

Owen Griffith Jones
Associate Professor, Purdue University

745 Agriculture Mall Drive
 West Lafayette, IN 47907-2009
joneso@purdue.com
 +001 765 496 77 23

EDUCATION

- 2006 - 2009 **UNIVERSITY OF MASSACHUSETTS** Amherst, MA, USA
Doctorate in Food Science
Department of Food Science
 Dissertation: http://scholarworks.umass.edu/open_access_dissertations/145/
- 2005 - 2006 **THE OHIO STATE UNIVERSITY, COLUMBUS** Columbus, OH, USA
Candidate for Doctor of Pharmacy
Department of Pharmacy
- 2001 - 2005 **THE OHIO STATE UNIVERSITY, COLUMBUS** Columbus, OH, USA
Bachelor of Science, Suma cum Laude, with Honors
Department of Food Science & Technology
Minor: Department of Chemistry

EXPERIENCE

- 2018 - Present **PURDUE UNIVERSITY** West Lafayette, IN, USA
Associate Professor
Department of Food Science
- 2011 - 2018 **PURDUE UNIVERSITY** West Lafayette, IN, USA
Assistant Professor
Department of Food Science
- 2009 - 2011 **EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE (ETH) ZÜRICH** Zürich, ZH, Switzerland
Post-Doctoral Researcher; Advisor: Raffaele Mezzenga, PhD
Food Soft Materials Laboratory (LWM), Department of Food Science (ILW)
 - Study of milk protein structures, particularly fibril structures, and complexation with polysaccharides and surfactants
- 2006 - 2009 **UNIVERSITY OF MASSACHUSETTS** Amherst, MA, USA
Graduate student; Advisor: D. Julian McClements, PhD
Food Colloids Laboratory, Department of Food Science
 - Thesis: Development of engineered particulate structures through thermally treated associative protein-polysaccharide complexes
- 2005 - 2006 **KROGER PHARMACY** Columbus, OH, USA
Pharmaceutical Assistant & Intern
- 2004 - 2005 **THE OHIO STATE UNIVERSITY** Columbus, OH, USA
Honors Student Researcher; Advisor: Steven Schwartz, PhD
Haas Chair Laboratory, Department of Food Science & Technology
 - Comparative studies on the analysis of urinary 8-iso-PGF₂α (iso-prostaglandin)

PEER-REVIEWED PUBLICATIONS (N = 44)

