

DONALD J. MCMAHON

PROFESSIONAL EXPERIENCE

Utah State University, Department of Nutrition and Food Sciences

2007 – Present Director, Western Dairy Center
2006 – Present Director, Gary Haight Richardson Dairy Products Laboratory
1996 – Present Professor, Dairy Processing and Chemistry, Nutrition, Dietetics and Food Sciences Dept, Utah State University.
1993 – 2002 Director, Western Dairy Center
1992 – 1993 Visiting Industry Fellow, Victorian College of Agriculture and Horticulture - Gilbert Chandler, Werribee, Victoria, Australia. (Sabbatic)
1992 – 1996 Associate Professor, Nutrition and Food Sciences Dept, Utah State University
1992 – 1992 Acting Head, Nutrition and Food Sciences Dept, Utah State University
1987 – 1992 Assistant Professor, Nutrition and Food Sciences Dept, Utah State University

Other

1983 – 1987 Research Scientist & Group Leader, Kraft Foods (Australia)
Port Melbourne, Victoria, Australia.
1979 – 1983 Research Assistant (Ph.D), Nutrition and Food Sciences,
Utah State University, Logan, Utah.
1976 – 1979 Technical Officer, Department of Applied Chemistry
Royal Melbourne Institute of Technology, Melbourne, Australia.
1974 – 1976 Chemist, Chemical Research Laboratories
Olympic Tyre and Rubber Co., West Footscray, Victoria, Australia.

EDUCATION – COLLEGE LEVEL

Ph.D. (Nutrition & Food Sciences) 1983 Utah State University, Logan, Utah
Dissertation: Enzymic milk coagulation: Casein micelle aggregation and curd formation
B. Appl. Sci. (Applied Chemistry) 1978 Royal Melbourne Institute of Technology
Melbourne, Australia
Dp. Appl. Sci. (Applied Chemistry) 1973 Warrnambool Institute of Advanced Education
Warrnambool, Victoria, Australia

AWARDS

ADSA Most Cited Dairy Foods Paper in Journal of Dairy Science Award, 2011
ADSA International Dairy Foods Association Research Award in Dairy Foods Processing, 2007
Utah Academy of Arts and Sciences Distinguished Service Award for service to the sciences, 2001.
ADSA Gist-brocades Award for outstanding contribution to understanding cheese structure and functionality, 1999.

PROFESSIONAL ACTIVITIES

Co-organizer, Global Cheese Technology Forum, 2011
Co-organizer, Utah State University Artisan Dairy Day, 2010, 2011
Chair, IFT Bonneville Section, 1992, 2002, 2009
Co-Leader, US Cheese Research Expert Group, Dairy Management Inc.
Chair, Suppliers Night Food Expo, IFT Bonneville Section, 2004-2008

Updated: November 15, 2011

Co-organizer and instructor, Utah State University Cheese Short Courses, 1994 - present.
Winder Professorship, Nutrition and Food Sciences Dept, Utah State University, 1999-2001.
Co-organizer, Biennial Cheese Industry Conference, 1994-2009.
Member, ADSA National Milk Producers Federation Richard M. Hoyt Award Selection Committee, 1995-1998; ADSA Milk Industry Foundation/Kraft General Foods Inc., Teaching Award Selection Committee, 1994-1997; ADSA Research Committee, 1992-96
Ad hoc reviewer for: J. Food Sci., J. Dairy Res., J. Food Biochem., J. Ag. Food Chem., J. Dairy Sci., Food Structure, Australian J. Dairy Technol, Int. Dairy J., LWT Food Sci. Technol.
Editorial Board, Egyptian Journal of Dairy Science, 1994-2000
Co-organizer, Ultra-High Temperature Processing of Milk Symposium, 1992, 1994.
Member, National Dairy Promotion and Research Board Science Advisory Committee, 1992-93
Reviewer, Research Center Program Proposals, Fonds pour la Formation de Chercheurs Et L'aide à la Recherche, Québec, Canada, 1991.
Editorial Board, Journal of Dairy Science, 1989-1995.
Member, ADSA Dairy Foods Division, Milk Protein and Enzymes Committee, 1989-Present.

AREAS OF RESEARCH INTEREST

Study of proteins in milk and effects of processing on their structure and function. This includes the colloidal structure of casein micelles, changes that occur in milk proteins during the manufacture of cheese and cultured dairy products, the role of milk proteins in the functional properties of cheese, membrane fractionation of milk, and the stability of ultra-high temperature processed milk beverages.

AREAS OF TEACHING

Combining an understanding of food chemistry with an interest in dairy processing. This has included teaching food chemistry (1988-1992), dairy chemistry (1988-1990), food fascinations-an introduction to food science (1994-95), food: earth to mars-an integrated science course (new course, 1997), food, technology, and health-a science depth course (new course, 1999-2006), dairy processing (2004-ongoing), cheese science (new course, 2008-ongoing), ice cream and cheese shortcourses.

GRADUATED STUDENTS

Wadhwani, R. 2012. Investigating the strategies to improve the quality of low-fat mozzarella and cheddar cheeses, Ph. D.
Lance, R. M. 2011. Effect of adjunct cultures, sodium gluconate, and ripening temperature on low-fat cheddar cheese flavor, MS.
Larsen, K. S. 2009. Effects of starch addition on low fat rennet curd properties and their partitioning between curd and whey, M.S.
Adams, S. 2008. Mechanisms of nutrition bar hardening: effect of hydrolyzed whey protein and carbohydrate source, M.S.
Rasmussen, T. 2007. Texture profile analysis and melting in relation to proteolysis as influenced by aging temperature and cultures in cheddar cheese, M. S.
Singleton, T. J., 2007. The effect of exopolysaccharide producing *Streptococcus thermophilus* MR1C on functionality in high moisture cheddar-type cheese, M.S.
Paulson, B. M., 2004. Influence of sodium chloride, calcium, moisture, and pH on the structure and functionality of nonfat directly acidified Mozzarella cheese, M.S.

- Oommen, B. S., 2004. Casein supramolecules: structure and coagulation properties, Ph. D.
- Moyes, B. L., 2003 Correlation between the USU stretch test and the pizza fork test, M.S.
- Fife, R. L. 2003. The influence of fat and water on the melted cheese characteristics of mozzarella cheese. Ph.D.
- Pastorino, A. J. 2003 Effect of chemical parameters on structure-function relationships in cheese, Ph.D.
- White, S. 2002. The effect of *Lactobacillus helveticus* and *Propionibacterium freudenreichii* ssp. *Shermani* combinations on propensity for split defect in Swiss cheese, M.S.
- Perry, D., 2000. The effect of exopolysaccharide-producing cultures on the moisture retention and functional properties of low fat mozzarella cheese, M.S.
- Stone, R., 1999. A study of the effects of proteolytic adjunct cultures on the physical and functional properties of low-fat Mozzarella cheese, M.S.
- Orme, B. J., 1998. Improving fat retention and texture in low-moisture cheese manufactured from ultrafiltered milk, Ph.D.
- Venkatachalam, N. 1997. A study of the interactions between milk proteins and soy proteins, Ph.D.
- LeFevre, M.J. 1995. Improved control of cheese manufacture through vat monitoring of coagulation parameters using the hot wire probe, Ph.D.
- Hekmat, S. 1995. Effects of iron fortification on microbiological, chemical, physical, and organoleptic properties of yogurt, Ph.D.
- Rice, W.H. 1995. The effect of iron fortification on the chemical, physical, and sensory properties of mozzarella cheese, M.S.
- Alleyne, M.C. 1994. Fate of β -lactoglobulin and other milk proteins after ultra-high temperature processing of milk, Ph.D.
- Elilaly, M. 1994. Influence of ultra-high temperature process parameters on age gelation of milk concentrate, M.S.
- Smith, M. 1994. Manufacture dairy dessert from ultra-high temperature milk concentrate, M.S.
- Du, H. 1994. The mechanism of acid coagulation of milk, M.S.
- Raynes, R. 1993. Influence of process parameters in the manufacture of cottage cheese curd from ultrafiltered milk, M.S.
- Olsen, D.W. 1992. Zeta-potential of casein micelles as a factor in age gelation of UHT sterilized concentrated milk, M.S.
- Venkatachalam, N. 1992. The role of lactose in the age gelation of ultra-high temperature processed concentrated milk, M.S.
- Hekmat, S. 1991. Survival of *Lactobacillus acidophilus* and *Bifidobacteria bifidum* in ice cream for use as a probiotic food, M.S.
- Yousif, B. 1991. Effects of heat treatment of ultrafiltered milk on its rennet coagulation time and whey protein denaturation, M.S.

BIBLIOGRAPHY

Book Chapters

- McMahon, D. J., and B. S. Oommen. 2012. Casein micelle structure, functions and interactions. Chapter 6 in *Advanced Dairy Chemistry Proteins*, 4th edn., Vol. 1A P.F. Fox and P.L.H. McSweeney, eds, Kluwer Academic/Plenum Publishers, New York (In press).
- McMahon, D. J., and C. J. Oberg. 2011. Cheese: Pasta-filata cheeses: Low-moisture part-skim Mozzarella (Pizza cheese). Pages 737-744 in *Encyclopedia of Dairy Sciences*, 2nd ed., Vol. 1, J. W. Fuquay, P. F. Fox and P. L. H. McSweeney, eds, Academic Press, San Diego, USA.

Refereed Papers

Casein Micelle Structure:

- McMahon, D. J., and B. S. Oommen. 2012. Casein micelle structure, functions and interactions. Chapter 6 in *Advanced Dairy Chemistry Proteins*, 4th edn., Vol. 1A P.F. Fox and P.L.H. McSweeney, eds, Kluwer Academic/Plenum Publishers, New York (In press).
- McMahon, D. J., H. Du, W. R. McManus and K. M. Larsen. 2009. Microstructural changes in casein supramolecules during acidification of skim milk. *J. Dairy Sci.* 92 :5854–5867, doi: 10.3168/jds.2009-2324
- McMahon, D. J. and B. S. Oommen. 2008. Supramolecular structure of the casein micelle. *J. Dairy Sci.* 91:1709-1721.
- McMahon, D.J. and W.R. McManus. 1998. Rethinking casein micelle structure using electron microscopy *J. Dairy Sci.* 81:2985-2993.
- McMahon, D. J. and R. J. Brown. 1984. Composition, structure and integrity of casein micelles: a review. *J. Dairy Sci.* 67:499-512.

