

MARTHA GRACIELA RUIZ GUTIÉRREZ

mruizg@uach.mx

Septiembre 22, 2016

POSITION

Full Professor, 2011-Present
Facultad de Ciencias Químicas
Universidad Autónoma de Chihuahua
Chihuahua, México

EDUCATION

PhD in Science with Emphasis in Food

Jun 2014

Universidad Autónoma de Nuevo León, Facultad de Ciencias Biológicas

Dissertation: "Stability of bioactive components of red cactus pear (*Opuntia ficus indica*) in encapsulation and development of extruded products"

Graduated with Cum Laude distinction

Committee: PhD. Carlos Abel Amaya Guerra (Chair), PhD. María Guadalupe Alanís Guzmán, PhD. Juan Gabriel Báez González, PhD. María Adriana Núñez González and PhD. Carlos Javier Aguilera González

MS in Food Science and Technology

Dec 2008

Universidad Autónoma de Chihuahua, Facultad de Ciencias Químicas

Thesis: "Study of physical, chemical, thermal and structural changes during nixtamalization under different processing conditions"

Graduated with Honours Distinction

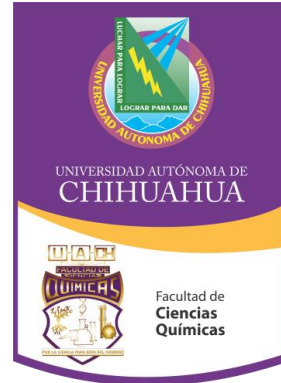
Advisor: PhD. Armando Quintero Ramos

BS Chemical Engineering option Food

Aug 2005

Universidad Autónoma de Chihuahua, Facultad de Ciencias Químicas

Graduated with Honours Distiction Mention



HONORS AND AWARDS

Teacher with profile PRODEP	2016-2019
Recognition to accomplish research, teaching and tutoring.	2013-2016
Member of the National System of Researchers	2015-2018
Level 1	
Recognition to the production of scientific and technological knowledge.	

TEACHING EXPERIENCE

Universidad Autónoma de Chihuahua, Chihuahua, México Aug 2011 to Present
Full Professor

- Biostatistics, MS
- Chemical, BSc
- Probability and Statistics, BSc
- Biostatistics, BSc
- Unit Operations III, BSc

Masters Students Advised

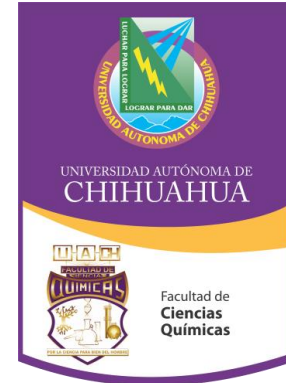
Claudia Selene Gutiérrez López, “Betalains stability in food matrices using natural fibers”, in process

Lucía Elizabeth Moreno Castro, “Application of power ultrasound during nixtamalización and its relationship to the physical and chemical characteristics in grain, masa and tortillas”, 17/10/2013

Bachelor Students Advised

Erika Janeth Ávila Romero, “Physical, chemical, sensory, and biological properties of yogurt pigmented with red cactus pear powder”, in process

Sara Salas and Nora Santillanes, “Effect of roasting time and drying temperature on quality characteristics in chile pasado”, 27/11/2014



SELECTED PUBLICATIONS

Journal Publications

Leyva-Corral, J., Quintero-Ramos, A., Camacho-Davila, A., Zazueta-Morales, J.J., Aguilar-Palazuelos, E., Ruiz-Gutiérrez, M.G., Melendez-Pizarro, C.O. and Ruiz-Anchondo, T.J. “Polyphenolic compound stability and antioxidant capacity of apple pomace in an extruded cereal”, *LWT- Food Science and Technology*, vol. 65, 2016, pp. 228-236.

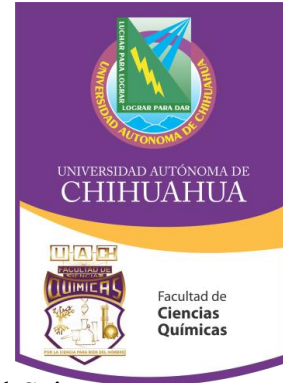
Ruiz-Gutiérrez, M.G., Amaya-Guerra, C.A., Quintero-Ramos, A., Pérez- Carrillo, E., Ruiz-Anchondo, T.J., Báez-González, J.G. and Meléndez-Pizarro, C.O. “Effect of extrusion cooking on bioactive compounds in encapsulated red cactus pear powder”, *Molecules*, vol. 20, 2015, p.p. 8875-8892.

