

CURRICULUM VITAE

Andréia Bianchini Huebner

3051 N 90th St., Lincoln, NE 68507

abianchini2@unl.edu (402) 802-9253

EDUCATION

PhD in Food Science and Technology, May 2010

University of Nebraska – Lincoln

Research Area: Antifungal Activity of Lactic Acid Bacteria and Effect of Food Processing on Mycotoxins

Master of Science in Agricultural and Environmental Microbiology, May 2003

Universidade Federal do Rio Grande do Sul - Rio Grande do Sul, Brazil

Research Area: Molds and Mycotoxins

Bachelor of Science in Food Engineering, December 2001

Fundação Universidade Federal do Rio Grande - Rio Grande do Sul, Brazil

ACADEMIC EXPERIENCE

Research Assistant Professor, Food Safety/Dairy, May 2010 - Present

University of Nebraska – Lincoln

- Conduct grant-funded research on the area of food safety and dairy, as part of the Applied Research and Engineering unit in The Food Processing Center.
- Lead the departmental efforts in distance education. More specifically, develop curricula, provide content and serve as director of the Food Processing Management Certificate Program.
- Teach FDST 363 – Heat and Mass Transfer and other courses as needed.
- Mentor domestic and international graduate and undergraduate students.
- Coordinate the shelf life testing program in The Food Processing Center.
- Provide technical advice, training activities and workshops to the food and feed industries regarding protocols, standard operating procedures and related technical documents to improve safety and quality in the food and feed chain, as part of the outreach and extension programs in The Food Processing Center.
- Courtesy appointment in the Biological Systems Engineering Department at University of Nebraska – Lincoln granted on April, 2015.

Research Assistant, January 2008 – April 2010

University of Nebraska – Lincoln

- Designed and execute experiments on the antifungal activity of lactic acid bacteria and effect of food processing on mycotoxins for grant-funded research projects.
- Assisted with courses in the Food Microbiology and Mycology areas in the Food Science & Technology Department.

Research Technician and Laboratory Manager, January 2005 – December 2007

University of Nebraska – Lincoln

- Supervised the operation of the laboratory and the work activities of undergraduate and graduate students.
- Coordinated activities in the laboratory, including ordering, maintenance of equipment, and safety procedures.
- Designed and carry out experiments for grant-funded research projects and assist with any research related to outreach and extension programs in the Food Science & Technology Department and Food Processing Center including mold prevention and extension of mold free shelf life in food products.
- Contributed to preparation and teaching of the Molds and Mycotoxins Workshop annually offered through the Food Science & Technology Department and the Food Processing Center.

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INDUSTRY EXPERIENCE

Cargill – Corn Milling North America, Blair, NE and Dayton, OH, February-September/2008

- Evaluated and implement the use of rapid detection methods (ELISA) for mycotoxin as research tool.
- Assisted in laboratory development of proprietary methods for decreasing fumonisin concentrations in a wet milled protein product and assisted with implementation of a plant-scale evaluation of the developed method.
- Participated at meetings to address mycotoxin risk assessment and prevention strategies for a Protein Product Line (Empyreal™ 75).

Pennacchi Cia Ltda – Arapongas, PR, Brazil, January-February/2001

- Followed all activities of the quality control laboratory, including sampling and analysis of finished products and ingredients.
- Evaluated changes in parameters of production as part of a troubleshooting process for a line of soft candy that was experiencing excessive down time for machinery cleaning.

Pescal Indústria S A – Rio Grande, RS, Brazil, April-May/1998

- Performed quality control analyses, including sampling and analysis of finished products and fresh fish and seafood.

RESEARCH FUNDS: GRANTS AND CONTRACTS

Bianchini, A., Stratton, J., Grant, "Interventions for reduction of spore-formers at farm level, Midwest Dairy Association. 01/01/16 - 06/31/17. \$39,830.

Zhang, Y., Rose, D., **Bianchini, A.**, Seed Grant, "Structural changes in millet protein during cooking and their effect on protein digestibility". 01/01/16 – 12/31/2016. \$10,000.

Bianchini, A. (Mentor), Calegare, L. (Training Coordinator), Grant, "Norman E. Borlaug International Agricultural Science and Technology Fellowship Program", USDA – FAS, 10/05/15 – 12/11/15. \$36,000.

