NMC is a not-for-profit professional organization devoted to reducing mastitis and enhancing milk quality. NMC promotes research and provides information to the dairy industry on udder health, milking management, milk quality and milk safety. Founded in 1961, NMC now has close to 1,500 members in more than 40 countries throughout the world.

M-teamUGent is a part of the Mastitis and Milk Quality Research Unit at the Faculty of Veterinary Medicine at Ghent University in Belgium. The team's mission is to provide advice, service and training related to udder health and milk quality, tailored to the needs of dairy producers.
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<td>Program Committee</td>
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<td>NMC Board of Directors and Staff</td>
<td>31</td>
</tr>
<tr>
<td>2014-2015</td>
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</table>
The National Mastitis Council (NMC) is a not-for-profit professional organization devoted to reducing mastitis and enhancing milk quality. The NMC promotes research and provides information to the dairy industry on udder health, milking management, milk quality, and milk safety. Founded in 1961, NMC has approximately 1,500 members worldwide, and holds an Annual and Regional Meeting each year.

This year we are excited to hold our first Regional Meeting outside North America, which has been made possible through a partnership with Ghent University, the M-team\textsuperscript{UGent}, and the Mastitis Research Workers Conference. This meeting promises something for everyone involved in mastitis and milk quality and has reached a record enrolment. We thank Ghent University and the M-team\textsuperscript{UGent} for their hard work.

We hope that attendees continue their involvement in NMC after the meeting by becoming a member or sustaining an existing membership and by volunteering in one of the many roles that members can play in the organization. Most of all we hope you enjoy the conference and take home some new knowledge!

With best regards,

John Middleton, President NMC
Some years ago a number of NMC members launched the “crazy” idea to organise an NMC meeting outside of North America... Many meetings and good discussions later, I am proud and excited to welcome you all here in Ghent, Belgium for what is indeed a unique meeting.

I have to thank past and present NMC board members and presidents, fellow members of the former International Advisory Committee, Anne Saeman (NMC executive director) and those that I forget for entrusting me and my team with the organisation of this Regional Meeting. Thanks should go as well to the Mastitis Research Workers because their decision to meet in Ghent has helped to open doors.

The number of registrations as well as the support from the industry have been overwhelming suggesting the program is attractive and people see the benefit of having NMC meetings in different places of the world. Let this be a first in a long list!

I want to thank you all for being here and participating in the discussions, short courses and seminars, reception and conference dinner. With attendees from over 40 countries this is a unique opportunity to discuss udder health and milk quality in an international context. Thank you to all speakers, moderators and instructors for helping to shape this meeting. Without their commitment we would not have been able to organise it.

Together with all members of the M-teamUGent, I sincerely hope you all have a great time and that all your scientific as well as social expectations are met. Do not forget to sign up and become a member of the NMC, a highly respected organisation that has been there for more than 50 years promoting good science and sound knowledge related to udder health and milk quality.

With best regard,

Sarne De Vliegher, Head of the M-teamUGent
Venue welcome reception (August 4)
AULA - Ghent University
Volderstraat 9
9000 Ghent

Venue scientific program (August 4-5)
AULA - Ghent University
Volderstraat 9
9000 Ghent

Venue conference dinner (August 5)
Gravenkasteel (Castle of the Counts)
Sint-Veerleplein 11
9000 Ghent

Venue technical program (August 6)
Short courses
Faculty of Law - Ghent University
Universiteitsstraat 4
9000 Ghent
- Meeting point: registration desk @ AULA

Industry seminars
AULA - Ghent University
Volderstraat 9
9000 Ghent
- Meeting point: registration desk @ AULA

Twitter
Use the hastag #NMC2014 when tweeting about this conference

Good to know

Wireless internet connection
Make a wireless connection with “UGentGuest”. If you have set up to request an IP address automatically, you will receive an IP address starting with 193.190.8x. Now you are connected, but not yet authenticated. You should start a web browser and you will be redirected to a logon screen. Enter the username and password as mentioned below. After correct authentication you can use the Internet connection. Your connection to this wireless LAN is not encrypted. To protect your personal data, please use encrypted connections like https, imaps, ssh etc. or a VPN client. You’re not allowed to pass on the login information to others.
Username/login: guestNmc201
Password: 4giJjxun

Visit Gent information centre
Oude Vismijn
Sint-Veerleplein 5 - 9000 Gent
9:30h > 18:30h
Phone: ++32 (0) 9 266 56 60
9:00h > 12:00h & 13:30h > 17:00h
Email: visit@gent.be