Nutritional Foods

- Ganesan, B., C. Brothersen and D. J. McMahon. 2012. Fortification of foods with omega-3 polyunsaturated fatty acids. *Critical Reviews in Food Science and Nutrition*. (Accepted for publication April 2011)
- Ganesan, B., C. Brothersen and D. J. McMahon. 2011. Fortification of Cheddar cheese with vitamin D does not alter cheese flavor perception *J. Dairy Sci.* 94 :3708–3714, doi: 10.3168/jds.2010-4020
- Oberg, C. J., L. V. Moyes, M. J. Domek, C. F. Brothersen, and D. J. McMahon. 2011. Survival of probiotic adjunct cultures in cheese and challenges in their enumeration using selective media. *J. Dairy Sci.* 94 :2220–2230, doi: 10.3168/jds.2010-3934
- McMahon, D. J., S. L. Adams, and W. R. McManus. 2009. Hardening of high protein nutrition bars and sugar/polyol-protein phase separation. *J. Food Sci.* 74:E312-321. doi: 10.1111/j.1750-3841.2009.01225.x
- Martini, S., J. E. Thurgood, C. Brothersen, R. Ward, and D. J. McMahon. 2009. Fortification of reduced-fat Cheddar cheese with n-3 fatty acids: Effect on off-flavor generation. *J. Dairy Sci.* 92:1876-1884
- Sharp, M. D., D. J. McMahon and J. R. Broadbent. 2008. Comparative evaluation of yogurt and low-fat cheddar cheese as delivery media for probiotic *Lactobacillus casei*. *J. Food Sci.* 73:M375-377.
- Khanal, R.C., Dhiman, T.R., Boman, R.L., and McMahon, D.J. 2007. Influence of supplementing dairy cows grazing on pasture with feeds rich in linoleic acid on milk fat conjugated linoleic acid (CLA) content. *Asian-Australasian J. Animal Sci.* 20:1374-1388.
- Allred, S. L., T. R. Dhiman, C. P. Brennand, R. C. Khanal, D. J. McMahon, and N. D. Luchini. 2006. Milk and cheese from cows fed calcium salts of palm and fish oil alone or in combination with soybean products. *J Dairy Sci.* 89:234-248.
- Khanal, R. C., T. R. Dhiman, A. L. Ure, C. P. Brennand, R. L. Boman, and D. J. McMahon. 2005. Consumer acceptability of conjugated linoleic acid-enriched milk and cheddar cheese from cows grazing on pasture. *J Dairy Sci* 2005 88: 1837-1847.
- Gustafson, D. R., McMahon, D. J., Morrey, J. and R. Nan. 2001. Appetite is not influenced by a unique milk peptide: caseinomacropeptide (CMP). *Appetite* 36:157-63.
- Dhiman, T. R., E.D. Helmink, D. J., McMahon, R. L. Fife, and M. W. Pariza. 1999. Conjugated linoleic acid content of milk and cheese from cows fed extruded oilseeds. *J. Dairy Sci.* 82:412-419.

- Hekmat, S. and D.J. McMahon. 1998. Distribution of iron between caseins and whey proteins in acidified milk. *Lebensm.-Wiss. u.-Technol (Food Sci. Technol.)* 31:632-638.
- Rice, W.H. and D.J. McMahon. 1998. Chemical, physical, and sensory characteristics of mozzarella cheese fortified using protein-chelated iron or ferric chloride. *J. Dairy Sci.* 81:318-326.
- Hekmat, S. and D.J. McMahon. 1997. Manufacture and microbial analysis of iron fortified yogurt. *J. Dairy Sci.* 80:3114-3122
- Hekmat, S. and D.J. McMahon. 1992. Survival of *Lactobacillus acidophilus* and *Bifidobacterium bifidum* in ice cream for use as a probiotic food. *J. Dairy Sci.* 75:1415-1422.

Lower Fat and Lower Salt Cheese Manufacture

- Brown, K. M., W. R. McManus and D. J. McMahon. 2012. Effects of starch addition on low-fat cheese curd and partitioning between curd and whey. *J. Dairy Sci.* 95:(Submitted)
- Wadhvani, R. and D. J. McMahon. 2012. Color of low-fat cheese influences flavor perception and consumer liking. *J. Dairy Sci.* 95:(Accepted Jan 1, 2012)
- Shrestha, S., J. A. Griender, D. J. McMahon and B. A. Nummer. 2011. Survival of *Salmonella* serovars introduced as a post-aging contaminant during storage of low-salt Cheddar cheese at 4, 10, and 21°C. *J. Food Sci.* 76:M616-M621, doi: 10.1111/j.1750-3841.2011.02430.x
- Shrestha, S., J. A. Griender, D. J. McMahon and B. A. Nummer. 2011. Survival of *Listeria monocytogenes* introduced as a post-aging contaminant during storage of low-salt Cheddar cheese at 4, 10, and 21°C. *J. Dairy Sci.* 94 :4329–4335, doi: 10.3168/jds.2011-4219
- Wadhvani, R., W. R. McManus and D. J. McMahon. 2011. Improvement in melting and baking properties of low fat Mozzarella cheese. *J. Dairy Sci.* 94 :1713–1723 doi: 10.3168/jds.2010-3952
- McMahon, D. J. 2009. Low fat cheese containing readily releasable oil upon heating. U.S. Prov. Patent Appl. 61/155,051, Feb 24, 2009.
- Johnson, M. E., R. Kapoor, D. J. McMahon, D. R. McCoy, and R. G. Narasimmon. 2009. Reduction of sodium and fat levels in natural and processed cheeses: scientific and technological aspects. *Comprehensive Rev. Food Sci. Safety*, 8(3):252-268.
- McMahon, D. J., B. M. Paulson and C. J. Oberg. 2005. Influence of calcium, pH and moisture on protein matrix structure and functionality in direct acidified nonfat mozzarella cheese. *J. Dairy Sci.* 88:3754-3763.
- Broadbent, J. R., D. J. McMahon, C. J. Oberg and D. L. Welker. 2001. Use of exopolysaccharide-producing cultures to improve the functionality of low fat cheese. *Int. Dairy J.* 11:433-439.
- McMahon, D. J. and C. J. Oberg. 2000. Manufacture of lower-fat and fat-free pizza cheese. U.S. Patent No. 6,113,953. Issued September 5, 2000.
- Perry, D., D.J. McMahon and C.J. Oberg. 1998. Manufacture of low fat mozzarella cheese using exopolysaccharide-producing starter cultures. *J. Dairy Sci.* 81:563-566
- Perry, D., D.J. McMahon and C.J. Oberg. 1997. Effect of exopolysaccharide-producing cultures on moisture retention in low fat mozzarella cheese. *J. Dairy Sci.* 80:799-805.
- Fife, R.L., D.J. McMahon and C.J. Oberg. 1996. Functionality of low fat mozzarella cheese. *J. Dairy Sci.* 79:1903-1910.
- McMahon, D.J., M.C. Alleyne, C.J. Oberg and R.L. Fife. 1996. Use of fat replacers in low fat mozzarella cheese. *J. Dairy Sci.* 79:1911-1921.
- Merrill, R.K., C.J. Oberg, W.R. McManus, M. Kalab, M. and D.J. McMahon. 1996. Microstructure and physical properties of a reduced fat Mozzarella cheese made using *Lactobacillus casei* adjunct culture. *Food Sci. Technol.* 29:721-728

Enzymatic Coagulation of Milk

- Yousif, B., McMahon, D.J. and K.M. Shammet. 1996. Milk clotting enzyme from *Solanum dobium*. plant. Int. Dairy J. 6:637-644.
- Shammet, K.M., Brown, R.J., and D.J. McMahon. 1992. Characteristics of macropeptides isolated from whole casein and κ -casein. Milchwissenschaft 47:615-619.
- Shammet, K.M., Brown, R.J. and D.J. McMahon. 1992. Proteolytic activity of some proteinases on macropeptides isolated from κ -casein J. Dairy Sci. 75:1380-1388.
- Shammet, K.M., Brown, R.J. and D.J. McMahon. 1992. Proteolytic activity of some milk-clotting enzymes on κ -casein J. Dairy Sci. 75:1373-1379.
- McMahon, D.J. and R.J. Brown. 1990. Development of surface functionality of casein particles as the controlling parameter of enzymic milk coagulation. Colloids and Surfaces. 44:263-279.
- McMahon, D. J. and R. J. Brown. 1985. Effects of enzyme type on milk coagulation. J. Dairy Sci. 68:628-632.
- McMahon, D. J., G. H. Richardson and R. J. Brown. 1984. Enzymic milk coagulation: Role of equations involving coagulation time and curd firmness in describing coagulation. J. Dairy Sci. 67:1185-1193.
- McMahon, D. J., R. J. Brown, G. H. Richardson and C. A. Ernstrom. 1984. Effects of calcium, phosphate, and bulk culture media on milk coagulation properties. J. Dairy Sci. 67:930-938.
- McMahon, D. J. and R. J. Brown. 1984. Enzymic coagulation of casein micelles: a review. J. Dairy Sci. 67:919-929.
- McMahon, D. J., R. J. Brown and C. A. Ernstrom. 1984. Enzymic coagulation of milk casein micelles. J. Dairy Sci. 67:745-748.
- McMahon, D. J. and R. J. Brown. 1984. Composition, structure and integrity of casein micelles: a review. J. Dairy Sci. 67:499-512.
- McMahon, D. J. and R. J. Brown. 1983. Milk coagulation time: linear relationship with the inverse of rennet activity. J. Dairy Sci. 66:341-34.
- McMahon, D. J. and R. J. Brown. 1982. Evaluation of the Formagraph for comparing rennet solutions. J. Dairy Sci. 65:1639-1642.

Cheese Chemistry and Functionality

- Fucà, N., D. J. McMahon, M. Caccamo, L. Tuminello, S. La Terra, M. Manenti and G. Licitra. 2012. Effect of brine composition and brining temperature on cheese physical properties in Ragusano cheese. J. Dairy Sci. 95:460-70.
- Rogers, N. R., D. J. McMahon, C. R. Daubert, T. K. Berry and E. A. Foegeding. 2010. Rheological properties and microstructure of Cheddar cheese made with different fat contents. J. Dairy Sci. 93:4565-4576, doi: 10.3168/jds.2010-3494
- Rogers, N. R., M. A. Drake, C. R. Daubert, D. J. McMahon, T. K. Bletsch, and E. A. Foegeding. 2009. The effect of aging on low, reduced, and full fat cheddar cheese texture. J. Dairy Sci. 92:4756-4772, doi: 10.3168/jds.2009-2156
- McMahon, D. J., M. M. Motawee, and W. R. McManus. 2009. Influence of brine concentration and temperature on composition, microstructure and yield of feta cheese. J. Dairy Sci. 92:4169-4179 doi:10.3168/jds.2009-2183.
- Motawee, M. M., J. Bauer, and D. J. McMahon. 2009. Survey of Aflatoxin M₁ in Cow, Goat, Buffalo and Camel Milks in Ismailia-Egypt Using ELISA. Bull. Environ. Contam. Tox. 83(5):766-769, doi: 10.1007/s00128-009-9840-3. Published online August 22, 2009
- Motawee, M. M., and D. J. McMahon. 2009. Fate of aflatoxin M₁ during manufacture and storage of feta cheese. J. Food Sci. 74 (5) T42-45. doi: 10.1111/j.1750-3841.2009.01158.x