Wang, B.(Principal Investigator), **Bianchini, A.** (Investigator), Stratton, J. (Investigator), Grant, "Mapping the Changes in Sporeforming Bacteria Contamination along Milk Production Chain from Farm to Packaged Pasteurized Milk: Systematic Review and Meta-Analysis Approaches", Midwest Dairy Association, 01/30/15 - 12/30/15. \$4,987.

Bianchini, A. (Principal Investigator), Grant, " Rapid Assessment of Mycotoxin in Afghanistan's Food Value Chains" – Grant added to the Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss, US-AID (Sub-award from Kansas State University). 01/01/15 - 12/31/15. \$107,500.

Rose, D. (Principal Investigator), **Bianchini, A.** (Investigator), Hallen-Adams, H.E. (Investigator), Stratton J. (Investigator), Grant, "Marketing and delivery of quality grains and bioprocess coproducts: Improving the microbial safety of wheat flour through non-thermal pre-milling interventions", USDA Multistate Hatch, NC213. 10/01/14-09/30/18. \$135,664.

Bianchini, A. (Principal Investigator), Stratton J. (Investigator), Hallen-Adams, H.E. (Investigator), Grant, "Quantitative Reverse Transcriptase PCR Rapid Detection and Quantification Method for Viable yeast and Molds in Dairy Products". Midwest Dairy Association. 01/01/15-12/31/16. \$31,602.

Bianchini, A. (Principal Investigator), Hallen-Adams, H. (Investigator), Carlos Campabadal (Investigator), Grant, "From the "Milpas" to the market: a feasibility study on the use of metal silos for safer and better storage of Guatemalan native corn", USDA - SCRP. 07/01/14 – 12/31/2016. \$39,050.

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Bianchini, A. (Principal Investigator), Hallen-Adams, H. (Investigator), Weller, C. L. (Investigator), Flores, R. A. (Investigator), Grant, "Global Hunger and Food Security Research Strategy: Climate Resilience, Nutrition, and Policy – Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss", US-AID (Sub-award from Kansas State University). 10/01/14 - 09/30/18. \$135,664.

Bianchini, A. (Principal Investigator), Stratton, J. (Investigator), Grant, "Tracking and Evaluating Heat-Resistant, Sporeforming Bacteria in the Fluid Milk Chain ", Midwest Dairy Association. 01/01/14 - 12/31/15. \$65,000.

Subbiah, J. (Principal Investigator), Jones, D.D. (Investigator), Thippareddi, H. (Investigator), Weller, C.L. (Investigator), **Bianchini, A.** (Investigator), Grant, "NSRI Food Safety Risk Assessment", Natl Strategic Rsch Inst (NSRI). May 6, 2013 - April 21, 2014. \$88,719.00.

Subbiah, J. (Principal Investigator), Jones, D.D. (Investigator), Thippareddi, H. (Investigator), Weller, C.L. (Investigator), **Bianchini, A.** (Investigator), Grant, "NSRI Food Safety Risk Assessment", Natl Strategic Rsch Inst (NSRI). May 6, 2013 - April 21, 2014. \$58,213.00.

Stratton, J. (Principal Investigator), **Bianchini, A.** (Co-Principal Investigator), Contract, "Prevalence of GMOs in food products purchased in different countries outside of the United States", Biotecon Diagnostics. May 1, 2013 - December 31, 2013. \$1,000.00 (in materials).

Stratton, J. (Principal Investigator), **Bianchini, A.** (Co-Principal Investigator), Contract, "Heat Resistance of different commercial strains of the probiotic *Bacillus coagulans* Spores", Nebraska Cultures. June 1, 2012 - January 31, 2013. \$1,000.00.

Bianchini, A. (Principal Investigator), Stratton, J. (Investigator), Grant, "Sporeformers in the Milk Chain", Midwest Dairy Association, March 14, 2012 - December 31, 2013. \$76,394.00.

Bianchini, A. (Co-Principal Investigator), Stratton, J. (Co-Principal Investigator), Hutkins, R. W. (Collaborator), Contract, "Phase I Option - First Generation of Controlled-Release Bacteriocins/Anti-Microbials", Orbis Biosciences Inc. September 2012 - September 2013. \$16,000.00.

Bianchini, A. (Co-Principal Investigator), Stratton, J. (Co-Principal Investigator), Hutkins, R. W. (Collaborator), Contract, "Phase II - First Generation of Controlled-Release Bacteriocins/Anti-Microbials", Orbis Biosciences Inc, Industry. September 2012 - September 2013. \$18,000.00.

