

## **CURRICULUM VITA**

Moshe Raccach, PhD  
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### **Education**

Biotechnology	University of Wisconsin, 1978 (Short Course)
Ph.D.	Cornell University, Ithaca NY 1977
M.S.	The Hebrew University, Rehovot Israel 1972
B.S.	The Hebrew University, Rehovot Israel 1966

### **Area of Teaching and Research**

My area of teaching concentrates on Agribusiness Biotechnology and added value to Agribusiness commodities. My teaching is at both the graduate and the undergraduate levels.

My research revolves around the mathematical modeling of Food safety issues and the development of food safety management tools such as Hazard Analysis Critical Control Points.

### **Languages**

English  
French  
Hebrew  
Arabic  
Spanish

### **Position Held**

2011-Present	Emeritus Professor, ASU
2007	<b>Visiting professor</b> , Fulbright Senior Specialist Program, at the University St Kliment Ohridski Faculty of Biotechnological Sciences-Bitola, Macedonia (Two weeks)
2006-2011	Adjunct Professor, Chandler Gilbert Community College: Microbiology (BIO 205)
2005	Adjunct Professor, Rio Salado Online Nutrition Class

2003	<b>Visiting professor</b> at The Polytechnic University of Valencia, Valencia, Spain (Fall semester)
1985-2011	Arizona State University, <b>Associate Professor</b> , Microbiology and Foods Morrison School of Agribusiness and Resource Management
1980-1985	Arizona State University, <b>Assistant Professor</b> , Division of Agriculture
1982	University of Costa Rica, <b>Visiting Professor</b> , Dept. of Microbiology (Summer)
1978-1980	Microlife Technics, Sarasota, Florida, <b>Microbiologist</b> , food fermentations and cultures development
1977-1978	Oklahoma State University, <b>Post Doctorate</b>
1973-1975	Rupin Institute, Israel, <b>Lecturer</b>
1970-1975	Agriculture Res. Org. Volcani Center, Bet-Dagan Israel <b>Microbiologist</b> , Cryogenics and Pathogenic Bacteria
1973	Hadassah Medical School, Jerusalem, Israel <b>Microbiologist</b> , Microbial Membranes
1972	Hebrew University, Rehovot, Israel, <b>Instructor</b>
1967-1970	Logistics and Administration, <b>First Lieutenant</b>
1967	<b>Deputy Commander, Second Lieutenant</b>

### **Administrative Experience**

Chair

2006 – 2007 ASU Polytechnic Personnel Committee.

Member 1999- Present	Senate Executive Committee. Arizona State University Polytechnic
Ombudsperson 1999-Present	Arizona State University Polytechnic
Chair 1999-2007	Graduate Committee, Morrison School of Management and Agribusiness Arizona State University, Polytechnic
Co-Coordinator 1993	University Night - Cactus section of the Institute of Food Technologists
Coordinator 1984-1985	Continuing Education Seminars for Sanitarians.
Co-coordinator 1984	Agricultural Biotechnology Course for High School Teacher.
Chairman 1983-1984	Arizona Committee for Establishing an Affiliate of the International Association of Milk, Food, and Environmental Sanitarians .
First Lieutenant 1967-1970	Logistics and Administration.
Second Lieutenant 1967	Deputy Commander

### **International Activity**

Fulbright Senior Specialist 10/2007	University of Kliment Ohridski, Bitola Macedonia
India summer 2006	Studying the Food Cold Chain
Presenter, 1999	Food Safety Seminar, American University, Managua, Nicaragua.
Short Courses in Costa Rica 1989, 1990	Development of Technical Skills for Handling and Exporting Food Products.

Workshop Organizer 1986	Role of Metals in Industrial Fermentations. International Congress of Microbiology, (14th) Manchester England.
Visiting Professor Summer 1982	Development of Human Resources in Food Fermentation. Department of Microbiology, University of Costa Rica, San Jose, Costa Rica.
Visiting Professor & Organizer Summer 1974	The International Food Microbiology Seminar for Central American States, University of Costa Rica, San Jose, Costa Rica.

### **National and State Professional Service Activities**

Reviewer and Referee of articles submitted to the journals Meat Science and Journal of Food Preservation and Processing.

Member At Large      The Arizona Cactus section of the Institute of Food Technologists  
(2002/2003, spring  
2004, 2006/2007,2008)

Past Chair              The Arizona Cactus section of the Institute of Food Technologists.  
(2001/2002)

Chair                    The Arizona Cactus section of the Institute of Food Technologists.  
(2000/2001)

Arizona Institute of      Executive Committee  
Food Technologists      Member  
1997-1999

Institute of Food      Graduate Fellowship Jury.  
Technologists  
1992

American              Task Review for the National

Academy of Microbiology, 1988	Registry of Microbiologists.
American Public Health Association, 1987	Revising Methodology on Acid Producing Microorganisms.
American Society for Microbiology & Institute of Food Technologists 1983-1988	Committee on Food Microbiology Education.
American Meat Association Reciprocal Meats Conference.	Planning Committee for the 1982

### **Teaching Experience**

Applications of Biotechnology	Advance Food Science
Food & Industrial Microbiology	Advance Food Microbiology
Food Safety	Advance Food Biotechnology
Food & Industrial Fermentation	Food Processing
Agribusiness Technologies (Biotechnology)	Cultural Diversity in Foods
Management of Food Operations	Microbiology Laboratory Biology of Microorganisms
Nutrition	Predictive Microbiology

### **Honors/Distinctions**

15. The J. William Fulbright Scholarship Board and the U.S. Department of State – Award Certificate for participation in the Fulbright Senior Specialists Program in Macedonia. August 2008.