Certificate of attendance
A certificate of attendance will be provided to all attendees.
Belgian veterinarians can collect a continuing education certificate approved by the Veterinary Statutory Body at the registration desk - Belgische dierenartsen kunnen een door de Orde goedgekeurd certificaat ophalen op de registratiestand in het kader van de bijscholing - Les vétérinaires Belges peuvent collecter un certificat approuvé par l’Ordre au secrétariat dans le cadre du formation continu.
Monday, August 4 –
General introduction & Welcome reception

Registration @ AULA starting at 15h30

<table>
<thead>
<tr>
<th>Time</th>
<th>Subject/Title</th>
<th>Speakers/Moderators</th>
</tr>
</thead>
<tbody>
<tr>
<td>17h30 – 17h45</td>
<td>Welcome and introduction to the meeting</td>
<td>Sarne De Vliegher, Ghent University, Belgium</td>
</tr>
<tr>
<td>17h45 – 18h05</td>
<td>Introduction to the National Mastitis Council by the President</td>
<td>John Middleton, University of Missouri, USA</td>
</tr>
<tr>
<td>18h05 – 18h25</td>
<td>The use of antimicrobials in prevention and cure of mastitis: what is our responsibility - INDUSTRY VIEW</td>
<td>Tony Simon, Zoetis, United Kingdom</td>
</tr>
</tbody>
</table>

Industry responsibilities include both legal and societal responsibilities. Legal responsibilities include developing, manufacturing and marketing veterinary medicines (including antibiotics) with appropriate quality, safety and efficacy, together with robust mechanisms to capture and report pharmacovigilance information. Societal responsibilities are rather broader and include innovation: encouraging, developing and marketing of new antibiotic and non-antibiotic solutions to mastitis, as well as effective communication to customers and other stakeholders.

| 18h25 – 18h45 | The use of antimicrobials in prevention and cure of mastitis: what is our responsibility – ACADEMIA VIEW | Tine Van Werven, Utrecht University, The Netherlands |

This presentation will give an overview on how the academic world can help in further reducing the antimicrobial usage on a dairy farm via new insights (e.g. selective vs blanket dry cow therapy; implementation of treatment protocols; veterinary herd health management program) and the development/implementation of novel innovative strategies in the fight against mastitis.
18h45 – 19h05  The use of antimicrobials in prevention and cure of mastitis: what is our responsibility – REGULATORS’ VIEW

This presentation will give an overview on the regulation of antimicrobials in the EU. Some recommendations of regulators on the use of antimicrobials will be listed. The data of the EVSAC project focussing on the use of antimicrobials will be presented.

Jordi Torren Edo, European Medicines Agency, United Kingdom

19h05 – 19h30  Discussion

Ron Erskine, Michigan State University, USA

19h30 - 21h00  Welcome reception & Poster session @ Perstilium (Poster presentations from 20h00 - 20h30)

Tuesday, August 5 –
General session & Conference dinner

Registration @ AULA starting at 07h00

Subject/title  Speakers/Moderators

08h00 – 08h15  Welcome and introduction to the program
Sofie Piepers, Ghent University, Belgium

08h15 – 08h45  Fifty years of milk quality control in Flanders: an overview
Luc De Meulemeester, Milk Control Centre, Belgium

The official quality control of raw milk started in Flanders only in 1964 although milk quality has always been high in the agenda since the early fifties. In this overview the evolution of the Flemish dairy sector, legislation, analysis methods and frequency and quality results will be discussed with special emphasis on somatic cell count results and udder health.
**08h45 – 09h15**  
**Risks, realities and responsibilities associated with mastitis treatments**

Mastitis is a bacterial infection of the udder that is caused by a variety of pathogens and is recognized after the immune response of the cow has already responded to the infection. While inflammation almost always subsides within 4-6 days, the actual resolution of a clinical case is often difficult to discern. Some cases are spontaneously cured without treatment, some revert to a subclinical state, some respond well to antimicrobial treatments, and some are inherently resistant to most treatments. Treatment strategies vary among countries depending on the predominant pathogens, regulations regarding antimicrobial usage and local beliefs and customs. While treatment strategies may vary, there are some important treatment principles which are consistent throughout the world. These principles, such as knowledge of pathogens and medical history of the cow, can be used to guide mastitis treatments. This presentation will focus on application of scientifically based practical strategies to reduce the dependence on antibiotic therapy while still resulting in acceptable treatment outcomes.

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**09h15 – 09h45**  
**Dry cow management**

The dry period is an extremely important segment of the dairy cow's lactation cycle. The dry period offers a chance for the cow to physiologically prepare for the subsequent lactation and it provides an excellent opportunity to clear up lingering microbial infections through dry cow antibiotic therapy. There are also risks associated with the dry period, including the potential for high new intramammary infection rates, primarily due to bacteria from the environment. The dry period is a time of frequent antibiotic treatment, often for the prevention of new infections. Prophylactic antibiotic use in agriculture is under intense scrutiny worldwide. This has lead to a resurgent in interest in selective dry cow therapy and non-antibiotic alternatives.
This presentation will review the current research regarding best management practices for dry cows, focusing on methods and technology with practical application on commercial dairy herds.