Stratton, J. (Principal Investigator), **Bianchini, A.** (Investigator), Wegulo, S. (Investigator), Contract, "Evidence of Transmission of *E. coli* O157:H7 to Tissues or Phylloplane of Wheat from Contaminated Soil, Seeds, or Water", ConAgra. March 17, 2011 - December 21, 2012. \$33,650.00.

Bianchini, A. (Co-Principal Investigator), Stratton, J. (Co-Principal Investigator), Contract, "Phase IV: Effect of different ingredients on the inactivation of *Enterococcus faecium* by extrusion", Wenger Manufacturing Inc. June 2011 - October 2012. \$5,965.00.

Bianchini, A. (Co-Principal Investigator), Stratton, J. (Co-Principal Investigator), Hutkins, R. W. (Collaborator), Contract, "Phase I - First Generation of Controlled-Release Bacteriocins/Anti-Microbials", Orbis Biosciences Inc. January 2012 - September 2012. \$32,010.00.

Bianchini, A. (Principal Investigator), Stratton, J. (Investigator), Grant, "Use of Essential Oils, Spices and Plant Extracts to Control Microbial Contamination in Pet Food Products", UNL. June 1, 2011 - May 31, 2012. \$10,000.00.

Bianchini, A. (Co-Principal Investigator), Stratton, J. (Co-Principal Investigator), Contract, "Phase III: The effect of different temperatures on the inactivation of *Salmonella* by extrusion", Wenger Manufacturing Inc. January 2011 - March 2012. \$9,150.00.

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Bianchini, A. (Principal Investigator), Contract, "Validation of ELISA test kits for mycotoxins", Nestle Purina. January 2011 - March 2012. \$4,284.00.

Ryu, D. (Principal Investigator), **Bianchini, A.** (Investigator), Cappozzo, J. (Investigator), Jackson, L. (Investigator), Palumbo, J. (Investigator), Stratton, J. (Investigator), Wolf-Hall, C. (Investigator), Wu, F. (Investigator). Grant "Risk Assessment and Intervention Strategies for the Emerging Food Safety Threat of Ochratoxin in the United States", USDA-AFRI. 03/01/11 - 02/29/16. \$124,527.00.

PAPERS PUBLISHED, ACCEPTED OR SUBMITTED

Selani, M.M., **Bianchini, A.**, Ratnayake, W.S., Flores, R.A., Massarioli, A. P., Alencar, S.M., Brazaca, S.G.C. Physicochemical, Functional and Antioxidant Properties of Tropical Fruits Co-products. *Plant Foods for Human Nutrition*. [Epub ahead of print].

Sabillon, L. and **Bianchini, A.** 2016. From Field to Table: A Review on the Microbiological Quality and Safety of Wheat-Based Products. *Cereal Chemistry*. 93(2):105–115.

Sabillon, L., Stratton, J., Rose, D., Regassa, T., and **Bianchini, A.** 2016. Microbial Load of Hard Red Winter Wheat Produced at Three Growing Environments across Nebraska, USA. *Journal of Food Protection*. 79(4): 646–654.

Bianchini, A., Horsley, R., Jack, M.M., Kobiush, B., Ryu, D., Tittlemier, S., Wilson, W.W., Abbas, H.K., Abel, S., Harrison, G., Miller, J.D., Shier, W.T., Weaver, G. 2015. DON Occurrence in Grains: A North American Perspective. *Cereal Foods World*, 60 (1): 32-56.

Bismarck, M., Stratton, J., **Bianchini, A.**, Wegulo, S., Weaver, G. 2015. Transmission of *Escherichia coli* O157:H7 to internal tissues and its survival on flowering heads of wheat. *Journal of Food Protection*, 78 (3): 518-524.

Bianchini, A., Stratton, J., Weier, S. Cano, C., Miceli-Garcia, L. 2014. Use of Essential Oils and Plant Extracts to Control Microbial Contamination in Pet Food Products. *Journal of Food Processing & Technology*, 5: 357.

Selani, M.M., Brazaca, S.G.C., Dia, C.T.S., Ratnayake, W.S., Flores, R.A., **Bianchini, A.** 2014. Characterization and potential application of pineapple pomace in an extruded product for fiber enhancement. *Food Chemistry* 163: 23-30.