- Pastorino, A. J., C. L. Hansen, and D. J. McMahon. 2003. Effect of sodium citrate on the chemical composition and structure-function relationships of cheese. *J. Dairy Sci.* 86:3113-3121.
- Pastorino, A. J., C. L. Hansen, and D. J. McMahon. 2003. Effect of pH on the chemical composition and structure-function relationships of cheese. *J. Dairy Sci.* 86:2751-2760
- Dave, R. I., Sharma, P. and D. J. McMahon. 2003. Melt and rheological properties of Mozzarella cheese as affected by starter culture and coagulating enzymes. *Le Lait* 83:61-77.
- Dave, R. I., C. J. Oberg and D. J. McMahon. 2003. Influence of coagulant level on proteolysis and functionality of mozzarella cheese made using direct acidification. *J. Dairy Sci.* 86:114-126.
- Pastorino, A. J., N. P. Ricks, C. L. Hansen, and D. J. McMahon. 2003. Effect of calcium and water injection on structure-function relationships of cheese. *J. Dairy Sci.* 86:122-131
- Pastorino, A. J., C. L. Hansen, and D. J. McMahon. 2003. Effect of salt on structure-function relationships of cheese. *J. Dairy Sci.* 86:60-69.
- Pastorino, A. J., R. I. Dave, C. J. Oberg, and D. J. McMahon. 2002. Temperature effect on structure-opacity relationships of nonfat mozzarella cheese. *J. Dairy Sci.* 85:2106-2113
- Dave, R. I., D. J. McMahon, J. R. Broadbent and C. J. Oberg. 2001. Reversibility of the temperature-dependent opacity of nonfat mozzarella cheese. *J. Dairy Sci.* 84:2364-2371.
- McMahon, D. J., R.L. Fife, and C. J. Oberg. 1999. Water partitioning in mozzarella cheese and its relationship to cheese meltability. *J. Dairy Sci.* 82:1361-1369
- Paulson, B.M., D.J. McMahon and C.J. Oberg. 1998. Influence of salt on appearance, functionality, and protein arrangements in nonfat mozzarella cheese. *J. Dairy Sci.* 81:2053-2064.

Food Microstructure

- McManus, W. R., Larsen, K. M., and D. J. McMahon. 2009. Identification of starch in milk protein gels using confocal microscopy. *Microscopy Today* 17(4):68.
- McManus, W., McMahon, D.J. and C.J. Oberg. 1993. High-resolution scanning electron microscopy of milk products: A new sample preparation procedure. *Food Struct.* 12:475-482.
- Oberg, C.J., W. McManus, and D.J. McMahon. 1993. Microstructure of Mozzarella cheese during manufacture. *Food Structure* 12:251-258.
- Alleyne, M.C., McMahon, D.J., Youssef, N.N. and S. Hekmat. 1993. An apparatus for a new microcube encapsulation of fluid milk in preparation for transmission electron microscopy. *Food Struct.* 12:21-30.
- Mistry, V. V., H. N. Hassan, R. J. Robison, D. J. McMahon, D. N. Holcomb and V. R. Harwalkar. 1992. Effect of lactose and protein on the microstructure of dried milk. *Food Structure* 11:73-82.

Cheese - General

- McMahon, D. J., and C. J. Oberg. 2011. Cheese: Pasta-filata cheeses: Low-moisture part-skim Mozzarella (Pizza cheese). Pages 737-744 in *Encyclopedia of Dairy Sciences*, 2nd ed., Vol. 1, J. W. Fuquay, P. F. Fox and P. L. H. McSweeney, eds, Academic Press, San Diego, USA.
- Drake, M. A., R.E. Miracle and D. J. McMahon. 2010. Impact of fat reduction on flavor and flavor chemistry of Cheddar cheeses. *J Dairy Sci.* 93:5069-5081, doi 10.3168/jds.2010-3346
- Carunchia Whetstine, M. E.; M. A. Drake, J. R Broadbent, and McMahon. 2006. Enhanced nutty flavor formation in Cheddar cheese made with a malty *Lactococcus lactis* adjunct culture. *J. Dairy Sci.* 89: 3277-3284
- White, S. L., J. R. Broadbent, C. J. Oberg and D. J. McMahon. 2003. Effect of *Lactobacillus helveticus* and *Propionibacterium freudenrichii* ssp. *shermanii* Combinations on Propensity for Split Defect in Swiss Cheese. *J. Dairy Sci.* 86:719-727.

- Broadbent, J. R., D. J. McMahon, D. L. Welker, C. J. Oberg and S. Moineau. 2003. Biochemistry, genetics and applications of Exopolysaccharide production in *Streptococcus thermophilus*: a review. *J. Dairy Sci.* 86:407-423.
- Fife, R. L., D. J. McMahon and C. J. Oberg. 2002. Test for measuring the stretchability of melted cheese. *J. Dairy Sci.* 85:3539-3545.
- Oommen, B. S., D. J. McMahon, C. J. Oberg, J. R. Broadbent and M. Strickland. 2002. Proteolytic specificity of *Lactobacillus delbrueckii* subsp. *bulgaricus* influences functional properties of mozzarella cheese. *J. Dairy Sci.* 85:2750-2758.
- Oberg, C. J., J. R. Broadbent, M. Strickland and D.J. McMahon. 2002. Diversity in specificity of the extracellular proteinases in *Lactobacillus helveticus* and *Lactobacillus delbrueckii* subsp. *Bulgaricus*. *Letters Appl. Microbiol.* 34:1-6.
- Petersen, B. L., R. I. Dave, D. J. McMahon, C. J. Oberg and J. R. Broadbent. 2000. Influence of capsular and rropy exopolysaccharide-producing *Streptococcus thermophilus* on mozzarella cheese and cheese whey. *J. Dairy Sci.* 83:1952-1956.
- Caldwell, S., D.J. McMahon, C.J. Oberg, and J.R. Broadbent. 1999. Induction and characterization of *Pediococcus acidilacti* temperate bacteriophage. *System. Appl. Microbiol.* 22:414-519.
- Irudayaraj, J., Chen, M., and D. J. McMahon. 1999. Texture development in cheddar cheese during ripening. *Canadian Ag. Eng.* 41:253-258.
- Chen, M., J. Irudayaraj, and D. J. McMahon. 1998. Examination of full fat and reduced fat cheddar cheese during ripening by Fourier transform infrared spectroscopy. *J. Dairy Sci.* 81:2791-2797.
- Low, D., J. A. Ahlgren, D. Horne, D.J. McMahon, C.J. Oberg and J.R. Broadbent. 1998. Role of *Streptococcus thermophilus* MR-1C capsular exopolysaccharide in cheese moisture retention. *Appl. Environ. Microbiol.* 64:2147-2151
- Caldwell, S., R.W. Hutkins, D.J. McMahon, C.J. Oberg, and J.R. Broadbent. 1998. Lactose and galactose uptake by genetically engineered *Pediococcus* species. *Appl. Microbiol. Biotechnol.* 49:315-320.
- Caldwell, S.L, D.J. McMahon, C.J. Oberg and J.R. Broadbent. 1995. Development and characterization of lactose-positive *Pediococcus* species for milk fermentation. *Appl. Environ. Microbiol.* 62:936-941.
- Merrill, R.K., C.J. Oberg and D.J. McMahon. 1994. A method for manufacturing reduced fat mozzarella cheese. *J. Dairy Sci.* 77:1783-1789

Ultra-high Temperature Milk

- Hillbrick, G.W., McMahon, D.J., and W. R. McManus. 1999. Microstructure of indirectly and directly heated ultra-high-temperature (UHT) processed milk examined using transmission electron microscopy and immunogold labelling. *Food Sci. Technol./Lebensmittel-wissen und-mittel* 32: 4886-494.
- Hillbrick, G.C., McMahon, D.J. and H. C. Deeth. 1998. Electrical impedance particle size method (coulter counter) detects the large fat globules in poorly homogenized UHT processed milk. *Australian J. Dairy Technol.* 53:17-21.
- Smith, M. and D.J. McMahon. 1996. Aseptic rennet coagulation of UHT milk concentrates for manufacture of a dairy dessert. *J. Dairy Sci.* 79:1513-1520.
- McMahon, D. J. 1995. Age Gelation of UHT Milk: Changes that occur during storage, their effect on shelflife and the mechanism by which age gelation occurs. Pages 315-326 in *Heat Treatments and Alternative Methods*, International Dairy Federation. Brussels, Belgium.
- Blake, M.R., Weimer, B.C., McMahon, D.J. and P.A. Savello. 1995. Sensory and microbial quality of milk processed for extended shelf life by direct steam injection. *J. Food Protection* 58:1007-1013.

- Venkatachalam, N., D.J. McMahon, and P.A. Savello. 1993. Role of protein and lactose interactions in the age gelation of ultra-high temperature processed concentrated skim milk. *J. Dairy Sci.* 76:1882-1894.
- McMahon, D.J., B.H. Yousif and M. Kalab. 1993. Effect of whey protein denaturation on structure of casein micelles and their rennetability after ultra-high temperature processing of milk. *Int. Dairy J.* 3:239-256.
- McMahon, D.J., P.A. Savello, R.J. Brown and M. Kalab. 1991. Effects of phosphate and citrate on gelation properties of casein micelles in renneted ultra-high temperature (UHT) sterilized concentrated milk. *Food Structure* 10 (1):27-36.

Membrane Concentrated Milk

- McMahon, D. J., B. J. Orme and C.A. Ernstrom. 1997. Improving fermentation and fat retention when making cheeses from ultrafiltered milk. *Aust. J. Dairy Technol.* 52:53-57.
- Orme, B.J., D.J. McMahon and R.K. Thunell. 1994. Variable growth and acid production by lactococci in whole milk concentrated by ultrafiltration and diafiltration. *J. Dairy Sci.* 77:3454-3459.
- El-Samragy, Y.A., C.L. Hansen and D.J. McMahon. 1993. Production of ultrafiltered skim milk retentate powder 2. Functional properties. *J. Dairy Sci.* 76:2886-2890.
- El-Samragy, Y.A., C.L. Hansen and D.J. McMahon. 1993. Production of ultrafiltered skim milk retentate powder 1. Composition and physical properties. *J. Dairy Sci.* 76:388-392.
- Shammet, K.M., McMahon, D.J., and C.A. Ernstrom. 1992. Effect of acidification and heat treatment on the quality of white soft cheese from ultrafiltered whole milk retentate. *Milchwissenschaft* 47 (9): 553-557.

Patents

- McMahon, D. J. 2009. Low fat cheese containing readily releasable oil upon heating. U.S. Prov. Patent Appl. 61/155,051, Feb 24, 2009.
- McMahon, D. J. and C. J. Oberg. 2000. Manufacture of lower-fat and fat-free pizza cheese. U.S. Patent No. 6,113,953. Issued September 5, 2000.