14. The Macedonian Scientific Association - Bitola, Plaque and Certificate October 2007
13. Arizona State University Polytechnic CET Committee, Honor 2005/2006.
12. Arizona State University 25 year Service Award. April 5, 2005
11. Institute of Food Technologists – Leadership Conference August 18-20, 2000.
10. The Morrison Leadership Award - April 22, 1995.
9. University/ College of Engineering and Applied Sciences 15 year Service Award March 21, 1995.
8. The Vice President for Student Affairs at Arizona State University recognized my Significant Contributions to the Quality of Life for Students at Arizona State University. February 6, 1992, Tempe, AZ.
7. The Costa Rican Coalition for Initiatives and Development and the US Agency for International Development (AID) presented me with a Distinction for organizing and participating in the seminar entitled: **Hygiene and Sanitation of Food Processing Plants**. August 10, 1990. San Jose, Costa Rica.
6. The Costa Rican Coalition for Initiatives and Development and AID presented me with a Distinction for organizing and participating in the seminar entitled: **Elements of Chemical and Microbiological Quality Control for the Food Industry**. August 3, 1990. San Jose, Costa Rica.
5. The Costa Rican Coalition for Initiatives and Development and AID presented me with a Distinction for organizing and participating in the seminar entitled: **Biotechnology and Bioprocessing of Agroindustrial Products and the Potential for Export**. March 23, 1990. San Jose, Costa Rica.
4. A recognition, by the Arizona State University Vice President for Student Affairs for **collaboration with students**, August 30, 1989. Tempe, Arizona.

3. The Costa Rican Coalition for Initiatives and Development and AID presented me with a Distinction for organizing and participating in the seminar entitled: **Handling Perishables Products at the Airport**. November 15, 1989. San Jose, Costa Rica.
2. The Costa Rican Coalition for Initiatives and Development and AID presented me with a Distinction for organizing and participating in the seminar entitled: **Use of Low Temperatures to Preserve Agroindustrial Products for Export**. September 22, 1989. San Jose, Costa Rica.
1. The Costa Rican Coalition for Initiatives and Development and AID presented me with a Distinction for organizing and participating in the seminar entitled: **Techniques for High-Temperature Preservation of Agroindustrial Products**. July 28, 1989. San Jose, Costa Rica.

### **Publications**

#### **Texts**

8. Raccach, M. 1990. **Biotechnology of Foods**. *IFAIN*. San Jose, Costa Rica.
7. Raccach, M. 1990. **Microbiological Analyses of Foods**. *CINDE*. San Jose, Costa Rica.
6. Raccach, M. 1990. **Plant Hygiene**. *CINDE*. San Jose, Costa Rica.
5. Raccach, M. 1989. **Refrigeration and Freezing of agroindustrial Commodities**. *IFAIN*. San Jose, Costa Rica.
4. Raccach, M. 1989. **Principles of Canning agroindustrial Products**. *IFAIN*. San Jose, Costa Rica.
3. Raccach, M. 1989. **Handling Perishables**. *IFAIN*. San Jose, Costa Rica.
2. Juven, B. and **Raccach, M.** 1974. **Food Microbiology**. *The Agricultural Research Organization, Bet-Dagan, Israel and The University of Costa Rica*, San Jose, Costa Rica.
1. Juven, B. and **Raccach, M.** 1970. **The Microbiology of Frozen Foods**. 100pp.

#### **Chapters in Books**

3. **Raccach, M.** 1999. *Pediococcus*. In: *Encyclopedia of Food Microbiology* pp. 1641-1647 Academic Press Ltd., London, U.K.
2. **Raccach, M.** **Meat Starter Cultures**. Chapter 15 In: Nagodawithana, T. W. and Reed, G. 1998. *Nutritional Requirements of Commercially Important Microorganisms*. pp. 376- 411 Esteekey Associates, Inc. Milwaukee, WI.
1. Vedamuthu, E. R., **Raccach, M.**, Reddy, M. S., Seitz, E.W., and Glatz, B. 1992. **Acid Producing Microorganisms**. Chapter 15 In: *Compendium of Methods for the Microbiological Examination of Foods*. pp. 225-238 American Public Health Association, Washington, DC.

### **Manuals**

2. Righetti, T. L., Backhaus, R. A. **Raccach, M.** and Stutz, J. C. 1982. **Agricultural Biotechnology-Laboratory Manual**. *Division of Agriculture, Arizona State University*, Tempe, Arizona.
1. Juven, B. and **Raccach, M.** 1974. **Food Microbiology Laboratory Manual**. *The Agricultural Research Organization*, Bet Dagan, Israel and *The University of Costa Rica* San Jose, Costa Rica.