09h45 – 10h15  Discussion  Andrew Biggs, The Vale Veterinary Group, United Kingdom

10h15 – 10h45  Coffee and tea break & Poster session @ Peristylium

10h45 – 11h15  Immunity and mastitis  Lorraine Sordillo, Michigan State University, USA

The severity and duration of mastitis is dependent on the efficiency of mammary gland defense systems. Inflammation is a critical part of the initial immune response to invading bacterial that can determine if new intramammary infections become established. The inflammatory response should not only result in a rapid escalation of local antimicrobial factors, but also in the movement of leukocyte and plasma components from the blood and into infected tissues to kill invading pathogens. Once the bacterial is destroyed, the inflammatory response should resolve and the immune system returns to homeostasis. An efficient inflammatory response can result in the rapid elimination of infectious pathogens without any noticeable change to the mammary tissue or milk. An overly aggressive or prolonged inflammatory response, however, can cause damage to mammary tissues and contribute to reduced milk production associated with mastitis. The ways in which inflammation can either contribute to the resolution of intramammary infections or the pathology associated with mastitis will be discussed. Strategies that optimize the efficiency of mammary gland immune responses to rapidly eliminate bacteria or attenuate dysfunctional inflammatory responses may mitigate the detrimental impact that mastitis has on milk quality and quantity.
<table>
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<th>Time</th>
<th>Session</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>11h15 – 11h45</td>
<td>Selection for mastitis resistance</td>
<td>Gina Pighetti</td>
<td>University of Tennessee, USA</td>
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<td></td>
<td>The paper will provide an overview of the</td>
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<td>current genetic and genomic strategies that</td>
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<td>are being used, the challenges that are in</td>
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<td>place, and how these marker systems can</td>
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<td>be used for greater understanding of the</td>
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<td>mechanisms associated with mastitis</td>
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<td>resistance and developing new strategies for</td>
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<td>mastitis control.</td>
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<td>11h45 – 12h00</td>
<td>Discussion</td>
<td>David Kerr</td>
<td>University of Vermont, USA</td>
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<tr>
<td>12h00 – 12h30</td>
<td>Industry Lunch Forum by CID LINES</td>
<td>Joséphine Verhaeghe</td>
<td>CID LINES, Belgium</td>
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<tr>
<td>12h30 – 13h00</td>
<td>Industry Lunch Forum by ELANCO</td>
<td>Michael Overton</td>
<td>Elanco Knowledge Solutions, USA</td>
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<td>13h00 – 14h00</td>
<td>Lunch @ Peristylum</td>
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<tr>
<td>14h00 – 14h30</td>
<td>Update on “contagious” mastitis: <em>Staphylococcus aureus</em> and <em>Streptococcus agalactiae</em></td>
<td>John Middleton</td>
<td>University of Missouri, USA</td>
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<td></td>
<td>Contagious mastitis encompasses a number of</td>
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<td>host-adapted pathogens that usually spread</td>
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<td>cow-to-cow during the milking process.</td>
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<td><em>Staphylococcus aureus</em> is currently</td>
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<td>considered the most prevalent contagious</td>
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<td>mastitis pathogen in many regions of the</td>
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<td>world. While <em>Streptococcus agalactiae</em> was</td>
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<td>once the most prevalent contagious patho-</td>
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<td>gen, the advent of intramammary antimicro-</td>
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<td>bials for lactating and dry cows allowed</td>
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<td>control and eradication of *Streptococcus</td>
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<td>agalactiae on many farms. In contrast,</td>
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<td><em>Staphylococcus aureus</em>, particularly in</td>
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<td>older cows with chronic infections, can be</td>
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<td>very refractory to antimicrobial treatment.</td>
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Control of transmission of these pathogens relies heavily on adequate milking time hygiene procedures. Both of these pathogens have the potential to be zoonotic, spread from animals to humans, and recent efforts using modern molecular methods have studied the relationships between human and animal infections. This talk will review some of salient features of these two pathogens and discuss their implications for cow and human health.