Invited Scientific Presentations (including Published Proceedings)

- McMahon, D. J. 2011. What happens when you lower salt in cheese. Oregon Dairy Industries Annual Meeting, Salem, Oregon, April 11-12th. http://www.oregondairy.org/downloads/2-AA_OSI_McMahon_2011.pdf
- McMahon, D. J., B. Ganesan, M. Qian and C. Brothersen. 2011. Electrical resistive heating vs. conventional UHT technologies. American Dairy Science Association Annual Meeting, July 10-14th, *J. Dairy Sci.* 94 (E-Suppl. 1): (Abstract 213).
- McMahon, D. J. 2010. Issues with lower fat and lower salt cheeses. IDF World Dairy Summit-Cheese Science 2010. Auckland, N.Z., Nov 9-11th.
- McMahon, D. J. 2010. Sodium reduction in natural cheese. Dairy Innovation Forum, Scottsdale, AZ., Feb 9-10th.
- McMahon, D. J. 2009. Low fat natural cheese research. Dairy Innovation Forum, Scottsdale, AZ, Feb. 18-19th.
- McMahon, D. J. 2008. Improving the quality of low fat cheese. 2008 Dairy Innovation Forum, Scottsdale, AZ, Feb 20-21.
- McMahon, D. J. 2007. Improving the quality of low fat cheese. ADSA Annual Meeting, *J. Dairy Sci.* 90 (Supp. 1):184 (Abstract 197)

- McMahon, D. J. 2007. Making low fat cheese. 2007 Dairy Innovation Forum, Scottsdale, AZ, Feb 14-15.
- McMahon, D. J., and C. J. Oberg. 2005. How cheese composition influences functionality. North Central Cheese Industries Association Annual Meeting, St. Cloud, MN, Oct 13th.
- McMahon, D. J. 2004. Understanding heat induced changes in dairy foods and ingredients. 6th Symposium on Advances in Dairy Product Technology- Concentrated & Dried Dairy Ingredients, California Polytechnic Dairy Technology Center, San Luis Obispo, Mar 1-2nd.
- McMahon, D. J., C. J. Oberg and J. R. Broadbent. 2003. Cultures and functionality of mozzarella cheese. Pages 72-78 *in* Proceedings of 7th Cheese Symposium, Cork, Ireland, Oct 20-21st.
- Oberg, C. J., and D. J. McMahon. 2002. Improving cheese functionality by modifying manufacturing procedures and culture selection. Page 34-45 *in* Proceeding of Marschall Cheese Seminar, Visalia, California, October 2-3rd.
- McMahon, D. J. 2000. How to make a truly “grate” cheese. National Cheese Forum, Dairy Management Inc., Rosemont, IL, Dec 5-6, 2000.
- McMahon, D. J. and C.J. Oberg. 1999. Influence of moisture migration on physical characteristics of mozzarella cheese. 1999 Wisconsin Cheese Industry Conference, La Crosse, Wisconsin, April 13-14.
- McMahon, D. J. and C.J. Oberg. 1999. Deconstructing Mozzarella. Dairy Industries Int. 64 (7): 23, 25-26.
- McMahon, D. J. 1998. Structure of casein micelles. Seminar presentation at Gilbert Chandler Campus of the University of Melbourne, Werribee, Victoria, Australia, July 8.
- McMahon, D. J. and C.J. Oberg. 1998. Influence of fat, moisture and salt on functional properties of mozzarella cheese. Aust. J. Dairy Technol. 53: 42-45.
- McMahon, D. J. and C.J. Oberg. 1998. How fat, moisture, salt and calcium influence Mozzarella cheese microstructure and functionality. Texel International Dairy Symposium, Telford, England, Nov 19.
- McMahon, D. J. 1998. Protein changes during storage of UHT milk and mechanism of age gelation. Opening Seminar for Milk Industry UHT Milk Processing Center, University of Queensland, Gatton, Queensland, Australia, July 13.
- McMahon, D. J. and C.J. Oberg. 1998. Role of calcium and sodium in functionality of Mozzarella cheese. 35th. Marschall Italian and Specialty Cheese Seminar, Madison, Wisconsin, Sep. 16-17th, 1998.
- McMahon, D.J. and W.R. McManus. 1998. Rethinking casein micelle structure using electron microscopy J. Dairy Sci. 81:2985-2993.
- McMahon, D. J. 1997. Influence of composition on functional properties of Mozzarella cheese. Cheese Technology Forum, Dairy Management Inc., Chicago, Dec 11-12th.
- McMahon, D. J. 1995. How the microstructure of mozzarella cheese is related to functional properties. Pages 18-26 *in* Proceedings 32nd Annual Marschall Italian and Specialty Cheese Seminar, Marschall Products, Rhone-Poulenc, Madison, Wisconsin.
- McMahon, D. J. 1994. Trends in Manufacture of Products: Milk Processing. Proceedings of the XXIV International Dairy Congress, Melbourne, Australia, Sept 19-22, 1994.
- McMahon, D. J., C.J. Oberg and W. McManus. 1993. A method for manufacturing reduced-fat Mozzarella Cheese. Pages 27-38 *in* Proceedings of 30th Marschall Italian Cheese Seminar, Marschall Products, Rhone-Poulenc, Madison, Wisconsin.
- McMahon, D. J., Oberg C., and W. McManus. 1993. Functionality of Mozzarella cheese. Australian J. Dairy Technol. 48(2):99-104.
- McMahon, D. J. 1993. Product development opportunities for dairy foods using ultra-high temperature processing. Dairy Industry Association of Australia New South Wales Division 8th Annual Conference, Sydney, New South Wales, Australia, June 23rd.

- McMahon, D. J. 1993. Using ultra-high temperature processing as a product development tool for dairy foods. Dairy Industry Association of Australia South Australian Division 8th Annual Conference, Adelaide, South Australia, Australia, June 8th.
- McMahon, D. J. 1993. Functional properties of mozzarella cheese. Dairy Industry Association of Australia Tasmanian Division 8th Annual Conference, Shearwater, Tasmania, Australia, May 14th.
- McMahon, D. J. 1993. Functional properties of mozzarella cheese. Dairy Industry Association of Australia, 8th Annual Conference, Melbourne, Victoria, Australia, April 1-2nd.
- McMahon, D. J. 1993. New Liquid UHT Products. Advances in UHT Products and Packaging Seminar, VCAH Gilbert Chandler, Werribee, Victoria, Australia.
- McMahon, D. J. and P.A. Savello. 1991. Thermal processing of milk; New dairy product concepts. 85th American Dairy Science Association Meeting, Utah State University, Logan, Utah, August 11-15th. J. Dairy Sci. 74(Supp. 1):82.
- McMahon, D. J. 1990. Dairy Education and Training - What are the objectives and needs for the future: Introductory Remarks. Proceedings of the XXII International Dairy Congress, Montreal, Canada, 3:2537-2538.
- McMahon, D. J. 1990. The challenge of developing new frontiers in dairy foods research. Keynote address at Dairy Symposium of The Australian and New Zealand Institutes of Food Science and Technology Food Pacific Conference, Bond University, Queensland, Australia, May 8, 1990.
- McMahon, D. J. 1984. Enzymic milk coagulation. Symposium on chemistry of milk protein coagulation. ADSA Annual meeting, Texas A & M University, Texas, U.S.A.

Presentations at Utah State University Conferences

- McMahon, D. J. and N. Farkye. 2011. Lower fat and lower sodium cheese research. Global Cheese Technology Forum, Reno, NV, Oct 11-12th.
- McMahon, D. J., Wadhwani, R., and W. R. McManus. 2009. Improving the baking and melting of low fat Mozzarella cheese. *In* Proceedings of 18th Biennial Cheese Industry Conference, Utah State University, Logan, Utah, May 5, 2009.
- McMahon, D. J., J. R. Broadbent and S. L. Larsen. 2006. Making low fat cheese: Cultures and procedures for low fat cheese. *In* Proceedings of Utah State University 17th Biennial Cheese Industry Conference, Sun Valley, Idaho, Aug 9th.
- McMahon, D. J. and B. S. Oommen. 2004. How protein fortification affects coagulation. *In* Proceedings of Utah State University 16th Biennial Cheese Industry Conference, Sun Valley, Idaho, Aug 11th.
- McMahon, D. J., A. J. Pastorino, C. J. Oberg and C. L. Hansen. 2002. Meeting your mozzarella targets by understanding cheese chemistry, structure and function. *In* Proceedings of 12th Utah State University Biennial Cheese Industry Conference, Sun Valley, Idaho, August 7th.
- McMahon, D. J. and C.J. Oberg. 1998. Influence of fat, moisture and salt on functional properties of mozzarella cheese. *In* Proceedings of 13th Utah State University Biennial Cheese Industry Conference, Logan, Utah, August 10-12th.
- Oberg, C.J., J.R. Broadbent and D. J. McMahon. 1998. Designing thermophilic cultures to solve cheesemaking problems. *In* Proceedings of 13th Utah State University Biennial Cheese Industry Conference, Logan, Utah, August 10-12th.

- McMahon, D. J., R. Fife and C.J. Oberg. 1996. Measuring stretch of mozzarella cheese. *In* Proceedings of 12th Utah State University Biennial Cheese Industry Conference, Logan, Utah, August 20-22nd.
- Oberg, C.J. and D. J. McMahon. 1996. Manufacture of fat-free mozzarella cheese. *In* Proceedings of 12th Utah State University Biennial Cheese Industry Conference, Logan, Utah, August 20-22nd.
- McMahon, D. J. 1996. Heat-induced changes in beta-lactoglobulin and the stability of UHT milk. *In* Proceedings of 2nd Biennial Ultra-High Temperature Processing of Milk Symposium, Utah State University, Logan, Utah.
- McMahon, D. J. 1994. Changes in casein micelle structure during UHT processing of milk. *In* Proceedings of Ultra-High Temperature Processing of Milk Symposium, Utah State University, Logan, Utah, March 2-3, 1994.
- McMahon, D. J., C.A. Ernstrom and B. Orme. 1994. Using low pressure homogenization to retain fat in cheese made using ultrafiltration. *In* Proceedings of 11th Utah State University Biennial Cheese Industry Conference, Logan, Utah, August 16-18th.
- McMahon, D. J., M.C. Alleyne, R. Fife and C.J. Oberg. 1994. Using fat replacers in low-fat Mozzarella Cheese. *In* Proceedings of 11th Utah State University Biennial Cheese Industry Conference, Logan, Utah, August 16-18th.
- McMahon, D. J. 1994. Changes in casein micelle structure during UHT processing of milk. *In* Proceedings of Ultra-High Temperature Processing of Milk Symposium, Utah State University, Logan, Utah, March 2-3, 1994.

