal regulations'.

III.D.4. Other (extension activities)

2017, assisted Perimondo LLC. to develop a rapid technique to evaluate oxidation in lecithin.

2017, assisted Ms. Bobbie smith to create nutritional label for her food product.

2016, assisted Diagio Inc., in optimizing a glass design for an alcoholic beverage.

2016, guided Cava Grill LLC in completing the SQFI audit and improve the shelf-life of hummus based products.

2016, developed a Nutrition facts label and performed chemical analysis on samples, Abol LLC, Silver Spring MD, Dr. Tikekar did not charge compensation to the company. The company gave a donation of \$200 to Dr. Tikekar's research program.

2016, Analysis of samples for total plate count, Zivot Beverages Inc., Dr. Tikekar did not charge compensation to the company. The company gave a donation of \$150 to Dr. Tikekar's research program.

IV. Service and Outreach

IV.A. Editorships, Editorial Boards, and Reviewing Activities

IV.A.1. Editorial Boards

Food Research International, 2011-Current

Journal of Food Science, 2016-Current

IV.A.2. Reviewing Activities for Journals and Presses

Chemical Engineering Journal
 Food Hydrocolloids
 Comprehensive Reviews in Food Science and Food Safety
 Mycotoxin Research
 Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy
 Journal of Photochemistry and Photobiology, B: Biology
 Food and Function
 Food Chemistry
 Food Research International
 Journal of Agricultural and Food Chemistry
 LWT-Food Science and Technology
 Journal of Food Science
 Journal of Food Engineering
 Langmuir
 JAOCS
 Transactions of ASABE
 Innovative Food Science and Emerging Technologies
 Artificial Cells, Nanomedicine and Biotechnology
 Journal of Microencapsulation

IV.A.3. Reviewing Activities for Agencies and Foundations

2017, reviewer for AGNR: 2017 Integrated agricultural and natural resources extension and research program, University of Maryland.

2013-2014, research grant program NASA/NSBRI, Panel member, 2013-2014 Crew Health Step-2 Review.

2013, Nanotechnology for Agriculture and Food Systems program, National Institute of Food and Agriculture: Reviewer panel member for the program.

2013, 'Maryland Industrial partnerships (MIPS)' research grant, Invited reviewer.

IV.B. Committees, Professional & Campus Service

IV.B.1. Campus Service – Department

2017, chair of the NFSC Research Day program committee

2017, Member of the NFSC department review committee

IV.B.2. Campus Service – College

2017, Member of the Agricultural Innovation to Commercialization (AgI2C) committee.

2017, Member of the College of Agriculture and Natural Resources Strategic Positioning Team.

2016, Member of the college delegation to Chinese Universities to develop international programs with those universities.

IV.B.3. Campus Service – University

2017, member of the extension advisory panel for the CONSERVE: A Center of Excellence at the Nexus of Sustainable Water Reuse, Food & Health (PI: Sapkota A.).

IV.B.4. Other Non-University Committees, Memberships, Panels, etc.

2017, Served as a mentor for the USDA-NIFA organized “conference on Preparing Winning Grants” at Delaware State University.

IV.C. Service Awards and Honors

2014, Best research paper award, phospholipids division-American Oil Chemists Society.

2012, Dean’s award for outstanding scholarship, Drexel University.

2009, Frank Dudek graduate scholarship for academic excellence, Pennsylvania State University.

2007, Albert Kleinman scholarship for academic excellence, Rutgers University.

2006, Second prize for the poster presentation, Conference on Functional Foods and Nutraceuticals, Istanbul, Turkey.

2004, the best undergraduate project, Institute of Chemical Technology, India.

2004, the best student award, Association of Food Scientists and Technologists, India.

v. Other Information

None