Bianchini, A., Stratton, J., Weier, S., Hartter, T., Plattner, B., Rokey, G., Hertz, G., Gompa, L., Martinez, B., Eskridge, K.M. 2014. Use of *Enterococcus faecium* as a Surrogate for *Salmonella enterica* During Extrusion of a Balanced Carbohydrate-Protein Meal. *Journal of Food Protection* 77(1): 75-82.

Bianchini, A., Stratton, J., Weier, S., Hartter, T., Plattner, B., Rokey, G., Hertz, G., Gompa, L., Martinez, B., Eskridge, K.M. 2012. Validation of extrusion as a killing step for *Enterococcus faecium* in a balanced carbohydrate-protein meal using a response surface design. *Journal of Food protection* 75(9): 1646-53.

Brooks, J.C., Martinez, B., Stratton, J., **Bianchini, A.**, Krokstrom, R., Hutkins, R. 2012. Survey of raw milk cheeses for microbiological quality and prevalence of foodborne pathogens. *Food Microbiology* 31: 154-158.

Rose, D.J., **Bianchini, A.**, Martinez, B., Flores, R. A. 2012. Methods for reducing microbial contamination of wheat flour and effects on functionality. *Cereal Foods World*, 57(3): 104-109.

Xu, Y., **Bianchini, A.**, Hanna, M.A. 2011. Evaluation of mold and mycotoxin contaminations in hybrid hazelnuts grown in Nebraska. *Journal of Food Processing & Technology*, 2:119. doi:10.4172/2157-7110.1000119.

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Jackson, L.S., Jablonski, J., Bullerman, L.B., **Bianchini, A.**, Hanna, M.A., Voss, K.A., Hollub, A.D., Ryu, D. 2011. Reduction of fumonisin B₁ in corn grits by twin-screw extrusion. *Journal of Food Science*, 76(6): T150-T155.

Voss, K.A., Riley, R.T., Jackson, L.S., Jablonski, J.E., **Bianchini, A.**, Bullerman, L.B., Hanna, M.A., Ryu, D. 2011. Extrusion cooking with glucose supplementation of fumonisin contaminated corn grits protects against nephrotoxicity and disrupted sphingolipid metabolism in rats. *Molecular Nutrition & Food Research*, 55(Suppl 2): S312-20.

Voss, K.A., Bullerman, L.B., **Bianchini, A.**, Hanna, M., Ryu, D. 2008. Reduced toxicity of fumonisin B₁ in corn grits by single-screw extrusion. *Journal of Food Protection*, Vol 71(10): 2036-2041.

Ryu, D., **Bianchini, A.**, Bullerman, L.B., 2008. Effects of processing on mycotoxins. *Stewart Postharvest Review*, Vol 6(5): 1-7.

Bullerman, L.B., Ryu, D., **Bianchini, A.**, Jackson, L., Voss, K., Hanna, M. 2008. Reduction of fumonisin B₁ in corn grits by single-screw extrusion. *Journal of Agricultural and Food Chemistry*, Vol 56(7): 2400-2405.

Bullerman, L.B., **Bianchini, A.** 2007. Stability of mycotoxins during food processing. *International Journal of Food Microbiology*, Vol 119(1-2):140-146.

Kam, P.V., **Bianchini, A.**, Bullerman L.B. 2007. Inhibition of mold growth by sourdough bread cultures. *Review of Undergraduate Research in Agricultural and Life Sciences (RURALS)*, Vol 2, Issue 1, Article 5.

Bianchini, A., Kitazawa, S.E., Fagundes, C.A., Noll, I.B. 2004. Influência da contaminação fúngica e dos fatores abióticos sobre Influência da contaminação fúngica sobre a acidez lipídica do arroz em diferentes manejos de secagem e armazenamento. *Revista Brasileira de Armazenamento, Viçosa*, v. 29, n. 2, p. 89-97.

BOOK CHAPTERS - PUBLISHED

Gourama, H., Bullerman, L.B., **Bianchini, A.** 2015. Toxigenic Fungi and Fungal Toxins. In: Y. Salfinger and M. L. Tortorello (Eds.). *Compendium of Methods for the Microbiological Examination of Foods*. APHA Press, Chapter 43.