14h30 – 15h00 **Update on emerging pathogens: *Mycoplasma* and *Prototheca***

*Mycoplasma* sp. have long been regarded as causes of bovine diseases, such as otitis, pneumonia, arthritis and mastitis and will be the primary focus of this discussion. Increased prevalence of mycoplasma mastitis has been rather marked over the last decade and appears to be related to increasing herd size and the associated importation of cattle into herds as they expand. Transmission has traditionally been viewed as occurring during milking time and thus controlled by hygiene. Evidence now points to the importance of asymptomatic carriage as part of the transmission of this disease and nasal discharges are implicated as a major component of transmission. Control strategies advocated are strict milking time hygiene and teat dip. Monitoring the herd prevalence of mycoplasma mastitis through bulk tank cultures is advocated. Such monitoring will alert a dairy manager of a potential mycoplasma mastitis outbreak. Efforts to determine the infected cows can then be made when positive bulk tank mycoplasma culture results are known. Efforts to eradicate the disease can be made once cows have been identified, although it has been reported that some herds control the disease without selective culling or segregation. The emergence of *Prototheca* sp. has been more recent with an increasing number of reported and studied cases of bovine prototheca mastitis around the world. The epidemiology of these outbreaks has been less clear than for mycoplasma mastitis.
A significant source of mastitis pathogens in total confinement systems is the material used for bedding cows either in stalls or loose housing. Organic bedding materials such as straw, wood products and recycled manure commonly contain few mastitis pathogens prior to use as bedding. However, these organic products rapidly become contaminated with the mastitis pathogen populations increasing 10,000-fold within 24 hours. Efforts to control mastitis populations in organic beddings with sanitizing and disinfecting agents have been unsuccessful. Daily replacement of bedding in stalls reduces teat end exposure to coliforms. Inorganic bedding, such as sand, support reduced bacterial populations compared with organic bedding. The bacterial contamination of sand bedding is directly related to the moisture and organic contamination. Reclaiming and recycling of sand from manure often leads to higher organic content of bedding and greater exposure to mastitis pathogens compared with fresh sand. The exposure of cows managed in pasture-based systems to mastitis pathogens is largely dependent upon forage coverage of the soil and stocking rate. Management practices resulting in barren soils in maternity pens, loafing areas, paddocks and cow races can expose cows to greater populations of mastitis pathogens than those in organic bedding materials. Overstocking and feeding corn enriched rations will increase exposure to mastitis pathogens of fecal origin in all management systems. Based upon susceptibility to new intramammary infections by mastitis pathogens, the ranked priority areas to concentrate management for reducing exposure to environmental pathogens are the periparturient, recently dried-off, lactating, and dry cow environments.
**15h30 – 16h00**  
**Update on opportunistic pathogens: Coagulate-negative staphylococci**  
Suvi Taponen,  
University of Helsinki, Finland

Coagulate-negative staphylococci (CNS) are the most frequently isolated bacteria in cow’s milk samples. They cause intramammary infections and increased milk somatic cell count (SCC), but the importance of this group of bacteria on udder health is highly debated. The CNS cause mainly subclinical mastitis and the increase in SCC is usually low to moderate. Some studies have found a protective effect of CNS infection or teat colonization on *S. aureus* infections and even a positive effect on milk production but in other studies such effects were not found. The CNS group consists of about 50 species and subspecies, of which about ten are isolated in bovine milk samples. Although in veterinary practice CNS still are treated as a group, the development of genotype-based identification methods has made identification of CNS species easier, cheaper and more accurate. Several recent studies have focused on characteristics of individual CNS species and possible differences between certain predominant CNS species as cause of mastitis. This presentation will focus on the recent research on bovine mastitis-associated coagulate-negative staphylococci.

| **16h00 – 16h30** | **Discussion** | Herman Barkema,  
University of Calgary, Canada |
|-------------------|---------------|-----------------------------|

<table>
<thead>
<tr>
<th><strong>16h30 – 17h00</strong></th>
<th><strong>Coffee and tea break + Poster session @ Peristylum</strong></th>
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<tr>
<th><strong>17h00 – 17h30</strong></th>
<th><strong>Liner performance and teat health</strong></th>
<th>Ian Ohnstad, The Dairy Group, United Kingdom</th>
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</table>

This paper will concentrate on some of the latest thinking on the interaction between the milking liner and teat health and the importance of choosing the most suitable liner for the milking herd. After ensuring the liner is the most suitable fit for the average teats in the herd, the paper will then discuss how the performance of the liner can be manipulated by changing the milking system vacuum level and the liner open ‘b’ phase of the pulsation cycle.
<table>
<thead>
<tr>
<th>17h30 – 18h00</th>
<th><strong>Udder health programs in the world</strong></th>
<th>Theo Lam, Animal Health Service and Utrecht University, The Netherlands</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&quot;Over the years, in many countries in the world programs were started with the aim to improve udder health and milk quality. In this presentation an overview will be given of current programs that are known to the authors. Different approaches will be compared, and advantages and disadvantages of different approaches will be discussed. As far as available, results will be evaluated, with respect to milk quality, mastitis, attitude towards the subject and economy. Finally the added value of these types of projects will be discussed, including recommendations for future programs.&quot;</td>
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<tr>
<td>18h00 – 18h30</td>
<td><strong>Discussion</strong></td>
<td>Simon Dufour, University of Montreal, Canada</td>
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<tr>
<td>20h00 – 23h00</td>
<td><strong>Conference dinner @ “The Castle of the Counts”</strong></td>
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### Morning
**(09h00 – 12h00, including coffee break at 10h20)**