- Hirsch A, Cho Y-H, Kim YHB, Jones OG (2019). Contributions of protein and milled chitin extracted from domestic cricket powder to emulsion stabilization. *Current Research in Food Science*, 1: 17-23.
- Cheng CJ, Jones OG (2019). Effect of drying temperature and extent of particle dispersion on composite films of methylcellulose and zein nanoparticles. *Journal of Food Engineering*, 250: 26-32.
- Cheng CJ, Ferruzzi M, Jones OG (2019). Fate of lutein-containing zein nanoparticles following simulated gastric and intestinal digestion. *Food Hydrocolloids*, 87: 229-236.
- Murphy RW, Zhu L, Narsimhan G, Jones OG (2018). Impacts of Size and Deformability of β -lactoglobulin Microgels on the Colloidal Stability and Volatile Flavor Release of Microgel-Stabilized Emulsions. *Gels*, 4, 79: 1-14
- Wu B, Patel BK, Fei X, Jones O, Campanella OH, Reuhs BL (2018). Variations in physical-chemical properties of tomato suspensions from industrial processing. *LWT – Food Science & Technology*, 93: 281-286
- Elegbede JL, Li M, Jones OG, Campanella OH, Ferruzzi MG (2018). Interactions between flavonoids-rich extracts and sodium caseinate modulate protein functionality and flavonoid bioaccessibility in model food systems. *Journal of Food Science*, 83(5): 1229-1236
- Charnley M, Gilbert J, Jones OG, Reynolds NP (2018). Preparation of amyloid fibril networks. *Bio-Protocols*, 8(4): 10.21769/BioProtoc.2733
- Charnley M, Gilbert J, Jones OG, Reynolds NP (2018). Characterisation of amyloid fibril networks by atomic force microscopy. *Bio-Protocols*, 8(4): 10.21769/BioProtoc.2732
- Gilbert J, Charnley M, Cheng CJ, Reynolds NP, Jones OG (2017). Quantifying Young's moduli of protein fibrils and particles with bimodal force spectroscopy. *Biointerphases*, 12(4):041001
- Kim HW, Lee YJ, Jones OG, Kim B (2017). Effect of house cricket (*Acheta domesticus*) flour addition on physicochemical and textural properties of meat emulsion under various formulations. *Journal of Food Science*, 82(12): 2787-2793
- Gilbert J, Cheng CJ, Jones OG (2017). Vapor Barrier Properties and Mechanical Behaviors of Composite Hydroxypropyl Methylcellulose/Zein Nanoparticle Films. *Food Biophysics*. Doi: 10.1007/s11483-017-9508-1, pp. 1-12
- Murphy RW, Farkas B, Jones OG (2017). Effect of crosslinking on the physical and chemical properties of β -lactoglobulin (Blg) microgels. *Journal of Colloid and Interface Science*, 505: 736-744
- Gilbert J, Reynolds NP, Russell SM, Haylock D, McArthur S, Charnley M, Jones OG (2017). Chitosan-coated amyloid fibrils increase adipogenesis of mesenchymal stem cells. *Materials Science and Engineering: C*, 79: 363-371
- Du J, Cho Y, Murphy R, Jones OG. (2017). Impact of chitosan molecular weight and attached non-interactive chains on the formation of α -lactalbumin nanogel particles. *Gels*, 3: 14.
- Cheng CJ, Jones OG (2017). Stabilizing zein nanoparticle dispersions with i-carrageenan. *Food Hydrocolloids*, 69: 28-35
- Nguyen E, Jones OG, Kim YHB, San Martin F, Liceaga AM (2017). Impact of microwave-assisted enzymatic hydrolysis on functional and antioxidant properties of rainbow trout (*Oncorhynchus mykiss*) by-products. *Fisheries Science*: 1-15. DOI: 10.1007/s12562-017-1067-3.
- Hall FG, Jones OG, O'Haire ME, Liceaga A (2017). Functional properties of tropical banded cricket (*Gryllobates sigillatus*) protein hydrolysates. *Food Chemistry*, 224: 414-422.

- Jones OG (2016). Developments in dynamic atomic force microscopy techniques to characterize viscoelastic behaviors of food materials at the nanometer-scale. *Current Opinion in Food Science*, 9: 77-83.
- Kim HW, Steyabrata D, Lee YJ, Jones OG, Kim YHB (2016). Pre-treated mealworm and silkworm as a novel non-meat ingredient in emulsion sausages. *Innovative Food Science and Emerging Technologies*, 38: 116-123
- Murphy R, Farkas B, Jones OG (2016). Dynamic and viscoelastic behavior of β -lactoglobulin microgels of varying sizes at fluid interfaces. *Journal of Colloid & Interface Science*, 466: 12-19
- Du J, Reuhs BL, Jones OG (2016). Influence of PEGylation on the ability of carboxymethyl-dextran to form complexes with α -lactalbumin. *Food Chemistry*, 196: 853-859
- Jones OG (2016). Recent advances in the functionality of non-animal-sourced proteins contributing to their use in meat analogues. *Current Opinion in Food Science*, 7: 7-13.
- He Z, Chen J, Moser SE, Jones OG, Ferruzzi MG (2015). Interaction of β -casein with (-)-epigallocatechin-3-gallate assayed by fluorescence quenching: effect of thermal processing temperature. *International Journal of Food Science and Technology*, 51(2): 342-348
- Eren NM, Jones OG, Campanella OH (2015). Changes in the rheology of nano-structured suspensions by adsorption of the protein α -lactalbumin on the surface of silica particles. *Rheologica Acta*, 54: 735-744
- Murphy R, Cho YH, Farkas B, Jones OG (2015). Control of thermal fabrication and size of β -lactoglobulin-based microgels and their potential applications. *Journal of Colloid & Interface Science*, 447(1): 182-190
- Moser S, Liceaga A, Jones OG, Ferruzzi M (2014). The effect of milk proteins on the bioaccessibility of green tea flavan-3-ols. *Food Research International*, 66: 297-305
- Gilbert J, Campanella O, Jones OG (2014). Electrostatic stabilization of β -lactoglobulin fibrils at increased pH with cationic polymers. *Biomacromolecules*, 15(8): 3119-3127
- Hirt S, Jones OG, Adjianto M, Gilbert J (2014). Influence of sulfate, chloride, and thiocyanate salts on formation of beta-lactoglobulin-pectin microgels. *Food Chemistry*, 164, 63-69
- Hirt S, Jones OG (2014). Effects of chloride, thiocyanate, and sulfate salts on β -lactoglobulin – pectin associative complexes. *International Journal of Food Science & Technology*, 49(11): 2391-2398
- Zimmerer L, Jones OG (2014). Emulsification capacity of microgels assembled from beta-lactoglobulin and pectin. *Food Biophysics*, 9, 229-237
- Jones OG, Mezzenga R (2012). Inhibiting, promoting, and preserving stability of functional protein fibrils. *Soft Matter*, 8(4), 876-895
- Jones OG, Handschin S, Adamcik J, Harnau L, Bolisetty S, Mezzenga R (2011). Complexation of β -lactoglobulin fibrils and sulfated polysaccharides. *Biomacromolecules*, 12(8): 3056-3065.
- Matalanis A, Jones OG, McClements DJ (2011). Structured biopolymer-based delivery systems for encapsulation, protection, and release of lipophilic compounds. *Food Hydrocolloids*, 25(8): 1865-1880.
- Bengoechea C, Jones OG, Guerrero A, McClements DJ (2011). Formation and characterization of lactoferrin/pectin electrostatic complexes: impact of composition, pH and thermal treatment. *Food Hydrocolloids*, 25(5): 1227-1232

