
Ernesto M. Hernandez

- Results-driven research leader with proven record of success in product development in foods and nutritional supplements.
 - Special skills: R&D Leadership; Project Planning and Execution; Food Engineering Teaching and Training; Outstanding record on R&D in Food and Supplements Products.
 - Certifications: Approved Chemist-American Oil Chemist's Society; Project Management and Leadership; GMP for Food and Dietary Supplements; HACCP Systems; R&D Personnel Management.
-

EDUCATION

1987 **Ph.D.** Food Engineering. University of Massachusetts, Amherst, MA.

1982 **M.S.** Food Science and Technology. Oregon State Univ., Corvallis, OR.

1978 **B.S.** Chemical Engineering. University of Guanajuato, Guanajuato, Mexico.

EXPERIENCE

- **Advanced Lipid Consultants, Tomball, TX • Jan 2013 - present.**

technicians and student research assistants. Duties include design and supervision of contract and grant research on oilseeds, fats and oils processing and food product development. Organize and edit manuals for practical short courses on: 1) Processing of Vegetable Oils, 2) Advanced Modification of Vegetable oils, 3) Manufacture of non-Trans Margarines and Shortenings, 4) Processing and Products of Specialty Oils. Instructor of courses in the Food Science Department: FSTC 635 Oil and Fat Food Products and FTCS 314 Food Analysis. Supervised dissertations of four graduate students.

- **Texas A&M University, College Station, TX • Sept 1992 - Aug 1997**

Associate Research Engineer.

Principal Investigator in fats and oils research projects. Duties included procurement and supervision of research contract projects, supervision of fats and oils lab and pilot plant activities. Conduct training courses for industry. Organize and edit manuals for practical short courses.

- **USDA Citrus and Subtropical Prod. Lab., Winter Haven, FL • Jan 1991 - Aug 1992**

Food Technologist

Duties included the design of processes to obtain value added products from fruits and vegetables. Examples of products developed: New all natural clouding agent for beverages; Edible coatings for packaging technology; Use of ultrafiltration, reverse osmosis and evaporation

BOOKS EDITED

Hernandez, E. and A. Kamal-Eldin (Book editors) 2013. "Processing and Nutrition of Fats and Oils". Wiley-Blackwell Publishing, New York, N.Y.

Hernandez, E and Hosokawa, M. (Book editors). 2011. "Omega 3 Oils: Applications in Functional Foods". AOCS Press, Urbana, IL.

SELECTED PUBLICATIONS

Hernandez, E. 2020. Pharmaceutical and Cosmetic Use of Lipids. Chapter in "Bailey's Industrial Oils and Fat Products" (F. Shahidi. editor). John Wiley & Sons, Inc., New York, NY.

Hernandez, E. 2020. Processing of Fats and Oils Using Membrane Technologies. Chapter in "Bailey's Industrial Oils and Fat Products" (F. Shahidi. editor). John Wiley & Sons, Inc., New York, NY.

Hernandez, E. 2015. Specialty Oils. Functional and Nutraceutical Properties. Chapter 4 in "Functional dietary lipids: food formulation, consumer issues and innovation for health" Edited by T.M Sanders, Elsevier-Woodhead Publ. London, UK.

Hernandez, E. 2015. *Omega 3 Oils and Blends*. Chapter in "Trait Modified Oils in Foods", Edited by F. Orthoefer and G. List, Chapter 11, pp169-197, Wiley-Blackwell Publishing, New York, N.Y.

Hernandez, E. 2014. Issues in fortification and analysis of omega-3 fatty acids in foods. *Lipid Technology*, 26(5), 103-105.

Hernandez, E. 2013. *Current Trends in the Consumption Fats and Foods*. Chapter in Processing and Nutrition of Fats and Oils. Hernandez, E. and A. Kamal-Eldin (Editors), Wiley-Blackwell Publishing, New York, N.Y.

Hernandez, E. 2013. *Current Processing Techniques for Fats and Oils*. Chapter in "Processing

Wiley-Blackwell Publishing, New York, N.Y.

Hernandez, E. 2013. *Role of Lipids and Essential Fatty Acids in Infant Diet*. Chapter in "Processing and Nutrition of Fats and Oils". Hernandez, E. and A. Kamal-Eldin (Editors), Wiley-Blackwell Publishing, New York, N.Y.

Hernandez, E. 2013. *Cosmetic and Pharmaceutical Properties of Fats and Oils*. Chapter in "Processing and Nutrition of Fats and Oils". Hernandez, E. and A. Kamal-Eldin (Editors), Wiley-Blackwell Publishing, New York, N.Y.

Hernandez, E. 2013. *Labeling and Health Claims of Fats and Oils in Foods*. Chapter in "Processing and Nutrition of Fats and Oils". Hernandez, E. and A. Kamal-Eldin (Editors), Wiley-Blackwell Publishing, New York, N.Y.