<table>
<thead>
<tr>
<th>Subject/Title</th>
<th>Instructor(s)</th>
<th>Lecture Room</th>
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</thead>
<tbody>
<tr>
<td>1. On-farm culture systems</td>
<td>Sandra Godden &amp; Jennifer Timmerman &amp; Erin Royster, University of Minnesota, USA</td>
<td>Auditorium LLM</td>
</tr>
<tr>
<td>2. Mastitis – It’s all about communication and motivation</td>
<td>Roeland Wessels, Sint-Anna advice, The Netherlands - Theo Lam, Animal Health Service and Utrecht University, The Netherlands</td>
<td>Pleitlokaal</td>
</tr>
<tr>
<td>3. Failure of mastitis therapy – Is it the drugs, bugs, cows or us?</td>
<td>John Middleton, University of Missouri, USA – Ron Erskine, Michigan State University, USA</td>
<td>Auditorium A</td>
</tr>
<tr>
<td>4. Pain and mastitis</td>
<td>Christina Petersson-Wolfe, VirginiaTech, USA</td>
<td>Auditorium C</td>
</tr>
<tr>
<td>5. How good is your data? - A new approach to improve farm data quality</td>
<td>Miel Hostens, Ghent University, Belgium</td>
<td>Auditorium B</td>
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#### Lunch on your own

### Afternoon
**(14h00 – 17h00, including coffee break at 15h20)**

<table>
<thead>
<tr>
<th>Subject/Title</th>
<th>Instructor(s)</th>
<th>Lecture Room</th>
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</thead>
<tbody>
<tr>
<td>6. Unlocking the potential of precision dairy farming mastitis detection technologies</td>
<td>Jeffrey Bewley &amp; Amanda Sterett, University of Kentucky, USA</td>
<td>Auditorium LLM</td>
</tr>
</tbody>
</table>
7. The role of the microbiology laboratory in mastitis control

Paolo Moroni, Cornell University, USA - Allan Britten, Udder Health Systems, USA - Larry Fox, Washington State University, USA - Marcos Munoz, University of Concepción, Chile - John Middleton, University of Missouri, USA - Ruth Zadoks, University of Glasgow, United Kingdom

8. Understanding immune function and stress in dairy cattle

Arnout Dekker, Prince Agri, The Netherlands - David Kirk, Prince Agri, USA

*Meeting point: registration desk @ AULA at 8h45 - participants will be guided to the Faculty of Law

**Meeting point: registration desk @ AULA at 13h45 - participants will be guided to the Faculty of Law

Farm visit and cheese plant tour - lunch included

<table>
<thead>
<tr>
<th>Subject/title</th>
<th>Instructors</th>
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<tbody>
<tr>
<td>09h00 – 12h00 Visit and workshop commercial dairy farm</td>
<td>Peter Edmondson, Shepton Veterinary Group, United Kingdom - Pieter Pascchn Milk@vice and Ghent University, Belgium</td>
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<td>or Representatives cheese factory</td>
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<td>Visit cheese plant Milcobel</td>
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<tr>
<td>12h00 – 14h00 Lunch @ farm</td>
<td>Representatives cheese factory</td>
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<tr>
<td>14h00 – 17h00 Visit cheese plant Milcobel</td>
<td>Peter Edmondson, Shepton Veterinary Group, United Kingdom - Pieter Pascchn Milk@vice and Ghent University, Belgium</td>
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<td>or</td>
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<td>Visit and workshop commercial dairy farm</td>
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</table>

***Transportation by bus from city centre of Ghent - meeting point: registration desk @ AULA at 7h45
### Industry seminars @ AULA

#### Morning (09h00 – 12h00) – “Immunology and pathology of the udder”

<table>
<thead>
<tr>
<th>Subject/Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>09h00 – 09h40</td>
<td>General aspects immunology of the udder</td>
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<tr>
<td>09h40 – 10h20</td>
<td>History and benefits of the J5 E. coli vaccine</td>
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<tr>
<td>10h40 – 11h20</td>
<td>Mechanism of biofilm formation</td>
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<tr>
<td>11h20 – 12h00</td>
<td>Vaccination against mastitis: an overview</td>
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#### Afternoon (14h00 – 17h00) – “Proper milk extraction: methods and technologies. Balancing milking efficiency, udder health and milk quality - Doing it right in all herds at all times”