Non-refereed Papers

- Drake, M. A, R. E. Miracle and D. J. McMahon. 2010. Influence of fat on flavour and flavour development in cheddar cheese. IDF World Dairy Summit-Cheese Science 2010. Auckland, N.Z., Nov 9-11th.
- McManus, W. R., Larsen, K. M., and D. J. McMahon. 2009. Identification of starch in milk protein gels using confocal microscopy. *Microscopy Today* 17(4):68.
- Oberg, C.J., J.R. Broadbent and D. J. McMahon. 1998. Developments in thermophilic starter cultures for cheese. *Aust. J. Dairy Technol.* 53:46-48.
- Caldwell, S.L, D. J. McMahon, C.J. Oberg and J.R. Broadbent. 1998. An alternative approach to phage control in Italian-type cheese. *European Dairy Magazine* 4:37-40
- Caldwell, S.L, D. J. McMahon, C.J. Oberg and J.R. Broadbent. 1998. An alternative approach to phage control in mozzarella cheese. *In* Proceedings of 13th Utah State University Biennial Cheese Industry Conference, Logan, Utah, August 10-12th.
- Broadbent, J. R., C. J. Oberg, and D. J. McMahon. 1998. Practical considerations in the use of exopolysaccharide-producing cultures. *Proc. Marschall/Rhodia Italian and Specialty Cheese Conference*. Rhodia, Inc., Madison, WI.
- McMahon, D. J., B. J. Orme and C.A. Ernstrom. 1997. Improving fermentation and fat retention when making cheeses from ultrafiltered milk. *Aust. J. Dairy Technol.* 52:53-57.
- McMahon, D. J. 1995. Age Gelation of UHT Milk: Changes that occur during storage, their effect on shelflife and the mechanism by which age gelation occurs. Pages 315-326 *in* Heat Treatments and Alternative Methods, International Dairy Federation. Brussels, Belgium.
- McMahon, D. J. 1993. Educational and a changing dairy industry. Dairy Research Development Corporation, Australia.
- Brown, R.J., McMahon, D. J. and D.G. Dalgleish. 1991. Utah State University Department of Nutrition and Food Science. *Food Sci. Technol. Today* 5:174-178.
- McMahon, D. J. 1990. A report on dairy foods research in Australia. Dairy Research Council, Australia.

- Brown, R. J. and D. J. McMahon. 1984. Monitoring of enzymatic milk coagulation with the DU-8B and a laboratory minicomputer. Beckman Technical Information, T1575-UV-84-13, California, U.S.A.
- McMahon, D. J. 1981. Thermal inactivation and coagulating properties of Marschall enzymes. Marschall Div., Miles Laboratories, U.S.A.

Scientific Presented Papers, Posters and Published Abstracts

- Miracle, M. A. Drake, and D. J. McMahon. 2011. The impact of sodium reduction on the flavor of full fat and low fat Cheddar cheese. American Dairy Science Association Annual Meeting, July 10-14th, J. Dairy Sci. 94 (E-Suppl. 1):56 (Abstract M174).
- McMahon, D. J., B. Ganesan, M. Qian and C. Brothersen. 2011. Electrical resistive heating vs. conventional UHT technologies. American Dairy Science Association Annual Meeting, July 10-14th, J. Dairy Sci. 94 (E-Suppl. 1):231 (Abstract 213).
- McMahon, D. J., C. J. Oberg, L. Moyes, R. E. Miracle, and M. A. Drake. 2011. Influence of salt-in-moisture of full fat and low fat cheddar cheese on microflora and flavor. American Dairy Science Association Annual Meeting, July 10-14th, J. Dairy Sci. 94 (E-Suppl. 1):666 (Abstract 601).
- Ganesan, B., K. Brown, D. Irish, C Brothersen, and D. J. McMahon. 2011. Manufacture and sensory analysis of reduced and low sodium Cheddar cheeses. American Dairy Science Association Annual Meeting, July 10-14th, J. Dairy Sci. 94 (E-Suppl. 1):666 (Abstract 602).
- Ganesan, B., K. Brown, D. Irish, C Brothersen, and D. J. McMahon. 2011. Manufacture and sensory analysis of reduced and low sodium pasta filata style Mozzarella cheeses. American Dairy Science Association Annual Meeting, July 10-14th, J. Dairy Sci. 94 (E-Suppl. 1):667 (Abstract 604).
- Ganesan, B., D. Irish, C Brothersen, and D. J. McMahon. 2011. Microbial and sensory evaluation of fresh Mozzarella cheese. American Dairy Science Association Annual Meeting, July 10-14th, J. Dairy Sci. 94 (E-Suppl. 1):710 (Abstract 720).
- Ganesan, B., C Brothersen, and D. J. McMahon. 2011. Recovery of omega-3 fatty acids in Cheddar cheese curd and long-term stability of omega-3 fatty acids in whey powder. American Dairy Science Association Annual Meeting, July 10-14th, J. Dairy Sci. 94 (E-Suppl. 1):711-712 (Abstract 726).
- McMahon, D.J. and M. M. Motawee. 2011. Influence of pH on flavor of low fat Cheddar cheese. American Dairy Science Association Annual Meeting, July 10-14th, J. Dairy Sci. 94 (E-Suppl. 1):539 (Abstract W72).
- Oberg, E. N., W. R. McManus and D. J. McMahon. 2011. Increasing functionality of low fat Mozzarella cheese using polysaccharides. American Dairy Science Association Annual Meeting, July 10-14th, J. Dairy Sci. 94 (E-Suppl. 1):539 (Abstract W74).
- Wadhwani, R., D. J. McMahon, and C. Maughan. 2010. Impact of color of low fat Cheddar cheese on consumer preference. American Dairy Science Association Annual Meeting, J. Dairy Sci. 93 (E-Suppl. 1):208 (Abstract 136).
- McMahon, D. J., C. J. Oberg, L. Moyes, R. E. Miracle, and M. A. Drake. 2010. Influence of sodium gluconate on flavor and microbiology of low fat Cheddar cheese. American Dairy Science Association Annual Meeting, J. Dairy Sci. 93 (E-Suppl. 1):747 (Abstract 793).
- McMahon, D. J. and R. Wadhwani. 2010. Consumer flavor preferences and level of aged Cheddar cheese flavor. American Dairy Science Association Annual Meeting, J. Dairy Sci. 93 (E-Suppl. 1):747 (Abstract 795).
- Wadhwani, R., D. J. McMahon, and D. A. Irish. 2010. Enrichment of low fat Cheddar cheese with dietary fiber. American Dairy Science Association Annual Meeting, J. Dairy Sci. 93 (E-Suppl. 1):75 (Abstract M180).

- Ganesan, B., B. C. Weimer, G. Rompato, J. Pinzon, P. Desai, C. Brothersen and D. J. McMahon. 2010. Addition of probiotic bacteria modifies the biodiversity of other lactic acid bacteria in Cheddar cheese. American Dairy Science Association Annual Meeting, J. Dairy Sci. 93 (E-Suppl. 1):806 (Abstract 953)
- Oberg, E. N., K. M. Larsen, D. A. Irish, M. M. Motawee, D. J. McMahon. 2010. Increasing stringiness of low fat mozzarella cheese using polysaccharides. American Dairy Science Association Annual Meeting, J. Dairy Sci. 93 (E-Suppl. 1):74 (Abstract M179)
- Berry, T. K., Klok, H. J., McMahon, D. J., van de Velde, F and E. A. Foegeding. 2009. Structure of low and full-fat cheddar cheese as determined by microrheology. 6th NIZO Dairy Conference, Dairy Ingredients: innovations and functionality, Papendal, The Netherlands, Sep 30 – Oct 1, 2009.
- Brothersen, C., McMahon, D. J., and B. Pettee. 2009. Partitioning of omega-3 fatty acids in Cheddar cheese curd and whey. American Dairy Science Association Annual Meeting, J. Dairy Sci. 92 (E-Suppl. 1):211 (T46).
- Drake, M. A., Miracle, R. E., and D. J. McMahon. 2009. The influence of sodium chloride on flavor of natural Cheddar. American Dairy Science Association Annual Meeting, J. Dairy Sci. 92 (E-Suppl. 1):24 (M98).
- Larsen, K. M., D. J. McMahon, and W. R. McManus. 2009. Effects of starch addition on a low-fat cheese model system. American Dairy Science Association Annual Meeting, J. Dairy Sci. 92 (E-Suppl. 1):135 (73).
- McMahon, D. J., Motawee, M. M., and W. R. McManus. 2009. Influence of brine concentration and temperature on composition, microstructure and yield of feta cheese. American Dairy Science Association Annual Meeting, J. Dairy Sci. 92 (E-Suppl. 1):363 (436).
- McManus, W. R., Garg, N., and D. J. McMahon. 2009. Distribution of fat in comminuted cheese at varying fat levels and storage times using laser scanning confocal microscopy and textural analysis. American Dairy Science Association Annual Meeting, J. Dairy Sci. 92 (E-Suppl. 1):364 (439).
- Motawee, M. M. and D. J. McMahon. 2009. Fate of aflatoxin M1 during manufacture and brining of feta cheese. American Dairy Science Association Annual Meeting, J. Dairy Sci. 92 (E-Suppl. 1):21 (M58).
- Oberg, C. J., Moyes, L., Brothersen, C., and D. J. McMahon. 2009. Survival of probiotic adjunct cultures added to low-fat, reduced fat, and full fat cheddar cheese. American Dairy Science Association Annual Meeting, J. Dairy Sci. 92 (E-Suppl. 1):500 (526).
- Oberg, C. J., Moyes, L., Brothersen, C., and D. J. McMahon. 2009. Methodology for differentiation of lactic acid bacteria in cheese made with probiotic adjunct cultures. American Dairy Science Association Annual Meeting, J. Dairy Sci. 92 (E-Suppl. 1):218 (T69).
- Tippetts, M., Martini, S., Brothersen, C., and D. J. McMahon. 2009. Retention of vitamin D fortified emulsions in bench-top cheese. Dairy Science Association Annual Meeting, J. Dairy Sci. 92 (E-Suppl. 1):135 (71).
- Wadhvani, R., and D. J. McMahon. 2009. Low fat Mozzarella cheese with improved baking and melting properties. American Dairy Science Association Annual Meeting, J. Dairy Sci. 92 (E-Suppl. 1):135 (72).
- Thurgood, J. E., C. Brothersen, S. Martini, and D. J. McMahon. 2008. Sensory evaluation of reduced fat cheddar cheese fortified with omega-3 fatty acids for oxidized, rancid and fishy flavor attributes. ADSA Annual Meeting, J. Dairy Sci. 91 (E-Suppl. 1):118 (T49).
- Drake, M. A., C. J. Brighton, D. J. McMahon, and J. R. Broadbent. 2008. Sensory and microbiological properties of cheddar cheese made with different fat content. ADSA Annual Meeting, J. Dairy Sci. 91 (E-Suppl. 1):14 (T38).
- Miracle, R. E., D. J. McMahon, and M. A. Drake. 2008. Flavor chemistry of cheddar cheeses with varying

