

ALBUQUERQUE

49<sup>TH</sup>  
ANNUAL  
MEETING



January 31 – February 3, 2010  
Hyatt Regency Hotel  
Albuquerque, New Mexico



A global organization for mastitis control and milk quality

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A global organization for mastitis control and milk quality

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# Join Us in Albuquerque!

**The NMC 49th Annual Meeting** will be held January 31-February 3, 2010 at the Hyatt Regency Hotel in Albuquerque, New Mexico. One of the oldest cities in the U.S., Albuquerque is an epicenter of authentic Southwestern culture, offering quaint shops, Pueblo- and Spanish-inspired architecture, world-famous cuisine, music and art. Albuquerque is also known as the hot air ballooning capital of the world!

The NMC meeting will highlight the latest technical and applied information relating to udder health, milking management, milk quality and milk safety. This year's conference features an outstanding program that will help the attendees meet the evolving demands for milk quality. The conference is targeted toward individuals interested in mastitis control and quality milk production, including veterinarians, producers, researchers, extension specialists, industry suppliers, field staff, regulatory officials, and students.

## Schedule at a Glance

	Sunday Jan. 31	Monday Feb. 1	Tuesday Feb. 2	Wednesday Feb. 3
Morning	Board of Directors 7:00 am - noon	Committee Chairs 7:00 am - 8:00 am Newcomers Coffee 8:00 am - 8:30 am Committee Meetings 8:30 - 12:30 pm	Breakfast 7:00 am - 8:00 am Poster Session General Session 8:15 am – 12:00 pm	Breakfast 7:00 am - 8:00 am General Session 8:30 -12:00 pm Meeting Adjourns 12:00 pm
Afternoon	Pre-Conference Symposium 1:00 pm - 5:30 pm	Student Lunch & Social 12:30 pm – 1:30 pm Committee Meetings 12:30 - 3:30 pm Short Courses 2:00 - 5:00 pm Board of Directors 4:00 - 6:30 pm Poster Session	Luncheon & Awards 12:00 pm - 1:30 pm TTS/Free Time 1:30 pm - 2:00 pm General Session 2:00 pm - 5:30 pm R & D Session 2:00 pm - 5:00 pm Poster Session	
Evening	Short Courses 6:30 pm - 9:30 pm	Short Courses 6:30 pm - 9:30 pm Poster Session	Poster Session Reception & Auction 6:00 pm - 7:30 pm	



## Annual Meeting Overview

**Pre-conference Symposium.** “Worldwide Trends Affecting Demand for Milk” is the theme for a symposium scheduled for Sunday afternoon, January 31. This is open to all registered attendees (no additional registration fee).

**Short Courses.** Limited-enrollment short courses will be held on Sunday evening, Monday afternoon, and Monday evening. A total of seven courses will be offered. An extra registration fee is required for the short courses.

**Committee Meetings.** NMC committees will meet Monday, February 1, from 8:30 am to 3:30 pm. Individuals are encouraged to attend and participate in the committee meetings, which are open to all registered attendees.

**General Session.** The opening session begins at 8:15 am on Tuesday, February 2. Presentations continue Tuesday afternoon through Wednesday morning. Tuesday afternoon features two concurrent sessions, offering more options for meeting registrants. The meeting adjourns at noon on Wednesday, February 3

**Technology Transfer Session.** The Technology Transfer Session (TTS), featuring poster presentations on mastitis control and milk quality, will be held on Monday and Tuesday. Posters will be available for viewing all day, with authors present at specified times during the day.

**Research and Development Summaries Session.** Selected posters from the TTS will be presented Tuesday afternoon in an oral session (held concurrently with the general session).

**Reception & Auction.** The main social activity of the meeting, the annual reception, will be held on Tuesday evening. Meet new friends and old acquaintances at this feature event. An auction will also be held during the reception to raise funds for the National Mastitis Research Foundation.

**Proceedings.** Papers presented at the meeting (excluding the short courses) will be published in the Annual Meeting Proceedings. Members who do not attend the meeting will be mailed a copy. Additional copies may be purchased from the NMC office. The proceedings will also be provided on CD-ROM.

**Registration.** Discounted pre-registration fees are \$275 for NMC members and \$360 for non-members. Student registration fees are \$105 (members) and \$130 (non-member). Non-members are automatically signed up as NMC members for one year. Please note that the registration fee for members does not include annual dues. Registration includes a copy of the proceedings, two continental breakfasts, one luncheon and a reception.

# NMC 49th Annual Meeting

January 31 – February 3, 2010

Albuquerque, New Mexico

## Sunday, January 31

7:00 am - 12:00 pm Board of Directors Meeting

### **Pre-conference Symposium – Worldwide Trends Affecting Demand for Milk**

Moderator: Keith Sterner, Sterner Veterinary Clinic, Ionia, Michigan

Globalization continues to impact the dairy industry and the recent economic situation has intensified the impact of external forces on dairy farmers and dairy industry stakeholders. This symposium will present a variety of perspectives about some of the external forces that are impacting demand for milk. A highly respected group of speakers will address cutting edge societal issues that have the potential to impact virtually everyone who works to efficiently produce high quality milk.