### **Patents**

4. Raccach, M. 1985. **Fermentation composition using a selected *Lactobacillus***. *U.S. Patent* 4,514,424. April 30, 1985
3. Raccach, M. 1983. **Fermentation method using a selected *Lactobacillus***. *U.S. Patent* 4,407,828. October 4.
2. Raccach, M. 1982. **Method for fermenting vegetables**. *U.S. Patent* 4,342,786. August 3.
1. Raccach, M. 1981. **Method and bacterial composition for fermenting meats**. *U.S. patent* 4,303,679. December 1.

### **Non Refereed Publications**

1. Raccach, M. 2006. The Nuts and Bolts of Genetically Engineered (Modified) Foods: A US Perspective. **MSABR Website**, working paper # MSABR 06-01.



### **Refereed Journal Publications**

46. Raccach, M., Laine G. and Mohamed S. 2010. **Modeling the Survival of *Listeria monocytogenes* in Frozen Baby Food.** In preparation for *Food Microbiol.*

45. Raccach M. and Carlson E. 2010. **Modeling the Response of *Salmonella Muenchen* in Orange Juice**. Published Online: Nov 23 2009. DOI: 10.1111/j.1745-4549.2009.00385.x  
*J. Food Processing & Preservation*  
<http://www3.interscience.wiley.com/journal/122452918/issue>
44. Raccach M., Johnson, J., Tielbur G., Geshell D., Holt J. 2008. **The Fate of the Fecal Coliform, *Escherichia coli*, in Frozen Baby Foods**. *J. of Food Technol.* (Medwell). 6 (2): 80-85.
43. Raccach M. and Mellatdoust M. 2007. **The Effect of Temperature on Microbial Growth in Orange Juice**. *J. Food Processing & Preservation* 31 (2): 129-142
42. Raccach M. and Tilley H. R. 2006. **Thermal Inactivation of the Frozen Thawed Traditional Meat Starter Culture, *Pediococcus pentosaceus*, in a Meat Model System**. *Meat Science*. 72 (4): 751-756.
41. Raccach, M., Bamiro, T., Clinch, J., Combs, G., Gierczynski, A. and Karam, R. 2004. **Natural fermentation of wheat flours**. *Food Control*. 15: 191-195.
40. Raccach, M., Bamiro, T., Clinch, J., Combs, G., Gierczynski, A. and Karam, R. 2002. **Frozen storage of *Escherichia coli* O157:H7 in a vegetable broth**. *Food Control*. 13: 381-385.
39. Raccach, M. and Tully, T. 1999. **The fermentation of whole-wheat flour by *Pediococcus pentosaceus***. *Food Science Technology International* 5: 243-249.
38. Raccach, M. 1998. **Analyses and predictions of the deterioration of comminuted beef**. *Food Control* 9: 261-265.
37. Raccach, M. and Henningsen, E. C. 1997. **The effect of chloride salts on *Yersinia enterocolitica* in meat**. *Food Microbiol.* 14: 431-438.
36. Raccach, M. and Bamiro, T. 1997. **The effect of temperature on the lactic acid fermentation of rye flour**. *Food Microbiol.* 14: 213-220.
35. Kumar, S. G. and Raccach, M. 1996. **The effects of temperature and manganese on the fermentation of whole wheat flour**. *Food Microbiol.* 13: 149-157.

34. Raccach, M. and Geshell, D. J. 1995. **The inhibition of Listeria monocytogenes in milk by dehydrated pediococcal spent medium.** *Food Microbiol.* 12:229-235.
33. Raccach, M. and Geshell, D. J. 1993. **The inhibition of *Listeria monocytogenes* in milk by pediococci.** *Food Microbiol.* 10:181-186.
32. Raccach, M. 1992. **Some aspects of meat fermentation.** *Food Microbiol.* 9:55-65.
31. Raccach, M. 1990. **The Dairy Industry in Arizona: Organization, Processing and Quality Control.** *Dairy Food San.* 10:218-222.
30. Raccach, M., McGrath, Rose and Daftarian, Helga 1989. **Antibiosis of some lactic acid bacteria including Lactobacillus acidophilus toward Listeria monocytogenes,** *Int. J. Food Microbiol.* 9:25-32.
29. Raccach, M. 1987. **Pediococci and Biotechnology.** *CRC Critical Rev. Microbiol.* 14:291-309.
28. Raccach, M. 1986. **Lactic acid fermentation using high levels of cultures and the fate of Staphylococcus aureus,** *J. Food Sci.* 51:520-521 & 523.
27. Raccach, M., Kovac, S. L. and Meyer, C. M. 1985. **Susceptibility of meat lactic acid bacteria to antibiotics,** *Food Microbiol.* 2:271-275.
26. Raccach, M., Morrison, M. R. and Farrier, C. E. 1985. **The School Food Service Operation : An Analysis of Health Hazards,** *Dairy Food San.* 5:420-426, 430.
25. Raccach, M., Planck, C. M. 1985. **Effect of chloride salts on the fermentative activity of meat lactic acid bacteria.** *Food Microbiol.* 2:103-106
24. Raccach, M. 1985. **Manganese and lactic acid bacteria.** *J. Food Prot.* 48:895-898
23. Raccach, M. and Marshall P.S. 1985. **Effect of manganese ions on the fermentative activity of frozen-thawed lactobacilli.** *J. Food Sci.* 50:664-667.
22. Raccach, M. 1984. **Method for selection of lactic acid bacteria and determination of minimum temperature for meat fermentations.** *J. Food Prot.* 47:670-671.