- fat contents. ADSA Annual Meeting, J. Dairy Sci. 91 (E-Supp. 1):16 (T46).
- McMahon, D. J., and C. Brothersen. 2008. Influence of comminuting curd on curd particle size, moisture content and cohesiveness of 50%-reduced fat cheddar cheese. ADSA Annual Meeting, J. Dairy Sci. 91 (E-Supp. 1):20 (T58).
- Adams, S., and D. J. McMahon. 2008. Effect of hydrolyzed whey protein on the texture and microstructure of nutrition bars analyzed using texture analysis and confocal microscopy. IFT Annual Meeting, Abstract 028-04.
- Rasmussen, T.C., D. J. McMahon, J.R. Broadbent, C.J. Oberg. 2007. Texture profile analysis and melting in relation to proteolysis as influenced by aging temperature and cultures in Cheddar cheese. ADSA Annual Meeting, J. Dairy Sci. 90 (Supp. 1):271 (T94).
- Adams, S. P., D. J. McMahon, J. R. Broadbent, S. L. Larsen and M. Drake. 2007. Strategies for the manufacture of low fat cheddar cheese. ADSA Annual Meeting, J. Dairy Sci. 90 (Supp. 1):271 (T95).
- Rasmussen, T.C., D. J. McMahon, J.R. Broadbent, C.J. Oberg. 2006. Influence of adjunct cultures and accelerated ripening on texture and melting properties of Cheddar cheese. ADSA Annual Meeting, J. Dairy Sci. 89(Supp. 1):316 (W53).
- Joseph, P. J., D. J. McMahon, J. R. Broadbent, C. J. Oberg. 2006. Hydrolysis of caseins in Cheddar cheese: effects of temperature and coagulants. ADSA Annual Meeting, J. Dairy Sci. 89(Supp. 1):316 (W51).
- Drake, M.A., D. J. McMahon, J. R. Broadbent, S. Larsen, C. Brothersen, P. Joseph, R. L. Boucher. 2005. Impact of accelerated ripening temperatures and times on flavor and texture development of Cheddar cheese. Poster presentation at IFT Annual Meeting, New Orleans,
- Oommen, B. S., and D. J. McMahon. 2003. Dissociation of casein supramolecules. American Dairy Science Association Meeting, J. Dairy Sci. 86(Supp. 1):288.
- Khanal, R.C., T. R. Dhiman, C. Brennand, R. L. Boman and D. J. McMahon. 2003. Consumer acceptability characteristics of conjugated linoleic (CLA) enriched milk and cheese. American Dairy Science Association Meeting, J. Dairy Sci. 86(Supp. 1):356.
- Moyes, B. L., D. J. McMahon and C. J. Oberg. 2003. Correlation between the USU stretch test and the pizza fork test. American Dairy Science Association Meeting, J. Dairy Sci. 86(Supp. 1):364.
- Pastorino, A. J., C. L. Hansen and D. J. McMahon. 2003. Effect of sodium citrate on structure-function relationships in cheddar cheese. American Dairy Science Association Meeting, J. Dairy Sci. 86(Supp. 1):367.
- McMahon, D. J. and B. S. Oommen. 2003. Supramolecular structure of casein aggregates in milk. Utah Academy of Sciences, Arts and Letters annual conference, April 11, Ogden, Utah.
- Pastorino, A. J., C. L. Hansen, and D. J. McMahon. 2002. Effect of pH on chemical and functional properties of cheese. American Dairy Science Association Meeting, J. Dairy Sci. 85(Supp. 1):91.
- Oberg, C. J., J. R. Broadbent and D. J. McMahon. 2002. Applications of EPS production by LAB. American Dairy Science Association Meeting, J. Dairy Sci. 85(Supp. 1):116.
- Khanal, R. C., T. R. Dhiman, D. J. McMahon and R. L. Boman. 2002. Influence of diet on CLA content of milk, cheese blood serum. American Dairy Science Association Meeting, J. Dairy Sci. 85(Supp. 1):142.
- Oommen, B. S., and D. J. McMahon. 2002. Effect of method and time of hydration on structure of dried milk proteins. American Dairy Science Association Meeting, J. Dairy Sci. 85(Supp. 1):157.
- Oommen, B. S., and D. J. McMahon. 2002. Coagulation properties of skim milk fortified with various dried milk proteins. American Dairy Science Association Meeting, J. Dairy Sci. 85(Supp. 1):380

- Pastorino, A. J., C. L. Hansen, and D. J. McMahon. 2002. Effect of salt on structure-function relationships of cheese. Annual Meeting, Institute of Food Technologists, Anaheim, CA. (Abstract 28-2)
- Welker, D. L., J. R. Broadbent, R. Jensen, D. J. McMahon, C. J. Oberg, and J. A. Ahlgren. 2002. Polymorphisms in closely related exopolysaccharide gene clusters of *Streptococcus thermophilus* may influence polymer type and composition. Abstract D40 Proc. 7th Int. Symp. Lactic Acid Bacteria Genetics, Metabolism and Applications.
- Welker, D. L., J. R. Broadbent, A. D. Cefalo, D. J. McMahon, and C. J. Oberg. 2002. Mechanism(s) for loss of exopolysaccharide synthesis phenotype in strains of *Streptococcus thermophilus*. Abstract D41 Proc. 7th Int. Symp. Lactic Acid Bacteria Genetics, Metabolism and Applications.
- Pastorino, A. J., R. I. Dave, C. J. Oberg and D. J. McMahon. 2001. Temperature effect on structure-opacity relationships of nonfat mozzarella cheese. 96th American Dairy Science Association Meeting, J. Dairy Sci. 84(Supp. 1):5
- Oommen, B. S., D. J. McMahon, J. R. Broadbent and C. J. Oberg. 2001. Influence of proteolytic enzymes from thermophilic lactic acid bacteria on the functional properties of mozzarella cheese. 96th American Dairy Science Association Meeting, J. Dairy Sci. 84(Supp. 1):6
- Pastorino, A. J., N. P. Ricks, C. L. Hansen and D. J. McMahon. 2001. Salt and calcium distribution in injected cheese. 96th American Dairy Science Association Meeting, J. Dairy Sci. 84(Supp. 1):145
- Singleton, T. J., D. J. McMahon and J. R. Broadbent. 2001. Effect of microbial exopolysaccharide on functionality in high moisture cheese. 96th American Dairy Science Association Meeting, J. Dairy Sci. 84(Supp. 1):147
- Sharma, P., R. I. Dave, K. Muthukumarappan, D. J. McMahon and J. R. Broadbent. 2001. Melt and proteolysis of mozzarella cheese as affected by starter culture and coagulating enzymes. 96th American Dairy Science Association Meeting, J. Dairy Sci. 84(Supp. 1):305
- Oommen, B. S., D. J. McMahon and W. R. McManus. 2001. A comparative study of the microstructure of caseins in dried milk. 96th American Dairy Science Association Meeting, J. Dairy Sci. 84(Supp. 1):381
- McMahon, D. J. 2001. What we learnt about protein interactions from the study of nonfat cheese. Seminar presentation at Chonbuk National University, Korea. April 25, 2001.
- Pastorino, A. J., R. I. Dave, C. J. Oberg, and D. J. McMahon. 2001. Temperature effect on structure-opacity relationships of nonfat mozzarella cheese. Utah Academy of Sciences, Arts and Letters annual conference, April 6.
- Oommen, B. S., McMahon, D. J., Broadbent, J. R., Oberg, C. J., and M. Strickland. 2001. Influence of proteolytic enzymes from thermophilic lactic acid bacteria on the functional properties of mozzarella cheese. Utah Academy of Sciences, Arts and Letters annual conference, April 6.
- Pastorino, A.J., Ricks, N. P., Hansen, C.L., and D. J. McMahon 2000. Effect of water and calcium injection on structure-function attributes of Mozzarella cheese. Annual Meeting, Institute of Food Technologists, Dallas, Texas, June12-14, 2000 (Abstract 50-1)
- White, S.R., D. J. McMahon, J. R. Broadbent, C. J. Oberg, and G. L. Hong. 2000.. Influence of different combinations of *Lactobacillus helveticus* and *Propionibacterium shermani* on split defect in Swiss cheese. Annual Meeting, Institute of Food Technologists, Dallas, Texas, June12-14, 2000 (Abstract 50-6)
- Irudayaraj, J., McMahon, D. J., and D. Reznik, 2000. Ohmic heating for UHT milk. Annual Meeting, Institute of Food Technologists, Dallas, Texas, June12-14, 2000 (Abstract 86A-12)

- Gustafson, D. R., Nan, R., Morrey, J. and D. J. McMahon. 1999. Appetite suppressing properties of a peptide from milk. Proceedings of International Dairy Federation Nutrition Week 1999 Conference, San Francisco, Oct 4-7, 1999, p19.
- Petersen, B. L., Dave, R. I., McMahon, D. J., Oberg, C. J, and J. R. Broadbent. 1999. Influence of capsular and ropy exopolysaccharide-producing *Streptococcus thermophilus* on Mozzarella cheese and cheese whey. 94th American Dairy Science Association Meeting, J. Dairy Sci. 82(Supp. 1):D5.
- Dave, R. I., McMahon, D. J., Oberg, C. J, and J. R. Broadbent. 1999. Influence of coagulant concentration on proteolysis, meltability and rheology of 0, 10 and 20% fat containing Mozzarella cheese made using direct acidification. 94th American Dairy Science Association Meeting, J. Dairy Sci. 82(Supp. 1):D59.
- Dave, R. I., McMahon, D. J., Oberg, C. J, and J. R. Broadbent. 1999. Factors and mechanism involved in temperature-dependent opacity of non-fat Mozzarella cheese. 94th American Dairy Science Association Meeting, J. Dairy Sci. 82(Supp. 1):D61.
- Dave, R. I., McMahon, D. J., and C. J. Oberg. 1999. Effect of salt and storage periods on temperature-dependent opacity of non-fat Mozzarella cheese. Annual Meeting, Institute of Food Technologists, Chicago, Illinois, July 24-29. (Abstract 79A-37)
- McMahon, D. J. and C.J. Oberg. 1999. Influence of salt and calcium on Mozzarella cheese microstructure and functionality. Scanning 99 Food Microstructure Symposium, Chicago, Illinois, April 12-13.
- Dhiman, T.R., E.D. Helmink, D. J. McMahon, R.L. Fife, and M.W. Pariza. 1998. Conjugated linoleic acid content of milk from cows fed extruded oilseeds. 93rd American Dairy Science Association Meeting, J. Dairy Sci. 81(Supp. 1):353.
- Paulson, B. M., D. J. McMahon and C.J. Oberg. 1998. Influence of pH, calcium, and moisture on physical properties of nonfat Mozzarella cheese. 93rd American Dairy Science Association Meeting, J. Dairy Sci. 81(Supp. 1):13.
- McMahon, D. J., B. M. Paulson and C. J. Oberg. 1998. Microstructure and ultrastructure of nonfat Mozzarella cheese made using direct acidification. 93rd American Dairy Science Association Meeting, J. Dairy Sci. 81(Supp. 1):13.
- Fife, R.L., D. J. McMahon and C.J. Oberg. 1998. Test for measuring stretch characteristics of Mozzarella cheese. 93rd American Dairy Science Association Meeting, J. Dairy Sci. 81(Supp. 1):14.
- McMahon, D. J. and C.J. Oberg. Temperature-dependency of the opacity of nonfat Mozzarella cheese. 93rd American Dairy Science Association Meeting, J. Dairy Sci. 81(Supp. 1):13.
- Broadbent, J.R., L. Wei, D. J. McMahon, and C.J. Oberg. 1998. Characterization of the *Lactobacillus helveticus* groESL operon. 93rd American Dairy Science Association Meeting, J. Dairy Sci. 81(Supp. 1):5.
- Broadbent, J.R., L. Wei, D. J. McMahon, and C.J. Oberg. Characterization of the *Lactobacillus helveticus* groESL operon by inverse PCR. Poster presentation at the American Society for Microbiology's Fifth International E. coli and Small Genomes Conference. Oct. 12-15, Snowbird, UT.
- McManus, W.R. and D. J. McMahon. 1997. A new preparation technique for high resolution imaging of protein structure: casein micelles, Microscopy and Microanalysis 3(Suppl. 2, 1997. Proceedings):353-354.
- Paulson, B.M, D. J. McMahon and C.J. Oberg. 1997. Effect of dry salting and hot brine stretching on the functionality of nonfat mozzarella cheese, 92nd American Dairy Science Association Meeting, J. Dairy Sci. 80(Supp. 1):D10.
- Fife, R.L., D. J. McMahon and C.J. Oberg. 1997. Moisture partitioning in low fat and mozzarella cheese and its relationship to cheese microstructure, 92nd American Dairy Science Association Meeting, J. Dairy Sci. 80(Supp. 1):D60.