Hernandez, E. 2013. *Enrichment of baked goods with omega-3 fatty acids*. Chapter in "Food enrichment with omega-3 fatty acids" Jacobsen, C., Nielsen, N.S., Horn, A.F., and Sørensen, A.D.M. (Editors), Woodhead Publishing, Cambridge, England.

Hernandez, E. 2013. *Labelling and claims in foods containing omega-3 fatty acids*. Chapter in "Food enrichment with omega-3 fatty acids" Jacobsen, C., Nielsen, N.S., Horn, A.F., and Sørensen, A.D.M. (Editors), Woodhead Publishing, Cambridge, England.

Hernandez, E. 2011. *Processing of Omega-3 Oils*. Chapter in "Omega 3 Oils: Applications in Functional Foods." (Hernandez and Hosokawa, editors), AOCS Press, Urbana, IL.

Quezada, N. and Hernandez, E. 2011. *Synthesis and Properties of Structured Lipids with Omega 3s*. Chapter in "Omega 3 Oils: Applications in Functional Foods." (Hernandez and Hosokawa, editors), AOCS Press, Urbana, IL.

Hernandez, E. and L. de Jong. 2011. *Applications of Omega 3 Fats in Foods*. Chapter in "Omega 3 Oils: Applications in Functional Foods." (Hernandez and Hosokawa, editors), AOCS Press, Urbana, IL.

Rocha-Urbe, A and Hernandez. E. 2008. Effect of Conjugated Linoleic Acid and Fatty Acid Positional Distribution on Physicochemical Properties of Structured Lipids. J. of the American Oil Chemists' Society, 85, 997-1004.

Hernandez, E. 2008. *Structured Lipids as Delivery Systems* in "Delivery and Controlled Release of Bioactives in Foods and Nutraceuticals" (N. Garti, editor), Chapter 5. CRC Press, Boca Raton, FL.

Hernandez, E and Quezada, N. 2008. *Uses of Phospholipids as Functional Ingredients*. Chapter in: "Phospholipid Technology and Applications" (F.D. Gunstone, editor), Chapter 4, The Oily Press, Bridgewater, England.

Hernandez, E. 2005. *Pharmaceutical and Cosmetic Use of Lipids*. Chapter in "Bailey's Industrial Oils and Fat Products" (F. Shahidi . editor). Volume 6, Chapter 12, John Wiley & Sons, Inc., New York, NY.

Hernandez, E. 2005. *Production, Processing and Refining of Oils*. Chapter in "Healthful Lipids" (C. Akoh and O.M. Lai, eds.). pp 48-64, AOCS press, Champaign IL.

Hossen, M. and Hernandez. E. 2005. Phospholipase D-Catalyzed Synthesis of Novel Phospholipid- Phytosterol Conjugates. *Lipids*. 39(8), 777-782.

- Hossen, M. and Hernandez, E. 2005. Enzyme-catalyzed synthesis of structured phospholipids with conjugated linoleic acid. *Eur. J. Lipid Sci. Technol.* 107, 730–736
- G. Sunilkumar, L.M. Campbell, M. Hossen, J.P. Connell, E. Hernandez, A.S. Reddy, W. Smith, and K. S. Rathore. 2005. A comprehensive Study of the Use of a Homologous Promoter in Antisense Cotton Lines Exhibiting High Seed-Oleic Acid Phenotype. *J. Plant Biotech. J.*, 3, 319-330.
- Hernandez, E. 2005. *Concentration of Liquid Foods*. Chapter in “Food Engineering. Encyclopedia of life Support Systems” (G.V. Barbosa Canovas editor) pp. 447-459. UNESCO Publishing, Paris, France.
- Hernandez, E. 2004. *Cottonseed*. Chapter in Encyclopedia of Grain Sciences (C. Wrigley, H. Corke, C. Walker, eds.), pp 343-348. Elsevier Ed., Cambridge UK.
- Hernandez, E. 2004. *Filtration Techniques in Vegetable Oil Processing*. Chapter In “Nutritionally Enhanced Edible Oil Processing” (N. Dunford and H.B. Dunford, Eds.), pp. 161-177, AOCS press, Champaign Il.
- A. Rocha-Urbe and E. Hernandez. 2004. Solvent-Free Enzymatic Synthesis of Structured Lipids from Coconut oil and Tricaprylin with CLA. *J. Am Oil Chem. Soc.* 81, 685-689.
- A. Rocha-Urbe and E. Hernandez. 2004. Síntesis de ácido linoleico conjugado por isomerización alcalina usando propilenglicol como solvent, REVISTA MEXICANA DE INGENIERIA QUIMICA, 3-193-200
- Hernandez, E. 2004. Battle of the Omega3's: Marine vs Veggie Sources. *Functional Foods & Nutraceuticals*. July, pp 34-38.
- Hernandez, E. 2004. Infusing Foods with Fish Oils. *Functional Foods & Nutraceuticals*. May, pp 36-40.
- Hernandez, E. Lipid nutraceuticals. 2003. *Functional Foods & Nutraceuticals*. July-August, pp 38-50.
- Hernandez, E. 2003. *Fats and Oils Processing*. Chapter in: “Food Technology Report”. World Markets Research Centre. Pp. 68-70.
- Hernandez, E., S.J. Rathbone and K.C. Rhee (Editors). 2002. Vegetable Oil Processing Manual. Practical Short Course. Texas A&M University. College Station Texas.
- Hernandez, E., S.J. Rathbone and K.C. Rhee (Editors). 2002. Margarine Processing Manual. Practical Short Course. Texas A&M University. College Station Texas
- Rocha, A. and Hernandez, E. 2001. Food Applications of Structures Lipids with Conjugated Linoleic Acid. Proceedings of the 7th Conference of Food Engineering, 2001-AIChE-Annual Meeting, Reno, NV, USA, pp. 286-293.
- Hernandez, E. and M. Hossen. 2001. Design of Nutritional Food Blends with Functional Lipids. Proceedings of the 7th Conference of Food Engineering, 2001-AIChE-Annual Meeting, Reno, NV, USA, pp. 278-285.
- Hernandez, E. 2000. Essential Oils. Processing and Properties. Chapter in “Encyclopedia of