- Jones OG, McClements DJ (2011). Recent progress in biopolymer nanoparticle and microparticle formation by heat-treating electrostatic protein polysaccharide complexes. *Advances Colloid Interface Science*, 167(1-2): 49-62
- Jones OG, Adamcik J, Handschin S, Bolisetty S, Mezzenga R (2010). Fibrillation of β -lactoglobulin at low pH in the presence of a complexing anionic polysaccharide. *Langmuir*, 26(22): 17449-17458
- Jones OG, McClements DJ (2010). Functional biopolymer particles: Design, fabrication, and applications. *Comprehensive Reviews Food Science Food Safety*, 9(4): 374-397.
- Jones OG, Decker EA, McClements DJ (2010). Comparison of heated associative β -lactoglobulin-pectin complexes with pectin-coated, heated β -lactoglobulin particulates. *J Colloid Interface Science*, 344(1): 21-29
- Jones OG, Decker EA, McClements DJ (2010). Thermal analysis of β -lactoglobulin complexes with pectins or carrageenan for production of stable biopolymer particles. *Food Hydrocolloids*, 24(2-3): 239-248
- Jones OG, Lesmes U, Decker EA, Dubin P, McClements DJ (2010). Formation of biopolymer nanoparticles by heat treatment of β -lactoglobulin-pectin electrostatic complexes. *Food Hydrocolloids*, 24(4): 374-383
- Jones OG, McClements DJ (2010). Biopolymer nanoparticles from heat-treated electrostatic protein-polysaccharide complexes: Factors affecting particle characteristics. *J Food Sci*, 75(2): N36-N43
- Jones OG, Decker EA, McClements DJ (2009). Formation of biopolymer particles by thermal treatment of β -lactoglobulin pectin complexes. *Food Hydrocolloids*, 23: 1312-1321
- Chanasattru W, Jones OG, Decker EA, McClements DJ (2009). Impact of cosolvents on formation and properties of biopolymer nanoparticles formed by heat treatment of β -lactoglobulin-pectin complexes. *Food Hydrocolloids*, 23(8): 2450-2457
- Jones OG, McClements DJ (2008). Stability of biopolymer particles formed by heat treatment of β -lactoglobulin/beet pectin electrostatic complexes. *Food Biophysics*, 3: 191-197

BOOK CHAPTERS (N = 3)