21. Raccach, M., Schilz, M. E. and Kovac, S. L. 1984 **Combined Effect of Monotertiary butylhydroquinone and sodium chloride on lactic acid bacteria.** *J. Food Prot.* 47:591-597
20. Raccach, M. 1984. **The antimicrobial activity of phenolic antioxidants in foods.** *J. Food Safety.* 6:141-170
19. Raccach, M. and Henningsen, E. C. 1984. **Role of lactic acid bacteria, curing salts, spices and temperature in controlling the growth of Yersinia enterocolitica.** *J. Food Prot.* 47:354-358.
18. Raccach, M. and Henningsen, E. C. 1982. **The antibacterial effect of tertiary tyhydroquinone against two genera of gram positive cocci.** *J. Food Sci.* 47:106-109.
17. Raccach, M. 1981. **Control of Staphylococcus aureus in a dry sausage by a newly developed meat starter culture and phenolic-type antioxidants.** *J. Food Prot.* 44:655-669.
16. Raccach, M. 1980. **Low temperature lactic acid bacteria for meat fermentation.** *Proc. 26th Europ. Meeting Meat Res. Workers.* Vol. 2:335-338.
15. Raccach, M. and Henrickson, R. L. 1980. **The bacteriological quality of meat from electrically stimulated carcasses.** *Proc. 26th Europ. Meeting Meat Res. Workers.* Vol. 2:70-73.
14. Raccach, M. and Baker, R. C. 1979. **Bacterial repressive action of meat starter cultures in pasteurized liquid whole egg.** *J. Food Sci.* 44:90-92.
13. Raccach, M. and Baker, R. C. 1979. **Fermented mechanically deboned Poultry meat and the survival of Staphylococcus aureus.** *J. Food Prot.* 42:214-217.
12. Raccach, M. and Baker, R. C. 1979. **The effect of meat lactic acid starter cultures on some properties of mechanically deboned poultry meat.** *Poultry Sci.* 58:144-147.

11. Raccach, M. and Baker, R. C., Regenstein, J. M., and Mulnix, E. J. 1979. **Potential application of microbial antagonism to extended storage stability of a flesh type food.** *J. Food Science.* 44:43-46.
10. Raccach, M. and Henrickson, R. L. 1979. **Microbial aspects of mechanical tenderization of beef.** *J. Food Prot.* 42:971-973.
9. Raccach, M. and Henrickson, R. L. 1979. **The combined effect of blade tenderization and electrical stimulation on some bovine muscles.** *J. Food Proc. & Pres.* 3:43-58.
8. Raccach, M. and Baker, R. C. 1978. **Microbial properties of mechanically deboned fish flesh.** *J. Food Sci.* 43:1675-1677.
7. Raccach, M. and Baker, R. C. 1978. **The formation of hydrogen peroxide by meat starter cultures.** *J. Food Prot.* 41:789-799.
6. Raccach, M. and Baker, R. C. 1978. **The role of meat lactic acid starter cultures as antispoilage and safety factors in cooked mechanically deboned poultry meat.** *J. Food Prot.* 41:703-705.
5. Raccach, M. and Henrickson, R. L. 1978. **The storage stability and the bacteriological profile of refrigerated ground beef from electrically stimulated hot boned carcasses.** *J. Food Prot.* 41:957-960.
4. Raccach, M. and Juven, B. J. 1976. **Effect of suspending and plating media on the recovery of Salmonella gallinarum following freezing and thawing.** *J. Food Technol.* 11:221-228.
3. Raccach, M., Rottem, S., and Razin, S. 1975. **Survival of frozen mycoplasmas.** *Appl. Microbiol.* 30:167-171.
2. Raccach, M. and Juven, B. 1973. **Studies of the recovery of frozen Salmonella gallinarum the roles of cooling rate, initial cell concentration and plating medium.** *J. Food Technol.* 8:211-216.
1. Raccach, M., Juven, B., and Henis, Y. 1971. **Variations in bacterial counts during the production of frozen green beans.** *J. Food Technol.* 7:417-421.