1:00 pm **Welcome and Introduction**

Keith Sterner, Sterner Veterinary Clinic, Ionia, Michigan

1:05 pm **Current Consumer Perceptions of Animal Agriculture**

Wes Jamison, University of Florida, Gainesville, Florida

*A nationally recognized speaker with expertise in consumer perceptions of animal agriculture, Wes Jamison will present data about consumer concerns of current production practices and review results of consumer surveys of attitudes about food production in the United States.*

1:40 pm **Scientific, Educational and Ethical Challenges Facing the Dairy Industry**

Candace Croney, Ohio State University, Columbus, Ohio

*Providing humane care for dairy animals is fundamental to sustainability of the dairy industry. Dr. Croney's presentation will discuss various welfare issues facing the dairy industry. She will emphasize why these issues are important to consumers and what the dairy industry will need to do to effectively address these challenges.*

2:15 pm **Modern Dairy Production Systems: Integrating Biologic, Economic, Environmental, and Social Issues to Address Consumer Concerns**

Bill Wavrin, Sunny Dene Ranch LLC, Mabton, Washington

*Energy, carbon cycles, and welfare issues in the dairy industry are increasingly under the media spotlight. Dr. Wavrin is a partner in a large dairy and has extensively studied the dynamics of how a large dairy operation produces food for a growing human population. His insights into the value of modern dairy production systems for producing and delivering dairy products to consumers will be enlightening.*

2:50 pm Questions and Answers

3:00 pm Break

3:30 pm **Factors Outside the Dairy Industry that Impact the World Demand for Milk**

Dennis Avery, The Hudson Institute, Washington DC

*A popular invited speaker in many forums worldwide, Dennis Avery works at the Hudson Institute, a Washington-based think tank. He will discuss the politics and policies of food production needs that a growing world population will undoubtedly demand.*

4:15 pm **Low Input Approaches to Dairy Farming in the US**

Tessa Marshall, University of Missouri, Columbia, Missouri

*Successful dairy farmers produce milk using a variety of management strategies including the use of low cost extensive grazing systems. Several New Zealand dairy farms have recently relocated and replicated the New Zealand production style in the southern US. Dr. Marshall (a New Zealand native) and current faculty member at the University of Missouri will share some of their successes as well as some of their challenges.*

4:50 pm **Production and Consumption of Raw Milk**

Michael Payne, University of California, Davis, California

*The raw milk movement continues to grow and there is a great deal of controversy in the popular press regarding the sale and consumption of raw milk. Michael Payne has had considerable experience with this issue in California and will share some public health dilemmas that this issue has generated for state regulatory officials.*

5:25 pm Questions and Answers

5:30 pm Adjourn

**Short Courses (limited enrollment; pre-registration required)**

6:30 pm - 9:30 pm Course 1: Monitoring Udder Health Intervention with PCDART Tools  
Course 2: Milking System Evaluation – Where Do I Start?

# Monday, February 1

## Technology Transfer Session (poster presentations)

Posters available for viewing all day. Authors available from  
12:30 pm – 1:30 pm and/or 5:00 pm – 6:00 pm

## Committee Meetings

Meetings are open to all registered attendees.

- |                     |   |
|---------------------|---|
| 7:00 am - 8:00 am   | Committee Chairs Breakfast Meeting  |
| 8:00 am - 8:30 am   | Newcomers Coffee – An informal get-together for individuals new to NMC.<br>Learn more about the NMC and how its committees function.<br>(Includes coffee & donuts.) |
| 8:30 am - 10:30 am  | International Advisory Committee  |
| 8:30 am - 10:30 am  | Membership & Marketing Committee  |
| 8:30 am - 10:30 am  | Teat Health Committee   |
| 10:30 am - 12:30 pm | Education Committee   |
| 10:30 am - 12:30 pm | Machine Milking Committee   |
| 10:30 am - 12:30 pm | Milk Quality Monitoring Committee   |
| 1:30 pm - 3:30 pm   | Research Committee  |
| 1:30 pm - 3:30 pm   | Long Range Planning Committee   |
| 1:30 pm - 3:30 pm   | Residue Avoidance Committee   |
| 4:00 pm - 6:30 pm   | Board of Directors Meeting  |



## **Student “Meet and Greet” Lunch**

12:30 pm – 1:30 pm

Students at the annual meeting are invited to a “meet and greet” lunch. This informal event offers a great opportunity to meet other students as well as some members of the NMC board and committees.