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<th>Subject/Title</th>
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<tr>
<td>14h00 – 14h40</td>
<td>Teat prep procedure and cleaning-disinfection options</td>
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<tr>
<td>14h40 – 15h20</td>
<td>Effects of vacuum dynamics on milking performance, teat condition and udder health. Balancing milk out time and animal requirements</td>
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<tr>
<td>15h40 – 16h20</td>
<td>Liner type and impact on teat health, milk yield and milking performance</td>
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<tr>
<td>16h20 – 17h00</td>
<td>Post milking disinfection option, opportunities and issues</td>
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Social program (August 4 & 5)

**August 4:**

Welcome reception @ AULA (19h30-21h00)

AULA - Ghent University
Volderstraat 9
9000 Ghent

**August 5:**

Conference dinner @ Castle of the Counts (20h00-23h00)

Gravenkasteel (Castle of the Counts) (walking distance from AULA)
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SYMPOSIUM
“Immunology and pathology of the udder”
Wednesday, August 6th • 09:00 - 12:00h • Aula
National Mastitis Council Regional Meeting 2014 • Ghent, Belgium

Programme
Welcome and Introduction
Chairman: SARNE DE VLEUGHER, M-team UGent, Department of Obstetrics, Reproduction and Herd Health, Faculty of Veterinary Medicine, Ghent University (Belgium)

09:00 General aspects of udder immunology
YANTE SCHUKKEN, Chief Scientific Officer at GD Animal Health, Professor of Herd Health and Epidemiology at Cornell University (USA)

09:40 History and benefits of the J5 E. coli vaccine
JOSEPH HOGAN, Professor and Associate Chair in the Department of Animal Sciences at the Ohio State University (USA)

10:00 Coffee and tea break

10:40 Mechanism of biofilm formation
ANTONI PRENAFETA, HIPRA R&D Coordinator & Researcher (Spain)

11:20 Vaccination against mastitis: an overview
SOFIE PIEPERS, M-team UGent, Department of Reproduction, Obstetrics and Herd Health, Faculty of Veterinary Medicine, Ghent University (Belgium)

STARTVAC®
STMP2® (Polyvalent inactivated vaccine, Salm. mastitis, in injectable solution). 1000x diluted in 1 ml of sterile saline. The vaccine is administered subcutaneously or intramuscularly in the neck region of the cow. The vaccine is stable for at least 2 years. The recommended dosing interval is 12 months. The vaccine should be administered within 28 days of the last treatment. It is not recommended for use in pregnant cows. The vaccine is contraindicated in cases of severe clinical mastitis, systemic infections, or new cases of clinical mastitis. The vaccine is not recommended for use in pregnant cows. The vaccine should be stored at 2 to 8 °C and protected from light. Do not freeze. For more information, please refer to the product information. Packaging: 20 vaccines of 10 ml. Marketing Authorization holder: Laboratorios Hipra, S.A., Avda. la Selva, 135, 17170 Amer (Girona) Spain. Tel. (34) 972 43 06 60 / Fax (34) 972 43 06 61 / hipra@hipra.com / www.hipra.com
Thanks to the scientifically proven properties of the silica component in the formulation, OrbeSeal moulds to the shape of the teat canal and creates a protective barrier against mastitis. This is why farmers have relied on OrbeSeal for more than 10 years to prevent mastitis infections.

The dry period represents a time of significant risk to cows - up to 70% of all new intramammary infections are acquired during the dry period. Roughly half of all high yielding dairy cows may fail to develop a complete keratin plug in the dry period, without this barrier there is a greater risk of bacteria entering the udder. The use of OrbeSeal at dry off ensures the barrier against infection is present and significantly reduces the incidence of subsequent intramammary infections and clinical mastitis.¹ ² ³

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1. The effect of parity, age and season on somatic cell count of dairy cows with subclinical mastitis  
Ahmet Sabuncu*, Sinem Ozlem Enginler, Emek Dumen  
Faculty of Veterinary Medicine, Istanbul University, Avcılar, Istanbul, Turkey

2. Effect of intravenous infusion of hypertonic saline on the treatment of cows with Escherichia coli mastitis  
Hossein Hamali*, Ahmad Bargi, Katayon Nofouzi, Adel Saberivand  
1Dept. Clinical Sciences, Veterinary Faculty, University of Tabriz, Iran, 2Undergraduate student, University of Tabriz, Iran, 3Dept. Pathobiology, University of Tabriz, Iran