## Abstracts

24. Thor, E., Raccach, M. and Calzada A. 2006. Food Biosecurity and Safety Issues in the Americas International Food and Agribusiness Management Association, 16<sup>th</sup> World Symposium Buenos Aires. June 10 -13, 2006
23. Raccach, M. 2000. Frozen Storage of *Escherichia coli* O157:H7 in a vegetable broth. Food Safety Objectives – Public Health, HACCP and Science. Ceres Forum. Georgetown University, Washington DC, December 4-5, 2000. p. 48.
22. Raccach, M. 1999. Critical Control Points in Food Safety. In; Food Protection for Export A Workshop organized by the North South Center of the University of Miami; The Food Science program, MSABR, Arizona State University East and UPANIC. Managua, Nicaragua, May 25, 1999.
21. Raccach, M. and Thorne G.1997. The identification of bacteria associated with food and dairy products. XI National and Central American Congress of Microbiology and the III Congress of the College of Pharmaceuticals and Chemicals of Guatemala. Guatemala City, Guatemala. p. VI- 2.
20. Raccach, M. , Bamiro, T., Clinch, T., Combs, G., Gierczynski, A. and Karam, R. 1996. **The lactic acid fermentation of wheat flours.** AACC, American Association of Cereal Chemists, 81st Annual Meeting, Baltimore, MD. pp. 193-194.
19. Bamiro, T. and Raccach M. 1995. **The effect of temperature on the spontaneous lactic acid fermentation (laf) of rye flour.** AACC, American Association of Cereal Chemists, 80th Annual Meeting, San Antonio, TX. pp. 205.
18. Kumar S. G. and Raccach M. 1994. **The effect of temperature and manganese on the natural fermentation of whole wheat flour.** AACC, American Association of Cereal Chemists, 79th Annual Meeting, Nashville, TN. pp. 178-179.
17. Raccach, M. and Tully, T. 1992. **Natural and *Pediococcus* induced fermentation of whole wheat flour.** IFTEC International Food Technology Exposition and Conference. The Hague, The Netherlands. pp. 174-175.

16. Raccach, M. 1991. **Chilled meat: Deterioration and shelf life.** *World Congress of Food Science and Technology*. Toronto, Canada. p. 279.
15. Raccach, M. and Geshell, D. G. 1990. **Pediococcal and bacteriocin induced antagonism towards Listeria monocytogenes in milk.** *Brief Communications and Abstracts of Posters of the XIII International Dairy Congress: Dairying in a changing World*, Montreal. p. 564.
14. Raccach, M. 1987. **Chloride Salts and the growth of Yersinia enterocolitica-A Mathematical Quality Control Model.** *World Congress of Food Science and Technology*. Singapore. 7:83.
13. Raccach, M. 1986. **Role of Metals in Industrial Fermentations.** *Abstracts Microbe 86-XIV. International Congress of Microbiology*. Manchester, England. P. 323.
12. Raccach, M. 1986. **Predictive modeling of lactic acid fermentation of meat and growth of Staphylococcus aureus.** *American Society for Microbiology Abstracts*. (P17) p. 278.
11. Raccach, M. 1985. **lactic acid fermentation using high levels of cultures and the fate of Staphylococcus aureus.** *Institute of Food Technologists (IFT)*. Program Abstracts. p. 98.
10. Marshall, P. S., Raccach, M. and Whysong, G. 1985. **The use of dynamic computer modeling in the prediction of shelf life of ground beef.** *4th International Congress on Engineering and Food*. Digest of Papers. p. 126.
9. Raccach, M. and Marshall, P. S. 1984. **Stimulation of lactic acid fermentation of carbohydrates by frozen-thawed lactobacilli.** *IFT*. Program Abstracts. p. 169.
8. Raccach, M. and Henningsen, E. C. 1983. **Effect of chloride salts and sodium nitrite on virulent Yersinia enterocolitica.** *IFT*. Program Abstracts. p. 209.
7. Raccach, M. and Planck, M. M. 1983. **Effect of antibiotics and chloride salts on frozen-thawed lactic acid bacteria.** *IFT*. Program Abstracts. p. 209.
6. Raccach, M. and Henningsen, E. C. 1982. **Inhibition and injury of Yersinia enterocolitica by lactic acid bacteria.** *IFT*. Program Abstracts. p. 135.

5. Raccach, M., Moilan, M. E. and Kovac, S. L. 1982. **Inhibition of the fermentative activity of lactic acid bacteria in meat by tertiarybutylhydroquinone.** *IFT*. Program Abstracts. p 158.
4. Raccach, M. and Henningsen, E. C. 1981. **The antibacterial effect of tertiarybutylhydroquinone against some Gram positive cocci.** *IFT*. Program Abstracts. pp. 164-165.
3. Raccach, M. and Henrickson, R. L. 1978. **Blade tenderization of some hot boned bovine muscles.** *IFT*. Program Abstracts. p. 156.
2. Raccach, M. Baker, R. C., Regenstein, J. M. and Mulnix, E. J. 1977. **The potential application of microbial antagonism to food systems.** *IFT*. Program Abstracts. p. 91.
1. Raccach, M., Mulnix, E. J., Baker, R. D., Helwig, L. R. and Regenstein, J. M. 1977. **Some physical and microbial properties of mechanically deboned fish flesh.** *IFT*. Program Abstracts. p. 145.