## **Short Courses (limited enrollment; pre-registration required)**

2:00 pm - 4:00 pm      Course 3: The New Sciences of Teat Disinfection

2:00 pm - 5:00 pm      Course 4: Methods to Evaluate Individual Farm Mastitis Data  
to Make Decisions to Optimize Disease Prevention

6:30 pm - 9:30 pm      Course 5: All You Need to Know About Teat Condition  
Course 6: 200,000 and Beyond – What Somatic Cells Really Tell  
Course 7: Finding the Lost Efficiency in Your Dairy Operation

# Tuesday, February 2

## **Continental Breakfast**

7:00 am - 8:00 am

## **Technology Transfer Session (poster presentations)**

Posters available for viewing all day. Authors available from 7:00 am - 8:00 am and/or 5:15 pm - 6:00 pm

## **Opening Session and President’s Address**

8:15 am      Welcome and Introduction to Program

Pamela Ruegg, University of Wisconsin, Madison, Wisconsin - NMC Program Chairperson

8:20 am      President’s Address

Norm Schuring, GEA WestfaliaSurge, Naperville, Illinois - NMC President

## **General Session I: Motivating Farmers to Produce High Quality Milk**

Moderators: Pamela Ruegg, University of Wisconsin, Madison, Wisconsin and Martin Pol, Lactodiagnostico Sur, Buenos Aires, Argentina

Change requires motivation but motivation requires an understanding of both human psychology and interpersonal dynamics. What are the motivating factors that encourage dairy farmers to improve milk quality? How can dairy professionals motivate farmers to change? How can farmers motivate personnel to work like they own the farm? Can you motivate employees with just money? These questions and more will be addressed in a session which will merge the latest views from science and practical experience.

8:30 am **Keynote Address: Motivating Farmers – Insights from Social Psychology**

Chris Garforth, University of Reading, Reading, United Kingdom

*Understanding why farmers do what they do – and what they don't do – is a key part of successful technology transfer and policy change. Farmers are affected by a range of motivators and barriers. Social psychology offers research tools and conceptual frameworks that help us explore the interplay of economic, social and attitude factors in farmers' decisions. Understanding these factors can contribute to better strategies to encourage innovation and change at the farm level.*

9:30 am **Motivating Isn't Just About the Money**

Henk Hogeveen, Utrecht University, Utrecht, The Netherlands

*Mastitis costs money, but so does mastitis control. Costs and benefits of mastitis and mastitis control will be presented. Farmers do not always behave in a rational manner however, and calculating the costs and benefits is not always sufficient to motivate farmers. Recent data from the Netherlands will be presented.*

10:00 am Break

10:30 am **Making Quality Milk Simple**

David Sumrall, Dairy Production Systems, High Springs, Florida

*Producing high quality milk is possible everywhere in the US. However, often times the "myths of impossibility" related to producing high quality milk in certain regions of the country get in the way. Age-old "truisms" that have been used as excuses for decades, will be refuted, and the secrets of producing superior quality milk, no matter where the dairy is located, will be revealed.*

11:00 am **Working as a Team to Implement a Milk Quality Program**

Eduardo Garbarino, Progressive Dairy Health Services, Clovis, New Mexico  
and Mark Osterkamp Osterkamp Dairy, Muleshoe, Texas

*Teamwork is essential for implementation of successful farm programs. An effective relationship between the herd veterinarian and producer is key to implementing many management strategies. This tag team presentation will feature the viewpoints of both the herd veterinarian and farm owner and will demonstrate how working together can result in effective implementation of a milk quality program.*

11:30 am **Motivating Hispanic Farm Workers**

Jorge Estrada, Leadership Coaching Intl. Inc., Seattle, Washington

*Implementing a successful milk quality program often requires cross cultural skills and the ability to successfully motivate the individuals that are milking the cows. In many regions, cows are milked by Hispanic farm workers. Key strategies on how to surmount cultural issues and improve relationships and communication to achieve greater milk quality will be presented.*

12:00 pm Adjourn Session

## **Luncheon and Program; National Dairy Quality Awards Presentations**

12:05 pm - 1:30 pm

### **General Session II: The Science of Treatment (split session)**

Moderator: Paivi Rajala-Schultz, Ohio State University, Columbus, Ohio

Treatment of mastitis is an important part of an overall mastitis control program. While the practical aspects of treatment are well known, the scientific basis of selecting, administering and evaluating treatments is often not well understood. Speakers in this session will review the research that helps us make treatment decisions.

2:00 pm **Pharmacological Aspects of Mastitis Treatment**

Geoff Smith, North Carolina State University Raleigh, North Carolina

*This presentation will focus on pharmacologic considerations for treating mastitis. This will include an overview of topics affecting distribution of antibiotics in milk such as effects of protein binding and milk production and differences in milking frequency.*

2:45 pm **Efficacy of Alternative Treatments: A Science-Based Approach is Essential**

John Barlow, University of Vermont, Burlington, Vermont

*Alternative mastitis treatments may be described as those other than the conventional antimicrobial based therapies approved by regulatory agencies. Alternative therapies are used by both conventional and organic dairy producers, although there is extensive use of alternative mastitis treatments on organic farms where antimicrobial use is restricted. A summary of prior research that has evaluated alternative mastitis treatments, including a review of the strengths and limitations of selected studies, will be presented.*