- Hernandez, E. 1999. Cottonseed Oil. Chemical and Physical Properties. Chapter 4.5 In "Cotton" (W. Smith, J.T. Cothren Eds.) John Wiley and Sons. 793-823.
- Hernandez, E. and Lusas, E.W. 1997. Trends in Transesterification of Cottonseed Oil. *Food Technology*, 51(5), 72-76.
- Lusas, E. and Hernandez, E. 1997. Isopropyl Alcohol. In *Technology and Solvents for Extracting Oilseeds and Nonpetroleum Oils* (P. Wan and P.J. Wakelyn, Eds.). pp 199-266. AOCS, Press, Campaign, IL
- Hernandez, E., S.J. Rathbone and K.C. Rhee. 1997. *Fats and Oils Modification Processes. Hydrogenation, Interesterification and Fractionation. Practical Short Course Manual.* Texas A&M University. College Station Texas.
- Chen, C.S. and Hernandez, E. 1997. Evaporation of liquid foods. In "Handbook of Food Engineering Practice". E. Rothstein, R.P. Singh and K. Valentas (Ed.). 211-252, CRC Ed. Co. Boca Raton, FL.
- Hernandez, E., Chen, C.S., Johnson, J., and Carter, R.D. 1995. Viscosity Changes in Orange Juice after Concentration and Evaporation. *J. Food Engineering*, **25**, 387-396.
- Hernandez, E. 1995. Emu Oil. Processing and Properties. *AEA Magazine*. 11, 6-9.
- Hernandez, E. 1994. Edible Coatings from Lipids and Resins. In "Edible Coatings and Films to Improve Food Quality" J. M. Krochta, E. A. Balwin, and Nisperos, M. O. (Ed.). Chapter 10. pp. 279-303 Technomic Publ. Co., Lancaster, PA.
- Hernandez, E., Chen, C.S., Shaw, P.E., Carter, R.D. and Barros, S. 1992. Ultrafiltration of Orange Juice: Effect on Soluble Solids, Suspended Solids and Aroma. *J. Agri. and Food Chem.* 40, 986- 988.
- Hernandez, E., Couture, R., Rouseff, R., Chen, C.S. and Barros, S. 1992. Evaluation of Ultrafiltration and Adsorption to Debitter Grapefruit Juice and Grapefruit Pulp Wash. *J. Food Sci.* 57(3), 664- 666, 670.
- Chen, C.S., Carter, R.D., Barros, S.M., Hernandez, E. and Nagy, S. 1991. Evaluation of Citrus Processing System for Passion Fruit Juice Concentration. *Proc. Fla. State Hort. Soc.* 104, 51- 54.
- Hernandez, E. and Baker, R.A. 1991. Candelilla Wax Emulsion: Preparation and Stability. *J. Food Sci.* 56(5), 1382-1383.
- Hernandez, E. and Baker, R.A. 1991. Turbidity of Beverages with Citrus Oil Clouding Agent. *J. Food Sci.* 56(4), 1024-1026.
- Hernandez, E., Baker and Crandall, P.E. 1991. Model to Evaluate Turbidity in Beverages. *J. Food Sci.* 56 (3), 747-750.
- Schwartzberg, H.G., Rosenau, J.R., Chavarria, V.M., Yanniotis, S., Biswal, R. and Hernandez, E. 1984. Food Evaporation Driven by Solar Concentrated Brines. in "Engineering and Food: Processing Applications" V2, pp. 1013-1021. Elsevier Publ.
-

WEBINARS AND VIRTUAL PRESENTATIONS.

Hernandez, E.M. 2020. Use of Modified Lecithin for Stabilization of Emulsions in Beverages.
<https://doi.org/10.21748/am20.183>.

Hernandez, E.M. 2020. Enhanced antioxidant activity of modified lecithin emulsions in beverages.
<https://doi.org/10.21748/am20.183>.

t w a _ nr cinr
 l at j22 7