#### **Papers Presented at Local, National & International Meetings**

51. Raccach, M. and Nganje, W. 2008. Food Safety and Food Quality: A Workshop presented at Tecnologico de Monterrey at Sinaloa, Mexico. September 12-13, 2008.
50. Raccach, M. 2008. Predictive Modeling of the Response of Foodborne Disease Causing Bacteria in Foods. Presented at the spring meeting of the Cactus IFT section. January 31, 2008.
49. Thor, E., Calzada, A. and Raccach, M. 2006. Food Supply Chain Management: Biosecurity and Safety Issues. International Food and Agribusiness Management Association, 16<sup>th</sup> World Symposium Buenos Aires. June 10 -13, 2006.
48. Raccach, M. 2006. Food safety, Bird Flu and other issues: A lecture presented at the MEDIATION EDUCATION WORKSHOP FOR INDONESIAN PARTICIPANTS TRAINING AGENDA Rural Conflicts. February 2006.
47. Raccach, M. 2003. Genetically modified foods. The Polytechnic University of Valencia, Valencia, Spain.



46. Raccach, M. 2002. The Nuts and Bolts of Genetically Engineered (Modified) Foods. Confidence-Building Measures for Genetically Modified Foods (December 6, 2002). Center for The Study of Law, Science and Technology, Arizona State University College of Law, Tempe, AZ.
45. Critical Issues in Food Safety – A seminar presented to a Vietnamese Food Marketing delegation. October 21, 2002. ASUE.
44. Raccach, M. 2002. Food Safety: What is all the Fuss? Presented at the Fall meeting of the Cactus IFT section. September 17, 2002.
43. Backus, C. and Raccach M. 2002. Strategic Initiatives in Agribusiness Entrepreneurial Leadership Development Across The Americas ASUE & EARTH with. Lode Star Foundation Board of Director. February 19, 2002.43.
42. Raccach, M. 2000. Frozen Storage of *Escherichia coli* O157:H7 in a vegetable broth. Food Safety Objectives – Public Health, HACCP and Science. Ceres Forum. Georgetown University, Washington DC, December 4-5, 2000.
41. Raccach, M. 1999. Critical Control Points in Food Safety. In; Food Protection for Export A Workshop organized by the North South Center of the University of Miami; The Food Science program, MSABR, Arizona State University East and UPANIC. Managua, Nicaragua, May 25, 1999
40. **The identification of bacteria associated with food and dairy products.** XI National and Central American Congress of Microbiology and the III Congress of the College of Pharmaceuticals and Chemicals of Guatemala. November 1997 Guatemala City, Guatemala.
39. **The lactic acid fermentation of wheat flours.** AACC, American Association of Cereal Chemists, 81th Annual Meeting, Baltimore, MD. September 1996 (with Bamiro, T., Clinch, T., Combs, G., Gierczynski, A. and Karam, R.)
38. **The effects of temperature on the spontaneous lactic acid fermentation (laf) of rye flour.** AACC, American Association of Cereal Chemists, 80th Annual Meeting, November 1995. San Antonio, TX (with T. Bamiro).

37. **The effects of temperature and manganese on the natural fermentation of whole wheat flour.** AACC, American Association of Cereal Chemists, 79th Annual Meeting, October 1994. Nashville, TN (with G. Kumar).
36. **FDA's Food Safety Policy: Genetically Engineered Foods.** The National Food and Agriculture Policy Project Fall Conference, October 1994. Arizona State University.
35. **The effects of temperature and manganese on the natural fermentation of whole wheat flour.** Institute of Food Technologists, Cactus Section, May 1993. Tempe, Arizona (with G. Kumar).
34. **Modeling the growth of *Salmonella typhimurium* and *Staphylococcus aureus*.** Institute of Food Technologists, Cactus Section, May 1993. Tempe, Arizona (with T. Flannery).
33. **Metabolic and Structural injuries of frozen thawed *Listeria monocytogenes* in baby food.** Institute of Food Technologists, Cactus Section, May 1993. Tempe, Arizona (with S. Ahmed).
32. **The application of spreadsheet technology to thermoprocessing calculations.** Institute of Food Technologists, Cactus Section, May 1993. Tempe, Arizona (with S. Spear & G. Combs).
31. **Natural and *Pediococcus* induced fermentation of whole wheat flour.** International Food Technology Exposition and Conference. November 1992. The Hague, The Netherlands.
30. **Chilled meat: degradation and shelf life.** World Congress of Food Science and Technology. September-October 1991. Toronto, Canada.
29. **The effect of bacteriocin and bacteriocin-producing pediococci on Listeria monocytogenes in milk.** The XIII International Dairy Congress. 1990. Montreal, Canada.
28. **High temperature preservation of agroindustrial products.** Programa de Capacitacion PROCAP. 1989. San Jose, Costa Rica.
27. **An update on Listeria monocytogenes.** Arizona Dairy Technology Society 1988.