3:15 pm **Is Mastitis Painful and is Therapy for Pain Beneficial?**

Ken Leslie, Ontario Veterinary College, Guelph, Ontario, Canada

*Over numerous decades of intensive research, our understanding of the biological and epidemiological aspects of mastitis in dairy cattle has increased exponentially. Yet, the effects of intramammary infection on cow behavior and well-being remain largely unexplored. This presentation will review knowledge concerning effects of mastitis on cow behavior and welfare. Changes in various indicators of pain will be described and the potential for increasing our knowledge in this area through incorporation of the measures of cow behavior and welfare into plans for mastitis research will be discussed.*

3:45 pm Break

4:15 pm **Practical Methods to Evaluate Treatment Outcomes**  
Martin Green, University of Nottingham, Loughborough, United Kingdom

*Assessing the outcome of treatments for bovine mastitis, in commercial situations, poses problems for the mastitis consultant. This paper considers possible methods of defining a 'cure' in clinical practice and discusses approaches currently used in the UK for examining cure rates during both dry and lactating periods. The difference between assessment of a cure for an individual cow and the average cure rate for a herd is also discussed.*

4:45 pm **The Scientific Basis for Using On-Farm Culture Systems**  
Greg Keefe, Atlantic Veterinary College, Charlottetown, Prince Edward Island, Canada

*This presentation will discuss the concept of selective therapy (evidence-based treatment) using on-farm culture systems. The primary emphasis will be on treatment of clinical mastitis but some ongoing research about selective dry cow therapy will be discussed.*

5:15 pm Adjourn

## **Research and Development Summaries Session (split session)**

2:00 pm - 5:00 pm

Oral presentation of selected posters from the Technology Transfer Session will be featured in this session. Designed to highlight the latest research and development projects from around the world, the session offers an opportunity for graduate students, post-doctoral fellows, research associates and new individuals in the field of mastitis and milk quality to be involved in the oral presentations at the NMC meeting.

## **Technology Transfer Session (poster presentations)**

Posters available for viewing all day. Authors available from 7:00 am - 8:00 am and/or 5:15 pm - 6:00 pm

## **Reception and NMRF Auction**

6:00 pm - 7:30 pm



# Wednesday, February 3

## Continental Breakfast

7:00 am - 8:00 am



## General Session III: Reaching the Global Dairy Industry in Developing Countries

Moderator: Steve Nickerson, University of Georgia, Athens, Georgia

There are millions of people living in underdeveloped countries that need help in developing their dairy industries to provide them with a source of high quality protein. Presenters in this section will describe the current status of the industries in selected underdeveloped countries, how milk is handled and milk quality assessed, and what NMC procedures can be put in place to educate dairy producers on practices to manage mastitis and improve milk quality.

### 8:30 am **The Emerging Dairy Industry in China**

Jim Cullor, University of California, Davis, California

*This presentation will provide information on observations of the China dairy industry and its strengths, weaknesses and projected future directions. There is a great need for introducing NMC principles and philosophies in collaboration with Chinese leadership at all levels.*

### 9:00 am **Improving Milk Quality in Developing Countries with a Reference to Asia**

Gene Monfore, ABS Global, Inc., Visalia, California

*This presentation will discuss many of the items that anyone considering working as an advisor, consultant, or employee in a developing area in a third world country should consider. Specific examples will be discussed.*

### 9:30 am **Dairying and Milk Quality in Latin America**

Abelardo Martinez, Hoard's Dairyman Mexico, Tlalnepantla, México

*The production of milk among Latin American countries is quite diverse, ranging from primitive to more modern operations. Several challenges to mastitis control and producing higher quality milk are unique to the region, which will be discussed. However, this region has the potential to improve its productivity and become more self sufficient, and dairy farmers and their advisers should focus on the strengths in Latin America to build upon and to help sustain the dairy industry in this part of the world.*

10:00 am Break



## **General Session IV: Managing the Environment to Reduce Mastitis and Improve Milk Quality**

Moderator: Rick Watters, Cornell University, Ithaca, New York

This session will offer three perspectives on housing and environmental factors that contribute to milk quality. The session will begin by reviewing the implications of free stall design on animal behavior and emphasize the impacts of cow comfort on udder hygiene and mammary health. In many regions, cows live in open corrals or “dry lots” and the second presentation will focus on management strategies that can be used to ensure quality milk is produced from dry lot dairies. Finally, a look at bulk tank milk quality in California over the past ten years will provide the back drop for a discussion of environmental challenges that many large dairy farms face.