Bianchini, A. 2015. Lactic Acid Bacteria as Antifungal Agents. In: W. H. Holzapfel (Ed.). *Advances in Fermented Foods and Beverages*. Elsevier Ltd, Academic Press, pp. 333-353.

Bullerman, L.B., **Bianchini, A.** 2014. Good Food-Processing Techniques: Stability of Mycotoxins in Processed Maize-Based Foods. In: J.F. Leslie and A. F. Logrieco (Eds.). *Mycotoxin Reduction in Grain Chains*. Wiley Blackwell, pp.89-100.

Bianchini, A., Stratton, J., 2014. Spoilage of Plant Products: Cereals and Cereal Flours. In: Batt, C.A., Tortorello, M.L. (Eds.), *Encyclopedia of Food Microbiology*, vol 3. Elsevier Ltd, Academic Press, pp. 459–464.

Bianchini, A., Bullerman, L.B., 2014. Mycotoxins: Classification. In: Batt, C.A., Tortorello, M.L. (Eds.), *Encyclopedia of Food Microbiology*, vol 2. Elsevier Ltd, Academic Press, pp. 854–861.

Bianchini, A., Bullerman, L.B. 2013. *Fusarium* and Fumonisin : Toxigenic *Fusarium* Species in Cereal Grains and Processed Foods. In: Labbé, R.G., Santos, G. (Eds.) *Guide to Foodborne Pathogens*, 2nd Edition. Wiley-Blackwell, pp. 273-283.

Bianchini, A., Bullerman, L.B. 2010. Biological Control of Molds and Mycotoxins in Foods. In: M. Appell (Ed.). *Mycotoxin Prevention and Control in Agriculture*. American Chemical Society, New Orleans, LA.

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Bullerman, L.B., **Bianchini, A.** 2009. Production of Microbiologically Safe Foods - Cereals and Cereal Products. In: N. Heredia, I. Wesley, and S. Garcia (Eds.). Production of Microbiologically Safe Foods. John Wiley and Sons, NY.

TRADE JOURNALS AND WHITE PAPERS

Bullerman, L.B., **Bianchini, A.** 2011. The microbiology of Cereal and Cereal Products. Food Quality, Vol 18(1): 26-29.

Bianchini, A. 2011. Rope Spoilage. White Paper. Literature Review commissioned by ConAgra Mills.

Kyuregian, G., Stratton, J., **Bianchini, A.**, Albrecht, J. 2010. Nutritional Comparison of Frozen and Non-Frozen Fruits and Vegetables: Literature Review. White Paper. Available at: http://www.frozenfoodfacts.org/assets-foundation/misc/files/Nutritional_Comparison_WP.pdf

SCIENTIFIC TRANSLATIONS

The Microbiology of Safe Food. Stephen Forsythe. 2013 (Portuguese edition). Second Edition. Brazilian Press: Artmed. **Contribution:** Translation from English to Portuguese of chapters 3 and 4.

The Microbiology of Safe Food. Stephen Forsythe. 2005 (Portuguese edition). Brazilian Press: Artmed. **Contribution:** Translation from English to Portuguese of two chapters of the book.

GRADUATE STUDENTS

Bismarck Martinez, Master Degree – Co-advisor – Graduation 2012 – “Evidence of transmission of *Escherichia coli* O157:H7 to the tissues or phyllo-plane of wheat, from contaminated soil, seeds or water”.

Lakshmi Gompa, Master Degree – Advisor – Graduation 2013 – “Evaluation of methodologies for determination of ochratoxin A in food commodities, contamination levels in different products available in the US market and evaluation of fungal microbiota associated with some of the products”.

Maricarmen Estrada, Master Degree – Advisor – Graduation 2014 – “Tracking heat-resistant, sporeforming bacteria in the milk chain: a farm to table approach”.

Carmen Cano, Master Degree – Co-advisor – Graduation 2014 – “Characterization of commercial probiotics: Antibiotic resistance, acid and bile resistance, and prebiotic utilization”.

Luis Eduardo Sabillon Galeas, Master Degree – Advisor – Graduation 2014 – “Understanding the Factors Affecting Microbiological Quality of Wheat Milled Products: From Wheat Fields to Milling Operations”.

Liya Mo, Master Degree – Advisor – Graduation 2015 – “"Viability of *Lactobacillus acidophilus* DDS 1-10 encapsulated with an alginate-starch matrix”.