3. Association of CXCR1 gene polymorphisms with incidence rate of clinical mastitis, and test-day somatic cell count and milk production  
Joren Verbeke*, Mario Van Poucke, Luc Peelman, Sofie Piepers, Sarne De Vliegher  
M-team and Mastitis and Milk Quality Research Unit, Ghent University, Ghent, Belgium

4. Analyses of eicosanoid profiles in the milk of cows with Escherichia coli mastitis as potential targets for intervention  
Jeff Gandy, Vengai Mavangira, Lorraine Sordillo  
College of Veterinary Medicine, Michigan State University, East Lansing, Michigan, USA

5. Bovine blood neutrophil function is altered by stage of lactation but not by nutrient supply  
Yang Qu1, Theodore Elsasser2, Kasey Moyes3,  
1University of Maryland, College Park, Maryland, USA, 2Bovine Functional Genomics Laboratory, Beltsville, Maryland, USA

6. Post milking teat disinfection: Effectiveness of teat coverage using a vacuum operated teat spray system  
Brian Pocknee*, Ian Ohnstad1, Colin Kingston2  
1The Dairy Group, Taunton, Somerset, United Kingdom, 2Ambic Equipment Ltd, Witney, Oxfordshire, United Kingdom

7. Association between acute phase protein concentration and PCR-diagnosed mastitis pathogens in the cow composite milk  
Piret Kalmus*, Toomas Orro  
Estonian University of Life Sciences, Tartu, Estonia

8. Identification and prevalence of coagulase-negative Staphylococcus species in Sardinian dairy sheep herds  
Simone Dore*, Sebastiana Tola1, Ennio Bandino1, Pierangela Cabras1, Giovanni Antonio Carboni1, Vittoria D’Ascenzo1, Manuele Liciardi1, Stefano Lollai1, Carla Longheu1, Antonio Vidili1, Eugenia Agnese Cannas1  
1National Reference Laboratory for Sheep and Goat Mastopathy, IZS Sardegna, Sassari, Italy, 2Current address: IZS Sardegna, Sassari, Italy

9. Role of virulence factors in determining subclinical mastitis in dairy Sarda sheep experimentally infected with Staphylococcus epidermidis  
Simone Dore*, Stefano Lollai1, Sebastiana Tola1, Manuele Liciardi1, Ilaria Dupré1, Giovanni Sottigli1, Paola Nicolussi1, Giovanni Antonio Pilo1, Eugenia Agnese Cannas1  
1National Reference Laboratory for Sheep and Goat Mastopathy, IZS Sardegna, Sassari, Italy, 2Department of Biomedical Sciences, University of Sassari, Sassari, Italy, 3Current address: IZS Sardegna, Sassari, Italy

10. Evaluation of milk somatic cell count as indicator of quarters for bacteriological culturing of high somatic cell count cows  
Reshat Jashari, Sofie Piepers, Sarne De Vliegher  
M-team and Mastitis and Milk Quality Research Unit, Ghent University, Ghent, Belgium
11. A survey among Swedish veterinarians concerning treatment of clinical mastitis in dairy cows
Karin Persson Waller*,1,2, Vanja Hårdemark2, Anna Duse1,2
1National Veterinary Institute, Uppsala, Sweden, 2Swedish University of Agricultural Science, Uppsala, Sweden

12. Diagnostic properties of three udder-health indicators in identifying cows with intramammary infection
Ann Nyman*,1, Karin Persson Waller1,2, Ulf Emanuelson2, Torben Larsen2, Torben Werner Benedsgaard3
National Veterinary Institute, Uppsala, Sweden, Swedish University of Agricultural Sciences, Uppsala, Sweden, Aarhus University, Tjele, Denmark

13. Determination of the probability of cure of mastitis by cell differentiation
Sonja Degen*,1, Martina Hoedemaker2, Volker Krömker1
1University of Applied Sciences, Arts Hannover, Hannover, Germany, 2University of Veterinary Medicine, Clinic for Cattle, Hannover, Germany

14. Bacteria count in cotton towels after standard wash procedure
Michael Farre*
Dyrlæager & Ko, Vejen, Denmark

15. Milk amyloid A in the laboratory diagnosis of mastitis
Gabriel Kovári*,1, Csilla Tóthová1, Oskar Nagy1, Tibor Vozár2
1University of Veterinary Medicine and Pharmacy, Košice, Slovak Republic, 2Veterinary Policlinic, Hranovnica, Slovak Republic