### **10:30 am Impact of Freestall Housing on Animal Health and Behavior**

Marina von Keyserlingk, University of British Columbia, Vancouver, British Columbia, Canada

*This presentation will provide insight to how knowledge of natural behavior can help provide practical solutions to current problems in housing and management of dairy cows. How does a cow's response to physical structures in her environment impact health and productivity?*

### **11:00 am Dry Lot Dairy Management**

Dennis Armstrong, University of Arizona, Tucson, Arizona

*Although free stall barns are the housing of choice for almost all new and remodeled dairies, dry lots, or open corrals, are still common in the West. This presentation will review dry lot management including corral surface maintenance, shades, bedding, and wash pens for reduced mastitis and improved milk quality.*

### **11:30 am Milk Quality and Environmental Regulations – Addressing the Challenges**

Carol Collar, University of California Cooperative Extension, Hanford, California

*California dairies operate within a complex and burdensome maze of regional, state and federal regulations – does this impact milk quality? Bulk tank milk quality in the major milk producing regions will be presented along with an overview of new and proposed regulations. How are dairy producers adapting to comply? How are we helping them meet the challenge, and what can you learn from our experience?*

12:00 pm Adjourn



# Short Course Information

## **Course 1: Monitoring Udder Health Intervention with PCDART Tools**

Date and Time: Sunday, January 31, 6:30 pm – 9:30 pm

Class Size Limit: 30 people

Course Fee: \$115

Instructors: Kas Ingawa, Dairy Records Management Systems, NCSU, Raleigh, North Carolina; Bruce Clark, Northstar Cooperative DHI Services, Lansing, Michigan

This short course will focus on utilizing tools within the PCDART dairy herd assessment and Herd Detective (can be used with all major on-farm dairy herd management programs) software programs to monitor the success or failure of intervention. The course will consist of a short review of the specific database items and reports which help define a herd's current udder health status and then monitoring changes over time in both individual cows and the overall herd's udder health status. The majority of the course will be designed in a case review format in which data from actual herds are provided; a structured approach is implemented to evaluate the success or failure of intervention strategies.

**IMPORTANT NOTE: Participants must provide their own laptop to run programs used in the course.**

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## **Course 2: Milking System Evaluation – Where Do I Start?**

Date and Time: Sunday, January 31, 6:30 pm – 9:30 pm

Class Size Limit: 40 people

Course Fee: \$115

Instructors: Patrick Gorden, Iowa State University, Ames, Iowa; David Reid, BouMatic, Madison, Wisconsin

This short course is meant to be a beginner to intermediate course on evaluating milking systems within a complete milking time evaluation. Evaluation of milking systems utilizing guidelines established by NMC will be discussed with emphasis on milking unit performance. The course will utilize case studies to emphasize important concepts of system evaluations. All participants will receive a copy of NMC's "Procedures for Evaluating Vacuum Levels and Air Flow in Milking Systems" and a handout of the course content. All participants should understand the concepts for completing the Milking System Evaluation Form upon completion of the course.

### **Course 3: The New Sciences of Teat Disinfection**

Date and Time: Monday, February 1, 2:00 pm – 4:00 pm

Class Size Limit: 40 people

Course Fee: \$80

Instructors: Colin Kingston, Ambic Equipment Ltd, Witney, United Kingdom; Joe Morelli, Ecolab, Redmond, Washington

This is a new course for dairy industry professionals responding to the growing variety of means of applying teat disinfectants and the wide array of active agents and formulations of products now available. The course will demonstrate the range of equipment – the different types of dip cups, spray systems and even automated sprayers – that can be used to apply the modern disinfectant actives and formulations. It will show how certain application products fit certain disinfectants and how they can be selected and optimized for any type of milking operation. Handouts on course materials will be provided.

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### **Course 4: Methods to Evaluate Individual Farm Mastitis Data to Make Decisions to Optimize Disease Prevention**

Date and Time: Monday, February 1, 2:00 pm – 5:00 pm

Class Size Limit: 40 people

Course Fee: \$115

Instructors: Martin Green and Andrew Bradley, University of Nottingham Veterinary School, Nottingham, United Kingdom

A recently completed research program in the United Kingdom has thrown light on how patterns of clinical mastitis alongside somatic cell counts relate to new infection rates on dairy farms. The findings of this study have broad applicability and offer challenges to thinking about mastitis control in any environment. This course will demonstrate how mastitis patterns can be used in practice, to improve the understanding of mastitis epidemiology on individual units and to directly help selection of appropriate preventive measures. Participants will see real examples and, in interactive sessions, make their own farm assessments, using novel software to aid analysis. We will also illustrate how the whole scheme is used on a widespread basis in the UK by dairy practitioners, to facilitate adoption of a national mastitis control plan. The participants will receive handouts and a trial software CD.

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### **Course 5: All You Need to Know About Teat Condition**

Date and Time: Monday, February 1, 6:30 pm – 9:30 pm

Class Size Limit: 40

Course Fee: \$115

Instructors: Ian Ohnstad, The Dairy Group, Taunton, United Kingdom; Elizabeth Berry, DairyCo, Cirencester, United Kingdom; Doug Reinemann, University of Wisconsin, Madison, Wisconsin; Brian Pocknee, The Dairy Group, Taunton, United Kingdom; Tom Hemling, DeLaval, Kansas City, Missouri

The original “Teat Club International” (TCI) course has been updated and is presented to explain how to assess teat condition; the effects of machine milking, the environment and various skin infections; how to determine when a problem occurs; and how to resolve any problem. A series of modules will be followed ending with an assessment/discussion task in identifying various teat conditions, their causes and significance. This course is for those who have not previously attended a TCI teat condition short course. All participants will receive the TCI’s “Teat Condition Portfolio” CD.