26. **Chloride salts and the growth of Yersinia enterocolitica - A Mathematical Quality Control Model.** World Congress of Food Science and Technology. September-October 1987. Singapore.
25. **Role of manganese in lactic acid fermentations.** Microbe 86-XIV International Congress of Microbiology. September 1986. Manchester, England.
24. **Predictive modeling of lactic acid fermentation of meat and growth of Staphylococcus aureus.** American Society for Microbiology. March 1986. Washington, DC.
23. **Lactic Acid Fermentation using high levels of cultures and the fate of Staphylococcus aureus.** IFT Annual Meeting, June 1985. Atlanta, Georgia.
22. **The use of dynamic computer modeling in the prediction of shelf life of ground beef.** 4th International Congress on Engineering and Food. July 1985. Alberta, Canada. (with G. Whyson).
21. **Stimulation of lactic acid fermentation of carbohydrates by frozen-thawed lactobacilli.** IFT Annual Meeting. June 1984. Anaheim, California.
20. **Food Safety - Truth or Fallacy.** Arizona IAMFES Meeting, June 1983. Tempe, Arizona.
19. **Effect of chloride salts and sodium nitrite on virulent Yersinia enterocolitica.** IFT Annual Meeting, June 1983. New Orleans, Louisiana.
18. **Effect of antibiotics and chloride salts on frozen-thawed lactic acid bacteria.** IFT Annual Meeting, June 1983. New Orleans, Louisiana.
17. **Effect of salt substitutes on Yersinia enterocolitica in meat.** Arizona Branch American Society for Microbiology-Annual Meeting, April 1983. Flagstaff, Arizona.
16. **Antimicrobial activity of phenolic antioxidants in foods.** Invited Paper. ASM Annual Meeting, March 1983. New Orleans, Louisiana.
15. **Inhibition and injury of Yersinia enterocolitica by lactic acid bacteria.** IFT Annual Meeting, June 1982. Las Vegas, Nevada.

14. **Inhibition of the fermentative activity of lactic acid bacteria in meat by tertiarybutylhydroquinone.** IFT Annual Meeting, June 1982. Las Vegas, Nevada.
13. **Control of Yersinia enterocolitica during meat fermentation.** Food Science Symposium.. January 1982. Arizona City, Arizona.
12. **Inhibition of lactic acid bacteria in a meat system by tertiary-butylhydroquinone.** Food Science Symposium. January 1982. Arizona City, Arizona.
11. **The antibacterial effect of tertiarybutylhydroquinone against some Gram positive cocci.** IFT Annual Meeting. June 1981. Atlanta, Georgia.
10. **Food safety problems in the Food Service Establishment.** Food Science Symposium. January 1981. Arizona City,
9. **Effect of tertiarybutylhydroquinone on a lactic acid bacterium.** Food Science Symposium. January 1981. Arizona City, Arizona.
8. **Low temperature lactic acid bacteria for meat fermentation.** 26th European Meeting of Meat Research Workers. August-September 1980. Colorado Springs, Colorado.
7. **The bacteriological quality of meat from electrically stimulated carcasses.** 26th European Meeting of Meat Research Workers. August-September 1980. Colorado Springs, Colorado.
6. **Blade tenderization of some hot boned bovine muscles.** IFT Annual Meeting, June, 1978. Dallas, Texas.
5. **Microbial problems with mechanically tenderized meat.** Spring Food Technology Conference, Oklahoma State University, March 1978. Stillwater, Oklahoma.
4. **Some physical and microbial properties of mechanically deboned fish flesh.** IFT Annual Meeting. June, 1977. Philadelphia, Pennsylvania.
3. **The potential application of microbial antagonism to food systems.** IFT Annual Meeting, June, 1977. Philadelphia, Pennsylvania.
2. **Studies on the recovery of frozen Salmonella gallinarum.** The International Symposium on Bacteriology. 1973. Jerusalem, Israel.

1. **Variations in bacterial counts during the processing of frozen vegetables.** The Annual Meeting of the Israeli Institute of Food Technologists. 1971. Haifa, Israel.

#### **Other Paper Presentations**

11. **The "Cook-Chill Tank" Technology.** Phoenix Veterans Administration Hospital. 1991.
10. **Microbiological Analytical Methods.** Costa Rican Industry. San Jose, Costa Rica. 1990.
9. **Hygiene and Sanitation of Food Processing Plants.** Costa Rican Industry. San Jose, Costa Rica. 1990.
8. **Biotechnology and Bioprocessing of Foods.** Costa Rican Industry. San Jose, Costa Rica. 1990.
7. **The antimicrobial activity of some lactic acid bacteria against Listeria monocytogenes.** Arizona Dairy Technology Society. 1989.
6. **Handling Perishables.** Costa Rican Airport Authorities. San Jose, Costa Rica. 1989.
5. **The effect of bacteriocin and bacteriocin producers against Listeria monocytogenes in milk.** Arizona Dairy Technology Society. 1988.
4. **Low Temperature Preservation of Agroindustrial Commodities for Export.** Costa Rican Industry. San Jose, Costa Rica. 1989.
3. **High Temperature Preservation of Agroindustrial Commodities for Export.** Costa Rican Industry. San Jose, Costa Rica. 1989.
2. **The Food Science curriculum in the School of Agribusiness and Environmental Resources.** Arizona Dairy Technology society. 1987.
1. **The School Food Service Operation: An Analysis of Health Hazards.** Food and Drug Administration. State Training Branch. Institutional Food Service. 1986.