- Low, D., D. J. McMahon, C.J. Oberg, D. Hornel and J.R Broadbent. 1997. Influence of *Streptococcus thermophilus* 10JC exopolysaccharide on the moisture content of low-fat mozzarella cheese, 92nd American Dairy Science Association Meeting, J. Dairy Sci. 80(Supp. 1):D40.
- Broadbent, J.R., S. Caldwell, D. J. McMahon, C.J. Oberg and R. Hutkins. 1996. Development and characterization of alternative starter cocci for Mozzarella cheese. 5th Symposium on Lactic Acid Bacteria Genetics, Metabolism, and Applications, Veldhoven, The Netherlands, Sept 8-12.
- Fecera, R.M., D. J. McMahon, C.J. Oberg and M. Strickland. 1996. Capillary electrophoresis as a method for monitoring proteolysis in mozzarella cheese. 91st American Dairy Science Association Meeting, J. Dairy Sci. 79(Supp. 1):
- McManus, W. R. and D. J. McMahon. 1996. Casein micelles, three dimensional imaging with transmission and scanning electron microscopy. Scanning 96 Symposium, Scanning 18(3):205-206
- Venkatachalam, N., and D. J. McMahon. 1996. A study of the interaction between milk proteins and soy proteins during milk coagulation. 211th American Chemical Society Annual Meeting, New Orleans, March 24-29, 1996.
- Reddy, M.I, D. J. McMahon and R.J. Brown. 1995. A method for the isolation of β -lactoglobulin/ κ -casein complex from heated milk. 90th American Dairy Science Association Meeting, J. Dairy Sci. 78(Supp. 1):D108.
- Caldwell, S.L., J.R. Broadbent, D. J. McMahon and C.J. Oberg. 1995. Development of lactose-positive *Pediococcus* species cheese starter culture. 90th American Dairy Science Association Meeting, J. Dairy Sci. 78(Supp. 1):D41.
- Reddy, M.I, P.V.M. Kalpalathika, D. J. McMahon and R.J. 1995. Interaction of β -lactoglobulin with micellar κ -casein in heated milk: a quantitative study. 210th American Chemical Society Annual Meeting, August
- Venkatachalam, N., M.I. Reddy and D. J. McMahon. 1995. Effect of soy protein isolate on rennet coagulation of milk and microstructure of cheese curd. Annual Meeting, Institute of Food Technologists, Anaheim, California, June 3-7.
- Perry, D., C.J. Oberg and D. J. McMahon. 1995. Effects of exopolysaccharide producing cultures on moisture retention in low fat mozzarella cheese. Annual Meeting, Institute of Food Technologists, Anaheim, California, June 3-7.
- Fecera, R., C.J. Oberg and D. J. McMahon. 1995. Effect of proteolytic adjunct cultures on the physical properties of low fat mozzarella cheese. Annual Meeting, Institute of Food Technologists, Anaheim, California, June 3-7.
- Fife, R.L., D. J. McMahon, C.J. Oberg and M.C. Alleyne. 1995. Functionality of low fat mozzarella cheese made with commercial fat replacers. Annual Meeting, Institute of Food Technologists, Anaheim, California, June 3-7.
- Caldwell, S.L., J.R. Broadbent, and D. J. McMahon. 1995. Genetic construction of lactose-positive *pediocci*. Annual Meeting of Intermountain Branch of American Society for Microbiology, April 22, Idaho State University, Pocatello, ID.
- McManus, W.R., D. J. McMahon and W. Gray. 1995. Changes in calcium and phosphorus distribution in bovine casein micelles following acidification, utilizing electron spectroscopic imaging. Scanning 95 Meeting, J. Scanning Micros. 17(Suppl. 5):129-130.
- Venkatachalam, N. and D. J. McMahon. 1995. Effect of soy protein on the microstructure of coagulum made with milk-soy blends. 95 Meeting, J. Scanning Micros. 17(Suppl. 5):140-141.
- McMahon, D. J. and M.C. Alleyne. 1994. A mechanism for the age gelation of UHT concentrated milk. 24th International Dairy Congress, Melbourne, Australia, Brief Communications & Abstracts

- Blake, M. B. Weimer, P. Savello and D. J. McMahon. 1994. Processing conditions for extended shelf life milk. 24th International Dairy Congress, Melbourne, Australia, Brief Communications & Abstracts
- Venkatachalam, N., Reddy, M.I. and D. J. McMahon. 1994. The interaction between bovine κ -casein and soy glycinin, a preliminary study. ACS Annual Meeting, August 21, Washington, DC.
- McMahon, D. J., Fife, R.L., Alleyne, M.C. and C.J. Oberg. 1994. A Comparison of low fat (6% fat) Mozzarella cheese made using protein or carbohydrate fat mimetics. 89th American Dairy Science Association Meeting, J. Dairy Sci. 77(Supp. 1):153
- Hekmat, S., Reddy, M.I., McManus, W.R., and D. J. McMahon. 1994. Binding of iron to casein and whey proteins and in Fe-fortified yogurt. 89th American Dairy Science Association Meeting, J. Dairy Sci. 77(Supp. 1):35
- Hekmat, S., Weimer, B., and D. J. McMahon. 1994. Effect of iron fortification of yogurt on its manufacture, growth of lactic acid and spoilage bacteria, and lipid oxidation. 89th American Dairy Science Association Meeting, J. Dairy Sci. 77(Supp. 1):19
- Haws, W.J., Hekmat, S., Kalpalathika, M., Mahoney, A.W. and D. J. McMahon. 1994. Iron Fortification of Mozzarella Cheese. 89th ADSA Meeting, J. Dairy Sci. 77(Supp. 1):18
- Alleyne, M.C. and D. J. McMahon. 1994. Immunolocalization of β -Lactoglobulin in Processed Milk, Yogurt, and Various Cheeses. 89th American Dairy Science Association Meeting, J. Dairy Sci. 77(Supp. 1):25
- Alleyne, M.C. and D. J. McMahon. 1994. Immunolocalization of Caseins and Whey Proteins in Milk at Various Stages of treatment from Fresh Whole Milk to Ultra-High Temperature Sterilized Ultrafiltered (3X) Milk Concentrate. 89th American Dairy Science Association Meeting, J. Dairy Sci. 77(Supp. 1):118
- Alleyne, M.C. and D. J. McMahon. 1994. Immunolocalization of Caseins and Whey Proteins in Ultra-High Temperature Sterilized Ultrafiltered (3X) Milk Concentrate Stored at Room Temperature Until Gelation. 89th American Dairy Science Association Meeting, J. Dairy Sci. 77(Supp. 1):119
- Yousif, B.H., Shammeth, K.M. and D. J. McMahon. 1994. Jubein Rennet: A Milk Clotting Enzyme from *Solanum dobium*. 89th American Dairy Science Association Meeting, J. Dairy Sci. 77(Supp. 1):D
- Fife, R.L., Oberg, C.J. and D. J. McMahon. 1994. Functionality of Low Fat Mozzarella Cheese Using the Utah State University Reduced-Fat Mozzarella Cheese Make Procedure. 89th American Dairy Science Association Meeting, J. Dairy Sci. 77(Supp. 1):152
- McManus, W.R. and D. J. McMahon. 1994. Calcium and potassium elemental mapping of freeze dried milk and yogurt through electron spectroscopic imaging. Food Microstructure Conference, Toronto, Canada, May 9-11, 1994.
- El-Samragy, Y.A., C.L. Hansen and D. J. McMahon. 1993. Production of ultrafiltered skim milk retentate powder. 2. Functional properties. Int. Food Tech. Exp. & Conf., Nov 15-18, The Hague, The Netherlands.
- Oberg, C.J., Merrill, R.K. and D. J. McMahon. 1993. Mozzarella cheese: Changes in microstructure during manufacture, aging, and fat reduction. Scanning Microscopy International Meeting, Los Angeles, California, May 8-13.
- Mohamed A.M. and D. J. McMahon. 1993. Influence of ultra-high temperature process parameters on age gelation of milk concentrate. 88th American Dairy Science Association Meeting, J. Dairy Sci. 76(Supp. 1):D38.
- Du, H. and D. J. McMahon. 1993. Microstructural changes in casein micelles during acidification of skim milk. 88th American Dairy Science Association Meeting, J. Dairy Sci. 76(Supp. 1):D132.