- Cho YH, Jones OG (2019). Assembled protein nanoparticles in food or nutrition application. In: *Advances in food and nutrition research, V88, Food Applications of Nanotechnology*. Eds.: Lim L-T, Rogers M. Elsevier Publications, , pp 47-84
- Jones OG (2015) Protein Nanostructures. In: *Edible nanostructures*. Eds.: Marangoni AG, Pink D. Royal Society of Chemistry, Cambridge, UK, pp 69-113
- Jones OG, McClements DJ (2012) Development of colloidal delivery systems for food and pharmaceutical applications based on proteins and polysaccharides. In: *Nano-architectures for solubilization and delivery in food, cosmetic and pharma applications*. Eds.: Garti N, Yuli-Amar I. DEStech Publications, Inc., Lancaster, PA. pp 81-111.

PRESENTATIONS (N = 32)

Invited Conference Presentations

- Jones OG (2017). Young Scientist Competition: Controlling physical properties of β -lactoglobulin microgels to enhance emulsion stabilization. *American Chemical Society, Fall Meeting*, September 2017, Washington, D.C.

- Jones OG (2017). Bimodal force spectroscopy as a technique to quantify Young's moduli of protein fibrils and nanoparticles. *Microscopy and Microanalysis*, August 2017, St. Louis, MO
- Gilbert J, Jones OG (2017). Improved stability of whey protein fibrils and utility for biomaterial application. *American Chemical Society*, Spring Meeting, April 2017, San Francisco, CA.
- Jones OG (2015). Macromolecular assemblies for delivery of nutraceuticals. *International Society for Nutraceuticals and Functional Foods 8th Annual Meeting*, September 2015, Wuxi, China.
- Jones OG (2015). Instability of protein fibrils in conditions of reduced charge and stabilization by polyelectrolyte complexation. *International Symposium on Food Carbohydrates*, March 2015, Wuxi, China.
- Gilbert J, Jones OG (2015). Protein fibrils: Improved stability and atomic force microscopy characterization. *Joint Great Lakes/Central Regional American Chemical Society meeting*, May 2015, Grand Rapids, MI.
- Jones OG (2014). Advances in whey protein microgels. *Institute of Food Technologists, Annual Meeting*, June 2014, New Orleans, LA
- Jones OG (2012). Effect of protein/polysaccharide interactions on β -lactoglobulin aggregate structures and submicron texture characteristics. *Institute of Food Technologists, Annual Meeting*, June 2012, Las Vegas, NV
- Jones OG, Mezzenga R (2012). Complex formation between β -lactoglobulin fibrils and κ -carrageenan at low pH values. *American Chemical Society Spring Meeting*, March 2012, San Diego, CA

Other Conference Presentations

- Federici E, Selling G, Jones OG, Campanella OH (2019). Effect of extruded zein and different starches on the rheological behavior of gluten-free dough. *AACC International: 18th European Young Cereal Scientists and Technologists Workshop*, April 15-17, 2019, San Benedetto del Tronto, Italy
- Du J, Jones OG (2016). Interaction and structure formation between α -lactalbumin and chitosan grafted with poly(ethylene glycol) chains. *American Chemical Society*, Fall Meeting, August, 2016, Philadelphia, PA
- Jones OG, Hirt S (2014). Influence of specific salts on whey protein microgel formation from electrostatic complexes. *4th Annual International Colloids Conference*, June 2014, Madrid, Spain
- Jones OG, McClements DJ (2009) "Protein-based nanoparticles derived from thermal treatment of β -lactoglobulin-pectin associative complexes". *Presented: Fall 2009 ACS National Meeting & Exposition*, August 2009, Washington, DC.

Invited Lectures/Seminars

- Jones OG (2017). Colloidal and Physical properties of protein/polysaccharide assemblies. University of Sao Paulo, Sao Paulo Campus, Dept. of Chemistry, June 2017, Sao Paulo, Brazil
- Jones OG (2017). Generating colloidal materials by controlled polysaccharide-protein interactions. University of Illinois, Urbana-Champaign, Dept. of Food Science, January 2017, Urbana, IL
- Jones OG (2016). Polysaccharide-protein behavior and structures for food application. *University of Sao Paulo, Dept. of Food Engineering*, June 2016, Pirassununga, Brazil.