### **Course 6: 200,000 and Beyond - What Somatic Cells Really Tell**

Date and Time: Monday, February 1, 6:30 – 9:30 pm

Class Size Limit: 40 people

Course Fee: \$115

Instructors: Ynte Schukken, Frank Welcome and Brad Rauch, Cornell University, Ithaca, New York; Paolo Moroni, University of Milan, Milan, Italy; Alejandro Ceballos, University of Prince Edward Island, Charlottetown, PEI, Canada

Learn innovative ways of working with somatic cell count data. The course will provide innovative concepts that offer insight into what somatic cells really tell us. A combination of lectures and small group discussion on case studies will be used. New ideas and methods for identifying, tracking and managing somatic cells will be presented. Learn about New York Quality Milk Production Services' methods, initiatives and results. The course participants will receive all course materials in electronic form on a CD so that they may be able to use these materials in their own practice.

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### **Course 7: Finding the Lost Efficiency in your Dairy Operation**

Date and Time: Monday, February 1, 6:30 pm – 9:30 pm

Class Size Limit: 40 people

Course Fee: \$115

Instructors: Tom Lorenzen, Alltech, Omro, Wisconsin; Fabian Bernal, Dairy Workers' Program – Spanish, Alltech, Nicholasville, Kentucky

Cows don't lie! Stop, look and listen to your cows. Learn how to identify the small elements of dairy production that keep a dairy operation from achieving top-notch production efficiency. Discussions will focus on: 1) the work of milker technicians, proper milking procedures and common errors in milking management, with highlights from videos that illustrate improvements seen before and after attendance at a milker training school; 2) cow comfort issues, effective use of cow movement and management considerations involving cow feeding behavior and cow resting comfort; 3) the milking equipment in regard to parlor efficiency. Video demonstrations and discussion will highlight this energetic short course. You will learn some of the "little things" to improve the bottom line that do not require out-of-pocket investment to remedy "lost efficiencies". Relevant literature will be provided.

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**Please Note:** *The short courses have limited enrollment. Registration is based on a first come, first serve basis. The deadline for short course registration is January 19. Registrations may be accepted after the deadline if space is available.*

*Courses may fill up before the deadline, so early registration is recommended. In order to sign up for a short course, you must also register for the general session. Payment must accompany registration. Phone-in reservations are NOT accepted. Registering online will give you the best chance of being enrolled in a short course.*

# Hotel, Transportation, Activities & Attractions

## Hotel Information

The NMC Annual Meeting will be held at Hyatt Regency Albuquerque. This Four-Diamond hotel is located in downtown Albuquerque, about 4 miles from the airport.

Room rates are \$149 single/double (plus applicable state and local tax). All reservations are subject to availability and should be received by **January 5, 2010**. Reservations received after the official cut-off date will be based on availability at the hotel's prevailing rates. Your reservation must be guaranteed by one night's deposit or by credit card. Check-in time is 3:00 pm; check-out is 12:00 noon.

For reservations, contact the hotel directly (be sure to mention you will be attending the NMC meeting).

Online reservations can be accessed from the NMC meeting website  
[www.nmconline.org/annualmeet/2010](http://www.nmconline.org/annualmeet/2010)

NMC strives to hold conferences at hotels that are committed to implementing environmentally-friendly practices. The Hyatt Regency Albuquerque has already implemented several "green initiatives" into practice, and others are in the process of being implemented. Examples include shredding paper for recycling; "green" cleaning products in the sleeping rooms; using personal beverage containers instead of bottles, cans or paper throughout the hotel; water stations in meeting rooms rather than pitchers and glasses on tables; use of compact fluorescent bulbs; low-flow toilets and shower heads; and recycling glass, aluminum, cardboard, and plastic.



**Hyatt Regency Albuquerque**  
330 Tijeras Ave NW  
Albuquerque, NM 87102  
Phone: (505) 842-1234

## **How To Get There**

Albuquerque is serviced by the Albuquerque International Sunport Airport (ALB), which is located about 4 miles from the Hyatt Regency Hotel. Sunport Shuttle (independently operated) provides transportation between the airport and hotel. The rate is \$11 one-way (\$20 round trip) for the first person, and \$5 each way for the second person. Phone: 505-883-4966. Taxis are also available for approximately \$18-\$20 one-way.

### *Driving directions from Albuquerque International Airport:*

Exit on Sunport Blvd onto I-25 North. Travel I-25 North to Martin Luther King, exit 224 B. Turn left on Martin Luther King and travel west to 5th St. Turn left on 5th St to Tijeras Ave. Turn left on Tijeras – the hotel and front drive are on the right side. To access the parking garage, continue on Tijeras Ave, turn right on 3rd St and right on Copper. Garage is located on the right hand side of Copper.

More directions and maps can be found on the NMC meeting website.