#### **Awards/Research Proposals**

- Developing a Food Supply Chain Management Concentration at ASU's Morrison School of Management and Agribusiness USDA HEC Grant \$149,972.00  
Roger W. Hutt, William Nganje, Moshe Raccach, and Paul Skilton, 2/1/08
- Advancing the Food Protection Plan: New Findings, New Curriculum  
USDA **International Science and Education Grants Program** (ISE) \$99,832  
Roger W. Hutt, William Nganje, Moshe Raccach, and Paul Skilton, 1/17/08
- 2006 India: Cold Chain Improvement Program Definitional Mission. Solicitation Number: USTDA-06-Q-21-143. Antonio R. Moreira, Mark Spinoglio, Moshe Raccach and Elia D. Cossis (CoPIs) SPI USA, Inc 5523 Research Park Drive, Suite 325, Baltimore, MD 21228. Awarded \$48,367.00
- 2006/2009 Trade, Investment and Intellectual Property Rights Training And Education For Indonesia. E. Thor Pi. U.S. Information Agency (USIA). \$1,300,000.
- 2006/2009 Professional Exchange Program Focusing on Educational and Cultural Opportunities for Responsible Governance, Growth, Quality of Life, and Competitiveness for Ecuador and America's Southwest (Theme 1). (Thor & Stiles PI & CoPI, respectively) (Office of Citizen Exchanges of the Bureau of Educational and Cultural Affairs) ECA. E. Thor PI. \$248,000.
- The survival of *Salmonella muenchen* in unpasteurized orange juice. A follow up study to the 1999 outbreak associated with Sun Orchard. M. Raccach and E. Carlson (2005/2006). In like support: Orange juice and access to facility.
- New Agribusiness Products and Teaching Materials Through Cross Disciplinary, Learning, Consumer Research & Industry Partnership. 2/05. Higher Education Challenge Grant, USDA. Proposal # 05073306. For 8-1-05 to 7-31-07. \$149,135. Co PI.
- Food Export Project: Creating A Global Communication Network To Grow American Food Market. 7/04. Mid America International Agri-Trade Council (MIATCO). Proposal # 05012093. For 8-1-04 to 7-31-08. \$1,394,046. Co PI

- Project Hestia's Hearth Providing New Educational and Academic Curriculum and Opportunities for the New Millennium – Implementation Project. I am the PI. Budget: \$243757.4 for 3 years starting October 2004
- Strategic Initiatives In Agribusiness Entrepreneurial Leadership Development Across The Americas ASUE & EARTH with Raymond Marquardt, Jim French and Chuck Backus. Submitted to Lode Star Foundation. February 19, 2002. \$47,752.00.

### **Popular Publications, Presentations and Appearances**

22. Gilbert Republic. Food Safety Research. November 3, 2007.
21. Tera Television Bitola Macedonia Interview on Food Safety issues. October 2007
20. **Irradiation of Foods.** *KFYI 910 AM* (On the Bob Mohan Radio Talk Show, Fifty Minutes). February 24, 2000.
19. **The Need for Refrigeration of Foods.** *FOX TV 10*, March 29, 1999.
18. **E. coli Scare** *KNXV-TV ABC Channel 15*, August 28, 1997.
17. **Sun Tea.** *KPNX-TV-NBC Channel 12*, November 29, 1995.
16. **Sanitary Quality of Ice Tea.** *KPNX-TV-NBC Channel 12*, November 15, 1995.
15. **Coliform Bacteria in Frozen Soft Served Desserts .** *KTVK-TV channel 3*, July 26, 1995.
14. **Food Safety and Food Borne Diseases: An Hour Long Interview.** *KKFR Radio FM 92.1*, July 16, 1995.
13. **Quality of meats: Microbiology.** *KNXV-TV-ABC channel 15*, May 19, 1995.
12. **Microbiological survey of fish quality - One year later.** *KTVK-TV-ABC channel 3*, February 18, 1993.
11. **Microbiological survey of fish quality.** *KTVK-TV-ABC channel 3*, February 25 & 26, 1992.

10. **"Predicting the shelf life of refrigerated beef."** Press Release by the *University News Bureau*. 1987.
9. **"Summer and its effect on food."** *Arizona Republic*. June 1986.
8. **"Spoilage of Meat."** *Phoenix Gazette*. May 1986.
7. **Irradiated Foods.** *Scottsdale Progress*. May 1986.
6. **"Agriculture Offers Food Technology Programs".** *Technical Horizons*. Fall 1985.
5. Raccach, M. 1985. **Kansas to test culture for Salmonella.** *The Kansas City Times*.
4. Raccach, M. 1981. **Bacteria may extend the shelf life of food products.** *The Arizona Republic*.
3. Raccach, M. and Henrickson, R. L. 1978. **Mechanical tenderization of electrically stimulated muscles.** *Animal Science Research Report, Agricultural Experiment Station, Oklahoma State University and USDA*.
2. Raccach, M. and Henrickson, R. L. 1978. **The storage stability of electrically stimulated hot boned refrigerated ground beef.** *Animal Science Research Report. Agricultural Experiment Station, Oklahoma State University and USDA*.
1. Baker, R.C., Regenstein, J. M., Raccach, M., and Darfler, J. M. 1977. **Frozen minced fish - Development of products from minced fish; Booklet 3.** *New York Sea Grant Institute, State University of New York. Albany, New York*.