- Jones OG (2016). Recent advances in guiding protein-polysaccharide behavior and structural assembly. *University of Sao Paulo, Dept. of Food Science*, June 2016, Piracicaba, Brazil.
- Jones OG (2015). Biopolymer interactions. *TNO research center*, November 2015, Zeist, Netherlands.
- Jones OG (2015). Colloidal protein structures influenced by polyelectrolyte interaction for food or pharma application. *University of Sao Paulo, Dept. of Chemistry*, June 2015, Sao Paulo, Brazil.

Posters

- Federici E, Jones OG, Campanella OH. Extruded zein to enhance gluten-free doughs rheological properties. Institute of Food Technologists Annual Meeting, June 2, 2019. New Orleans, LA
- Cheng CJ, Ferruzzi M, Jones OG. Simulated Digestion of Zein Nanoparticles Encapsulating Lutein. Institute of Food Technologists Annual Meeting, July 15-18, 2018. Chicago, IL
- Rayate A, Jones OG, Campanella O, Bordenave N. The Influence of dairy proteins on polysaccharides in dilute and concentrated systems. New York Academy of Sciences, Journey through Science Day, November 14-15, 2016, New York, NY.
- Murphy R, Farkas B, Jones OG. Dynamic and Viscoelastic Interfacial Behavior of β -lactoglobulin Microgels of Varying Sizes at Fluid Interfaces. New York Academy of Sciences, Journey through Science Day, November 14-15, 2016, New York, NY.
- Cheng C, Jones OG. Stabilizing zein nanoparticle dispersions with carrageenan. Institute of Food Technologists Annual Meeting, July 17, 2016. Chicago, IL
- Rivera S, Jones OG, Liceaga A. Antioxidant properties of whole hemp seed (*Cannabis Sativa*) protein hydrolysates. Institute of Food Technologists Annual Meeting, July 17, 2016. Chicago, IL
- Spotti, MJ, Jaramillo Recalde AC, Campanella OC, Jones OG. Extraction, characterization, and physical and enzymatic treatment of alkali-extractable corn arabinoxylans. Institute of Food Technologists Annual Meeting, July 17, 2016. Chicago, IL
- Murphy R, Jones OG. International Colloids Conference, June 19-22, 2016, Berlin, Germany.
- Murphy R, Jones OG. Control of thermal fabrication and size of b-lactoglobulin microgels and their potential applications. *Presented: New York Academy of Sciences, Journey through Science Day*, New York, NY, December 14 (2015)
- Gilbert JT, Jones OG. Electrostatic stabilization of b-lactoglobulin fibrils at increased pH with cationic polymers. *Presented: New York Academy of Sciences, Journey through Science Day*, New York, NY, December 14 (2015)
- Du J, Jones OG. "Block ionomer complexes formed by carboxymethyl-dextran-block-poly(ethylene glycol) copolymer and α -lactalbumin." *Presented: 249th ACS National Meeting*, Denver, CO, March 22-26 (2015)
- Hirt S, Jones OG: "Specific salt effects on the formation and thermal transitions of electrostatic complexes among b-lactoglobulin and pectin." *Presented: 246th ACS National Meeting*, Indianapolis, IN, September 8-12 (2013)
- Jones OG, Adamcik J, Handschin S, Bolisetty S, Mezzenga R: "Fibrillation of β -lactoglobulin at low pH in the presence of an anionic polysaccharide." *Presented: Swiss Soft Days, Lausanne, Switzerland*, February 3 (2011)

- Jones OG, McClements DJ: “Formation of biopolymer particles from heated β -lactoglobulin/polysaccharide complexes.” *Presented: 236th ACS National Meeting & Exposition, Philadelphia, PA, August 17-21 (2008)*
- Jones OG, McClements, DJ: “Stability of heated β -lactoglobulin-pectin complexes to environmental stressors.” *Presented: 99th AOCS Annual Meeting, Seattle, May 18-21 (2008)*
- Jones OG, McClements DJ: “Complexes of beta-lactoglobulin and sugar beet pectin as stable particles involving factors of heat and pH.” *Presented: Delivery of Functionality in Complex Food Systems, Amherst, MA, October 8-10 (2007)*