## **What to See and Do**

One of the oldest cities in the U.S., Albuquerque is an epicenter of authentic Southwestern culture, offering quaint shops, Pueblo- and Spanish-inspired architecture, world-famous cuisine, music and art.

Located in the center of New Mexico, Albuquerque straddles the Rio Grande River. The Sandia Mountains run along the eastern side of Albuquerque, providing a beautiful backdrop for the modern city skyline. When visiting Albuquerque at night, you'll notice the city is bathed in the glow of neon signs, relics of Albuquerque's place on historic Route 66.

Albuquerque's climate is usually sunny and dry, with low relative humidity. Brilliant sunshine defines the region, averaging more than 300 days a year. In winter, daytime high temperatures range from the mid 40s to upper 50s Fahrenheit.

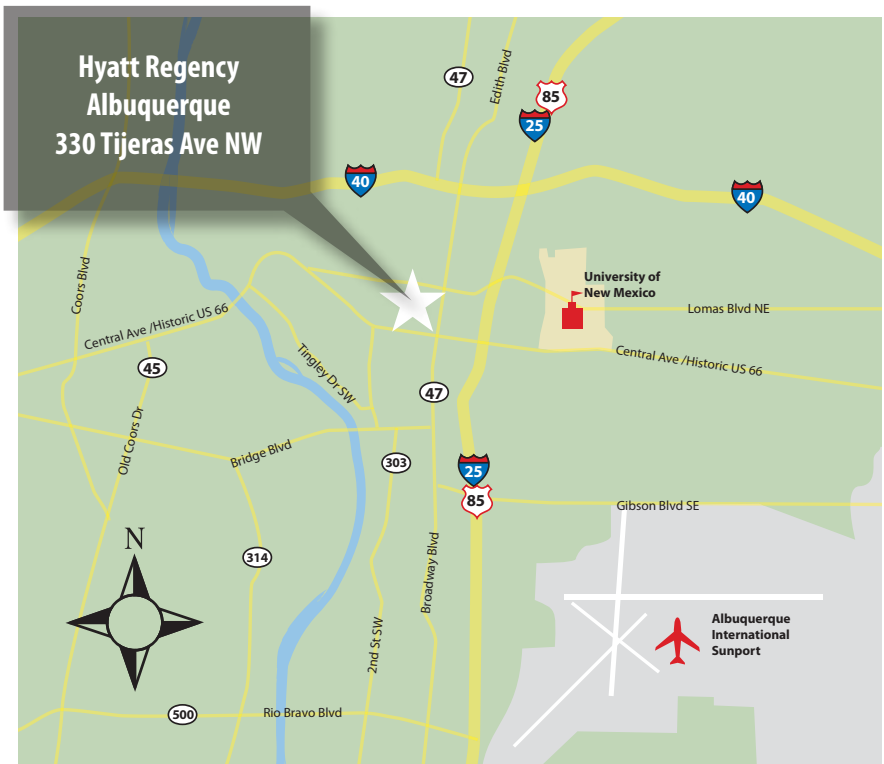
The unique weather conditions have made Albuquerque the hot air ballooning capital of the world. Balloons dot the clear blue skies almost every morning, revealing a myriad of colors year-round.

Albuquerque's weather also makes it perfect for outdoor activities, including hiking, biking, skiing and golfing on some of the country's best courses. The surrounding mountainous terrain is a paradise for hikers and bikers, with varying levels of trails crisscrossing the Sandia and Manzano Mountains. There is also an interconnected trail system throughout the city. The Paseo del Bosque Bike Trail is an easily accessible 15-mile route enjoyed by walkers, runners, cyclists, and inline skaters. Walkers can also take a historic hike through Petroglyph National Monument on the west side of the city.

During winter months, Sandia Peak offers skiing and snowboarding just minutes from the city. For a bigger ski experience, Taos Ski Valley and Santa Fe ski resort are both less than 2 1/2 hours away.

Santa Fe, about 60 miles from Albuquerque, is known as a center for arts and culture. It is easily accessible from Albuquerque via a light rail service.

Additional information and links to Albuquerque area attractions can be found on the NMC meeting website.



# National Mastitis Research Foundation Fund Raiser

## Auction to Support NMC Scholars Program

Look no further than the National Mastitis Research Foundation (NMRF) auction for a unique keepsake from the NMC 49th Annual Meeting. Being held during the Tuesday evening (February 2) reception, you can bid on a variety of handcrafted items, including handmade wood pieces and hand-sewn home décor articles. Other items with broad appeal include cheese, wine and coffee. And, expect to find a variety of bovine items – from figurines to prints to note cards. Some items will be offered via a live auction, while other items will be sold through a silent auction.

The auction will generate funds for NMRF, which solely supports the NMC Scholars Program – now in its third year. This program provides four scholarships to graduate students, who have an interest in mastitis control, udder health and quality milk production, to attend the NMC annual meeting, and encourages their active participation in NMC. Students attending the NMC annual meeting enhance their mastitis control knowledge and build their network of milk quality experts from around the world. This worthwhile program will help sustain and provide a continuous infusion of talent for the future of NMC and the dairy industry.