Narváez-Flores, M., Sánchez-Madriral, M.A., Quintero-Ramos, A., Paredes-Lizárraga, M.A., González-Laredo, R.F. Ruiz-Gutiérrez, M.G., Piñón-Castillo, H.A. and Meléndez-Pizarro, C.O. “Ultrasound assisted extraction modeling of fructans from agave (*Agave tequilana* Weber var. *Azul*) at different temperatures and ultrasound powers”, *Food and Bioproducts Processing*, vol. 96, 2015, pp. 232-239.

Sánchez-Madriral, M.Á., Neder-Suárez, D., Quintero-Ramos, A., Ruiz-Gutiérrez, M.G., Meléndez-Pizarro, C.O., Piñón-Castillo, H.A., Galicia-García, T. And Ramírez-Wong, B. “Physicochemical properties of frozen tortillas from nixtamalized maize flours enriched with β -glucans”, *Food Science & Technology, Campinas (Ciência e Tecnologia de Alimentos)*, vol. 35, 2015, p.p. 552-560.

Moreno-Castro, L.E., Quintero-Ramos, A., Ruiz-Gutiérrez, M.G., Sánchez Madriral, M.Á., Meléndez-Pizarro, C.O., Pérez-Reyes, I. and Lardizábal-Gutiérrez, “Nixtamalization assisted with ultrasound: effect on mass transfer and physicochemical properties of nixtamal, masa and tortilla”, *Revista Mexicana de Ingeniería Química*, vol. 14, 2015, p.p. 265-279.

Ruiz-Gutiérrez, M.G., Amaya-Guerra, C.A., Quintero-Ramos, A., Ruiz-Anchondo, T.J., Gutiérrez-Uribe, J.A., Baez-González, J.G., Lardizabal-Gutiérrez, D., and Campos-Venegas, K., “Effect of soluble fiber on the physicochemical properties of



cactus pear (*Opuntia ficus indica*) encapsulated using spray drying”, Food Science and Biotechnology, vol. 23, 2014, p.p. 755-763.

Sánchez-Madrigal, M.Á., Quintero-Ramos, A., Martínez-Bustos, F., Meléndez-Pizarro, C.O. and Ruiz-Gutiérrez, M.G., “Effect of different calcium sources on the antioxidant stability of tortilla chips from extruded and nixtamalized blue corn (*Zea mays L.*) flours, Food Science and Technology, vol. 34, 2014, p.p. 143-149.

Sánchez-Madrigal, M.Á., Quintero-Ramos, A., Martínez-Bustos, F., Meléndez-Pizarro, C.O., Ruiz-Gutiérrez, M.G., Camacho-Dávila, A., Torres-Chávez, P.I., and Ramírez-Wong, B., “Effect of different calcium sources on the bioactive compounds stability of extruded and nixtamalized blue maize flours”, Food Science and Technology, vol. 52, no. 5, 2014, p.p. 2701-2710.

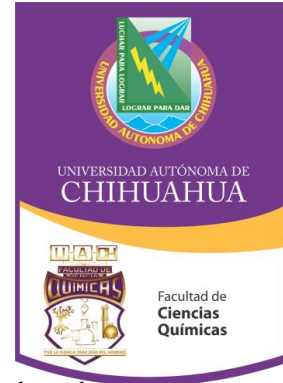
Sánchez-Madrigal, M.A., Meléndez-Pizarro, C.O., Martínez-Bustos, F., Ruiz-Gutiérrez, M.G., Quintero-Ramos, A., Márquez-Meléndez, R., Lardizábal-Gutiérrez, D., and Campos-Venegas, K., “Structural, functional, thermal and rheological properties of nixtamalised and extruded blue maize (*Zea mays L.*) flour with different calcium sources,” International Journal of Food Science and Technology, vol. 49, 2014, p.p. 578-586.

Ruiz-Gutiérrez, M.G., Quintero-Ramos, A., Meléndez-Pizarro, C.O., Talamás-Abbud, R., Barnard, J., Márquez-Meléndez, R., and Lardizábal Gutiérrez, D., “Nixtamalization in two steps with different calcium salts and the relationship with chemical, texture and thermal properties in masa and tortilla”, Journal of Food Process Engineering, vol. 35, 2012, p.p. 772-783.