RESEARCH SUPPORT

- ConAgra Foods
- Kraft Foods
- National Institute of Food and Agriculture – Food Quality Division (2017-2020)
- Purdue University, Agriculture Research Project
- Purdue University, Purdue Research Foundation
- PepsiCo, U.K.
- Proctor & Gamble

TEACHING

- FS 69000; “Food Physical Chemistry” (3 cr.), Purdue University (Fall Semester, even years, 2016-Present)
- FS 59100; “Soft Matter Topics in Food” (1 cr.), Purdue University (Fall Semester, 2015 – Present)
- FS 68400; “Graduate Seminar” (1 cr.), Purdue University (Spring and Fall Semester, 2015 – Present)
- FS 53000; “Food Ingredients” (1 cr.), Purdue University (Spring semester, 2014 – Present)
- FS 59100; “Food Physical Chemistry” (2 cr.), Purdue University (Fall Semester, 2012)
- FS 46900; “Food Analysis Laboratory” (2 cr.), Purdue University (Spring 2012)
- 752-2001-00S; “Food Technology and Characterization” (3 cr.), ETH Zurich, (Fall 2010-2011)
- 752-2002-00L; “Lebensmittel-Technologiepraktikum: Teigwaren” (1 cr.), ETH Zürich (Spring 2010-2011)
- FS 544; “Food Chemistry Laboratory” (1 cr.), UMass Amherst, (2007 - 2008)

MEMBERSHIPS

Institute of Food Technologists	2011-2013, 2015 – 2017
Whistler Center for Carbohydrate Research	2011 – Present
American Chemical Society	2008 – Present

EDITORIAL SERVICES

Editorial Board Member, Food Chemistry	2016 – Present
--	----------------

Editorial Board Member, Food Biophysics	2016 – Present
Associate Editor, Journal of Food Processing & Beverages	2013 – Present

CURRENT GRADUATE STUDENTS

	<u>Name</u>	<u>Degree Pursued</u>	<u>Expected Graduation Date</u>
1.	Federici, Enrico	Ph.D.	August, 2020
2.	Kelley, Alyssa	M.S.	August, 2020

FORMER GRADUATE STUDENTS

	<u>Name</u>	<u>Degree Awarded</u>	<u>Graduation Date</u>
1.	Hirt, Stacey	M.S.	December, 2013
2.	Zimmerer, Laura	M.S.	December, 2013
3.	Du, Juan	Ph.D.	December, 2016
4.	Gilbert, Jay T.	Ph.D.	August, 2017
5.	Murphy, Ryan	Ph.D.	May, 2017
6.	Rayate, Angarika	M.S.	August, 2018
7.	Cheng, Chris	Ph.D.	December, 2018
8.	Hirsch, Andrew	M.S.	December, 2018

FORMER POST-DOCTORAL RESEARCHERS

	<u>Name</u>	<u>Background</u>	<u>Time of Stay</u>
1.	Spotti, M. Julia	Food Engineering	July, 2016-July, 2017

VISITING SCHOLARS

	<u>Name</u>	<u>Originating Institution</u>	<u>Time of Stay</u>
1.	Merizalde-Aviles, M.G.	Zamorano School	February-May, 2013
2.	Xiang, N.	Wageningen Univ.	February-June, 2013
3.	Sandra, Sandra	Gum Products Intl.	August-September, 2014
4.	Santos, Fabiola M.G.	Univ Sao Paulo	May-July, 2015
5.	Medeiros, Nathalia M.	Univ Sao Paulo	May-July, 2015
6.	Jaramillo Recalde, Andrea	Zamorano School	January-April, 2016
7.	Enrico Federici	Univ Parma	March-September, 2016
8.	Okamoto, Andrea K.	Univ Sao Paulo	May-August, 2016
9.	Monique Chung	Univ Sao Paulo	June, 2016-June, 2017
10.	Giovanna Jungueira Cardoso	Univ Sao Paulo	January-June, 2017
11.	Dandan Li	Jiangnan University	Aug, 2017 – July, 2018
12.	Mariana Caressa	Univ Parma	March-Sept, 2018
13.	Matilde Tagliasco	Univ Parma	March-Sept, 2018
14.	Santiago Ramirez Lopez	Univ Sao Paulo	March-June, 2018
15.	Wanying He	Huazhong Ag. Univ	September 2019- August 2021