NMRF is accepting donations to the auction. Please contact Mark Puliafico at 508-943-9500 [markp@webco-chemical.com](mailto:markp@webco-chemical.com), or Lenny Petersson at 508-865-6911 or [lpetersson@iba-usa.com](mailto:lpetersson@iba-usa.com) to make a donation. Share your hidden talents – whether it's woodworking, quilting, photography, jewelry making or sewing – with the NMC family and provide a memento to be treasured for many years to come.

Help support NMRF, NMC and future milk quality experts by donating items to and bidding on items at the auction. You'll be making a difference in young scientists' efforts to improve udder health and prevent and control mastitis!

*NMC Scholars (from left to right), Rick Watters, Cornell University (US); Jennifer McCarron, Atlantic Veterinary College (Canada); Wilma Steeneveld, Utrecht University; (The Netherlands) and Patricia Yoshida Faccioli, Universidade Estadual Paulista (Brazil), received travel scholarships funded by the NMRF to attend the 2009 NMC Annual Meeting. This year's recipients will be announced at the annual meeting luncheon on Tuesday, February 2.*



# Registration Form

**NMC 49th Annual Meeting,  
January 31 – February 3, 2010,  
Albuquerque, New Mexico**

**Online registrations are preferred (and are processed quicker than mailed or faxed forms)**

Register Online at [www.nmconline.org](http://www.nmconline.org) and be eligible for a drawing for a \$100 gift card.

Name: \_\_\_\_\_

Nickname for Badge: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Postal Code \_\_\_\_\_

Country: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

NMC Membership ID Number: \_\_\_\_\_

(Membership ID can be found above the mailing address on this registration packet or on NMC newsletters)

## Select the most appropriate description of your company/organization:

- dairy farm     veterinary clinic     dairy cooperative     proprietary handler/processor  
 university     dairy supplies co.     consultant     other: \_\_\_\_\_

**Meeting Registration:** add \$25 to registration fees after January 4. Final pre-registration deadline is January 19.

- NMC Member: \$275 . . . . . -Does NOT include 2011 membership dues. Do NOT use this form to pay dues.  
 Non-Member: \$360 . . . . . -Enrolls registrant as an NMC member. Applies to NEW members only.  
 Student Member: \$105 . . . . . -Must be a full time student and an NMC member.  
 Student Non-Member: \$130 . . . . . -Enrolls registrant as a NEW student member (must be full time student).

## Optional Short Courses: (limit one per time slot)

(check meeting website to determine availability)

### Sunday Evening, 6:30 pm - 9:30 pm

- Course 1:** Monitoring Udder Health Intervention with PCDART Tools (\$115)  
 **Course 2:** Milking System Evaluation – Where Do I Start? (\$115)

### Monday Afternoon, 2:00 pm - 4:00 pm

- Course 3:** The New Sciences of Teat Disinfection (\$80)

### Monday Afternoon, 2:00 pm - 5:00 pm

- Course 4:** Methods to Evaluate Individual Farm Mastitis Data to Make Decisions to Optimize Disease Prevention (\$115)

### Monday Evening, 6:30 pm - 9:30 pm

- Course 5:** All You Need to Know About Teat Condition (\$115)  
 **Course 6:** 200,000 and Beyond – What Somatic Cells Really Tell (\$115)  
 **Course 7:** Finding the Lost Efficiency in Your Dairy Operation (\$115)

Paid by:     Check     VISA     MasterCard     American Express

Print or type clearly: Card # \_\_\_\_\_ Exp Date \_\_\_\_\_

Signature \_\_\_\_\_

NMC Fed. Tax ID no. 36-2539005

## Meeting Registration Information

- To receive early registration discount, forms must be received (not postmarked) by January 4 (add \$25 thereafter).
- Final pre-registration deadline is January 19. Forms must be received (not postmarked) by that date. Forms received after that date will not be pre-registered. After January 19, please register on-site.
- Full refunds for cancellations made by January 19. After January 19, a \$25 administrative fee will be assessed on all cancellations. No refunds after January 29. All requests for refunds must be in writing.

## Short Course Registration Information

- In order to participate, you must also register for the general session.
- Registration deadline for the courses is January 19 (early registration recommended—classes may fill prior to the deadline).
- Full refunds for cancellations made by January 19. After January 19, a \$25 administrative fee will be assessed on all cancellations. No refunds after January 29. All requests for refunds must be in writing.

## Send this form and payment (must be received by January 19) to:

NMC, 421 S. Nine Mound Rd. Verona, WI 53593 USA

Phone: (608) 848-4615 Fax: (608) 848-4671 Website: [www.nmconline.org](http://www.nmconline.org)

Payment must accompany registration. Fax registrations accepted with credit cards only.

Phone-in registrations are NOT accepted.

Please do not fax AND mail in the form or you may be charged twice!

**Online registrations are preferred (Note: you may still pay by check if you register online).**