- Oberg, C.J., Merrill, R.K. and D. J. McMahon. 1992. Microstructure of Mozzarella cheese. 29th Annual Marschall Italian Cheese Seminar, Madison, Wisconsin, Sept. 16-17.
- Kalpalathika, P.V.M. and D. J. McMahon. 1992. Study of molecular zeta-potential and size and calcium and phosphorus contents of UHT processed skim milk concentrates during storage. 87th American Dairy Science Association Meeting, J. Dairy Sci. 75(Supp. 1):D165.
- LeFevre, M., Richardson, G.H. and D. J. McMahon.. 1992. The effects of calcium, pH and chymosin changes on the coagulative properties of late-lactation milk. 87th American Dairy Science Association Meeting, J. Dairy Sci. 75(Supp. 1):D58.
- Mistry, V. V., H. N. Hassan, R. J. Robison, D. J. McMahon, D. N. Holcomb and V. R. Harwalkar. 1992. Effect of lactose and protein on the microstructure of dried milk. Food Structure 11:73-82.
- Venkatachalam, N. and D. J. McMahon.. 1992. The effect of microbial quality on the storage stability of ultra-high temperature processed skim milk concentrate. 87th American Dairy Science Association Meeting, J. Dairy Sci. 75(Supp. 1):D24.
- Venkatachalam, N. and D. J. McMahon.. 1992. Effect of ultrafiltration, diafiltration and ultra-high temperature processing on casein micelle size. 87th American Dairy Science Association Meeting, J. Dairy Sci. 75(Supp. 1):D25.
- Olson, D.W. and D. J. McMahon. 1992. Zeta-potential of casein micelles as a factor in age gelation of ultra-high temperature sterilized concentrated milk. 87th American Dairy Science Association Meeting, J. Dairy Sci. 75(Supp. 1):D57.
- El-Samragy, Y.A., C.L. Hansen and D. J. McMahon. 1992. Production of ultrafiltered skim milk retentate powder. 1. Composition and physical properties. 87th American Dairy Science Association Meeting, J. Dairy Sci. 75(Supp. 1):D84.
- Olson, D.W. and D. J. McMahon. 1991. Zeta-potential of casein micelles in UHT-treated ultrafiltered skim milk. 86th American Dairy Science Association Meeting, J. Dairy Sci. 74(Supp. 1):D155
- Kalpalathika, P.V.M. and D. J. McMahon. 1991. Effect of interaction of ionic additives with casein micelles on their zeta-potential, particle size, rennet and acid coagulation time. 86th American Dairy Science Association Meeting, J. Dairy Sci. 74(Supp. 1):D55.
- Kalpalathika, P.V.M., N. Venkatachalam and D. J. McMahon. 1991. The effect of storage of UHT sterilized skim milk concentrates on their ζ -potential, particle size, browning and viscosity. 86th American Dairy Science Association Meeting, J. Dairy Sci. 74(Supp. 1):D156.
- Hekmat, S., and D. J. McMahon. 1991. Growth and survival of *Lactobacillus acidophilus* and *Bifidobacterium bifidum* in ice cream for use as a probiotic food. 86th American Dairy Science Association Meeting, J. Dairy Sci. 74(Supp. 1):D107.
- Venkatachalam, N. and D. J. McMahon. 1991. Effect of lactose concentration on age gelation of UHT sterilized skim milk concentrate. 86th American Dairy Science Association Meeting, J. Dairy Sci. 74(Supp. 1):D62.
- LeFevre, M., Richardson, G.H. and D. J. McMahon. 1991. Use of hot-wire viscometric measurements to predict physical curd firmness of renneted milk as a function of milk composition. 86th American Dairy Science Association Meeting, J. Dairy Sci. 74(Supp. 1):D93.
- Smith, M.H. and D. J. McMahon. 1990. Use of Ultra-high Temperature Sterilization and Aseptic Addition of Rennet to a Milk Concentrate to Form a Shelf Stable Soft-curd Pudding. 23rd International Dairy Congress, Montreal, Brief Communications & Abstracts II:P924.
- Mrudula Kalpalathika, P.V. and D. J. McMahon. 1990. Measurement of Zeta-potential of Skim Milk Using Laser Doppler Electrophoretic Light Scattering. 23rd International Dairy Congress, Montreal, Quebec, Brief Communications & Abstracts I:P472.

- Smith, M.H. and D. J. McMahon. 1990. Manufacture of a soft-curd pudding from UHT milk concentrates. 85th American Dairy Science Association Meeting, J. Dairy Sci. 73 (Supp. 1):114.
- Yousif, B.H., D. J. McMahon, P.A. Savello, R.J. Brown and M. Kalab. 1990. Effects of heat treatment of concentrated milk on its rennet coagulation time, gel microstructure and whey protein denaturation. 85th American Dairy Science Association Meeting, J. Dairy Sci. 73 (Supp. 1):105.
- McMahon, D. J., P.A. Savello, R.J. Brown and M. Kalab. 1989. Microstructure differences in formation of a gel network in milk heated at high temperatures. The 1989 International Chemical Congress of Pacific Basin Societies. December 17–22, 1989. Honolulu, Hawaii.
- McMahon, D. J. 1989 Cheese Evaluation/Correcting Defects. 7th Annual Cheese Making Short Course, 5-7 Dec 1989, Utah State University.
- McMahon, D. J. 1989. Gelation of acid coagulated milk. 84th American Dairy Science Association Meeting, J. Dairy Sci. 72(Supp. 1):126.
- Savello, P.S., D. J. McMahon and R.J. Brown. 1989. Ultra-high temperature processing of milk ultrafiltered to 3x concentration and effects of phosphate addition on gelation. 84th American Dairy Science Association Meeting, J. Dairy Sci:Supp. 1, 135.
- Orme, B.J. and D. J. McMahon. 1989. Effect of concentration on coagulation of ultrafiltered milk. 84th American Dairy Science Association Meeting, J. Dairy Sci:Supp. 1, 135.
- McMahon, D. J., P.A. Savello, R.J. Brown and M. Kalab. 1989. Effects of phosphate and citrate on gelation properties of UHT concentrated milk. Food Microstructure Conference, 1-5 May 1989, Salt Lake City, Utah.
- McMahon, D. J. and R.J. Brown. 1988. Development of Functionality on casein micelles as the controlling mechanism of milk coagulation. 62nd American Chemical Society Colloid and Surface Science Symposium, Pennsylvania State University.
- McMahon, D. J. 1984. Enzymic milk coagulation. Australian Institute of Food Science and Technology Meeting, Manly, Australia.
- McMahon, D. J., R.J. Brown, G.H. Richardson and C.A. Ernstrom. 1983. Effects of calcium, phosphate and bulk culture media on milk coagulation. 78th American Dairy Science Association Meeting, University of Wisconsin – Madison.
- McMahon, D. J. and R.J. Brown. 1982. Measurement of rennet activity and its inverse linear relationship with milk coagulation time. 77th American Dairy Science Association Meeting, Pennsylvania State University.
- McMahon, D. J. and R.J. Brown. 1982. Nonspecific proteolytic activity of milk clotting enzymes. Institute of Food Technology Meeting, Las Vegas.

Other Presentations

- McMahon, D. J. Famous Aggie Ice Cream - A Utah State University favorite finds its way to Seoul, Korea. Utah Feed Manufacturers and Dealers Association Annual Meeting, Jan 23, 2002, Salt Lake City, Utah,
- McMahon, D. J. and M. Harmon. Food of our Fathers. Sons of Utah Pioneers, Bountiful Section meeting, Bountiful, Utah, March 26, 2002.

Research Grant Funding (last 5 years)

- 2011 - Concentration, storage stability and functionality of highly concentrated micellar casein (\$160,000) Dairy Research Institute, Co-Principal Investigator (new grant)
- 2011 - Dairy Technology Innovation Laboratory (\$374,000) Dairy Research Institute, Co-Principal

- Investigator (continuing grant)
- 2010 - A systematic study of cheese microbiology and flavor based on salt cation substitution in lower sodium cheddar cheese (\$582,000) Dairy Research Institute, Coordinating Principal Investigator (new competitive grant)
- 2010 - Improved organic milk production through the use of the condensed tannin-containing forage legume birdsfoot trefoil (\$1,019,411), USDA Organic Agriculture Research and Extension Initiative, Co-Investigator.
- 2010 - Dairy Technology Innovation Laboratory (\$390,000), Dairy Research Institute, Principal Investigator (continuing grant)
- 2010 - At what salt level do consumers notice decreasing salt concentrations and at what concentration (\$42,540). Dairy Research Institute, Co-Principal Investigator (new competitive grant)
- 2009 - Designing filler particles to imitate fat in cheddar cheese (\$49,672, Dairy Management Inc. (National Dairy Promotion & Research Board)., Co-Principal Investigator (new competitive grant)
- 2009 - Influence of starter culture growth on the development of rosey and burnt-brothy flavors during aging (\$44,120), Dairy Management Inc. (National Dairy Promotion & Research Board)., Principal Investigator (directed grant)
- 2009 - Influence of salt-in-water content on flavor of full fat and low fat cheddar cheese (\$30,850). Dairy Management Inc. (National Dairy Promotion & Research Board)., Principal Investigator (directed grant)
- 2008 - Flavor comparison between UHT milk heated by conventional methods and electrical resistive heating (\$124,163). Dairy Management Inc. (National Dairy Promotion & Research Board)., Principal Investigator (new competitive grant)
- 2008 - Production of high protein cheddar cheese with an improved extrusion-modified texture, (\$59,500). Dairy Management Inc. (National Dairy Promotion & Research Board)., Co- Investigator (new competitive grant)
- 2008 - Innovative approaches for improving low fat mozzarella cheese (\$132,340). Dairy Management Inc. (National Dairy Promotion & Research Board)., Principal Investigator (directed grant)
- 2008 - Improve the flavor of low fat cheese by adding innovative cultures and/or flavoring systems , (\$61,895). Dairy Management Inc. (National Dairy Promotion & Research Board)., Principal Investigator (directed grant)
- 2007 - Low fat cheese texture enhancement portfolio (\$67,000). Dairy Management Inc. (National Dairy Promotion & Research Board)., Principal Investigator (directed grant)
- 2007 - Investigating the filled gel model for the role of fat in cheese (\$79,700). Dairy Management Inc. (National Dairy Promotion & Research Board)., Co-Principal Investigator (directed grant)
- 2007 - Understanding how salt levels influences perception of cheese flavor (\$19,100). Dairy Management Inc. (National Dairy Promotion & Research Board)., Principal Investigator (directed grant)
- 2007 - A dairy technology and innovations laboratory at the Western Dairy Center (\$899,770), Dairy Management Inc. (National Dairy Promotion & Research Board)., Co-Principal Investigator (directed grant)
- 2007 - Why do protein bars become hard during storage (\$20,000), Western Dairy Center, Principal Investigator (directed grant)
- 2007 - Development of a descriptive taste panel for dairy applications, (\$57,500). Dairy Management Inc. (National Dairy Promotion & Research Board)., Co-Principal Investigator (directed grant)

Updated: November 15, 2011

2006 - Low Fat Natural Cheese Strategic Platform Project Objective 1, (\$75,576) Dairy Management Inc. (National Dairy Promotion & Research Board), Principal Investigator (directed grant).

2006 - Low Fat Natural Cheese Strategic Platform Project Objective 4, (\$29,500) Dairy Management Inc. (National Dairy Promotion & Research Board), Principal Investigator (directed grant).