Ruiz-Gutiérrez, M.G., Quintero-Ramos, A., Meléndez-Pizarro, C.O., Lardizábal-Gutiérrez, D., Barnard, J., Márquez-Meléndez, R., and Talamás-Abbud, R., “Changes in mass transfer, thermal and physicochemical properties during nixtamalization of corn with and without agitation at different temperatures”, Journal of Food Engineering, vol. 98, 2010, p.p. 76-83.

Conference Papers

Quintero-Ramos, A., Ruiz-Gutiérrez, M. G., Meléndez-Pizarro, C.O., Camacho-Dávila, A., Mendoza Guzmán, V. Talamás-Abbud, R., Escobedo- Cisneros, H., and Márquez-Meléndez, R. “Mecanismos de absorción de humedad y calcio durante el



proceso de nixtamalización”, Memorias del Simposium Internacional sobre Tecnologías Convencionales y Alternativas en el Procesamiento de Maíz, Agosto 2011, 978-607-7691-88-4, p.p. 18-25.

Moreno-Castro, L.E., Quintero-Ramos, A., Ruiz-Gutiérrez, M.G., Meléndez-Pizarro, C.O., Talamás-Abbud, R., Santana-Rodríguez, V., and Lardizábal-Gutiérrez, D., “Evaluación de propiedades físicas, químicas, térmicas y estructurales en masa y tortilla en nixtamalización asistida con ultrasonido”, Memorias del Simposium Internacional sobre Tecnologías Convencionales y Alternativas en el Procesamiento de Maíz, Agosto, 2011, 978-607-7691-88-4, p.p. 108-116.

FUNDED PROJECTS – SCIENCE AND TECHNOLOGY

Ruiz-Gutiérrez, M.G., Quintero-Ramos, A., Talamás Abbud, R., and Meléndez-Pizarro, C.O. “Strengthening and development of hot sauces through the automation of a line pilot plant for hot filling”, CONACyT, No. 230332, 2016.

Quintero-Ramos, A., Ruiz-Gutiérrez, M.G., Meléndez-Pizarro, C.O., Sánchez-Madrigal, M.Á., Márquez-Meléndez, R., Galicia-García, T., and Talamás-Abbud, R., “Grinding and classification with air to obtain soluble fiber high fractions from pericarp, by-product of the nixtamalization”, CONACyT, 2015.

Quintero-Ramos, A., Ruiz-Gutiérrez, M.G., Meléndez-Pizarro, C.O., “Full use of regional resources for obtaining food products and by-productos with value-added by applying food preservation processes and bioprocesses”, CONACyT, 2014.

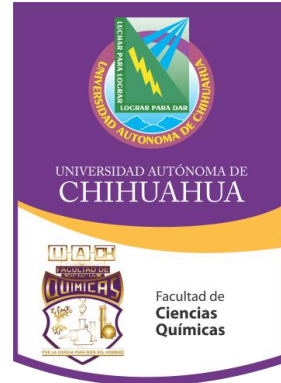
Quintero-Ramos, A., Ruiz-Gutiérrez, M.G., Meléndez-Pizarro, C.O., “A Use of innovative technologies for the production of functional products of blue corn flour: tortillas, totopos y tostadas nutritious, healthy and high shelf life”, PROMEP, 2013.

Quintero-Ramos, A., Ruiz-Gutiérrez, M.G., González-Laredo, R., Camacho-Dávila, A., Bautista-Genovese, D., and Meléndez-Pizarro, C.O., “Extraction and characterization of inulin from plants Sotol (*Dasyliirion spp.*) and agave (*Agave Tequilana Weber var. Azul*) by enzymatic methods assisted with ultrasound technologies”, CONACyT, 2013-2016.

PRESENTATIONS AND INVITED LECTURES

Facultad de Ciencias Químicas, circuito Universitario,
Campus Universitario # 2 , Chihuahua, Chih., C.P. 31125
Tels. (614) 236-60-00





COECyTeCH (Chihuahua) “Natural pigments as a potential source of dyes and antioxidants in the food industry”, 27/11/2014, Chihuahua, Mexico.

Universidad La Salle de Chihuahua, “Functional Food”, 05/05/2011, Chihuahua, Mexico.

PROFESSIONAL SERVICE

Symposium Co-Organizer

I National Meeting of Research and Innovation with the Productive Sectors and Services, 2014, Chihuahua, Chihuahua, Mexico.

International Symposium on Conventional and Alternative Technologies in Corn Processing, 2011, Chihuahua, Mexico.

Peer-Reviewed Articles for:

- Journal of Food Process Engineering

LANGUAGES

Spanish: Native Language

English: Exam Toefl