16. Efficacy of a cephalaxin-kanamycin intramammary treatment of clinical mastitis: some European field data
Elke Abbelaos*,1, Monique Driesse2, Sofie Piepers3
1Boehringer Ingelheim Animal Health, Ingelheim and Rhein, Germany, 2Boehringer Ingelheim Animal Health, Alkmaar, The Netherlands, 3M-team and Mastitis and Milk Quality Research Unit, Ghent University, Ghent, Belgium

17. The use of antimicrobials on dairy farms in Flanders, Belgium
Marina Stevens*, Sofie Piepers, Sarne De Vliegher
M-team and Mastitis and Milk Quality Research Unit, Ghent University, Ghent, Belgium

18. Susceptibility of mastitis pathogens to a cephalaxin-kanamycin combination across Europe
Karlien Supré1, Marc Saulmont2, Thomas Peter3, Antón Esnal de la Presa4, Ingrid Botvliet5, Andrew Biggs4, Elke Abbelaos*6
1Milkcontrol Centre, Flanders, Lier, Belgium, 2Association Régionale de Santé et d’Identification Animales, Ciney, Belgium, 3Milichtierherden-Betreuungs- und Forschungsgesellschaft, Wunstorf, Germany, 4Analytica Veterinaria, Vizcaya, Spain, 5Brabants Veterinair laboratorium, Diessen, The Netherlands, 6The Vale Veterinary Laboratory, Devon, United Kingdom, 7Boehringer Ingelheim Animal Health, Ingelheim am Rhein, Germany

19. What guides bovine teat macrophage heterogeneity? Teat macrophage subpopulations and the role of chemokines in their development
Hans-Joachim Schuberth*,1, Wolfram Petzl4, Jamal Hussen1
1University of Veterinary Medicine, Immunology Unit, Hannover, Germany, 2Clinic for Ruminants, Ludwig-Maximilians-University, Munich, Germany

20. What guides bovine teat macrophage heterogeneity? Bovine monocyte subpopulations and their differentiation into macrophages
Jamal Hussen1, Wolfram Petzl4, Hans-Joachim Schuberth*
1University of Veterinary Medicine, Foundation, Immunology Unit, Hannover, Germany, 4Clinic for Ruminants, Ludwig-Maximilians-University, Munich, Germany
21. Effect of antioxidant preparations, nonsteroid anti-inflammatory drug and an immunomodulator on blood antioxidant status of cows with clinical form of mastitis
Hanna Markiewicz¹, Marek Gehrke², Zdzisław Gajewski³
Department of Large Animal Diseases with Clinic, Faculty of Veterinary Medicine, Warsaw, Poland, ²Institute of Veterinary Medicine, Poznan, Poland

22. Impact of intramammary treatment on gene expression profiles and leukocyte recruitment in bovine *Escherichia coli* mastitis
Anja Sipka*, Suzanne Klaessig¹, Gerald E. Duhamel¹, Jantijn Swinkels³, Pascal Rainard³, Ynte Schukken¹
¹College of Veterinary Medicine, Cornell University, Ithaca, New York, USA, ²GD Animal Health Center, Deventer, The Netherlands, ³INRA, Infectiologie Animale et Santé Publique, Nouzilly, France

23. Lymphocyte subsets: interdependence of healthy and infected udder quarters
Maiara Blagitz*, Fernando Souza², Camila Batista³, Bruna Santos³, Claudia Stricagnolo¹, Andrea Parra³, Luis Fernando Azevedo³, Alice Della Libera³
¹UNOESC, Xanxerê, Santa Catarina, Brazil, ²EV-UFMG, Belo Horizonte, Minas Gerais, Brazil, ³FMVZ-USP, São Paulo, São Paulo, Brazil

24. Effect of bovine leukemia virus infection on milk lymphocyte subsets and milk B cell apoptosis
Maiara Blagitz¹, Fernando Souza², Camila Batista³, Kamila Santos³, Bruna Santos³, Claudia Stricagnolo¹, Andrea Parra³, Luis Fernando Azevedo³, Alice Della Libera³
¹UNOESC, Xanxerê, Santa Catarina, Brazil, ²EV-UFMG, Belo Horizonte, Minas Gerais, Brazil, ³FMVZ-USP, São Paulo, São Paulo, Brazil

25. Effect of dry cow antimicrobial therapy and teat sealant on the percentage of milk polymorphonuclear leukocytes during the early post-partum period
Jéssica Marochi¹, Gracieli Ferreira¹, Maria Andreguetti¹, Marla Schneider¹, Lindomar Pessoa¹, Pedro Moreira¹, Érica Guirro¹, Fernando Souza³, Alice Della Libera³, Maiara Blagitz¹
¹UFPR, Palotina, Paraná, Brazil, ²EV-UFMG, Belo Horizonte, Minas Gerais, Brazil, ³FMVZ-USP, São Paulo, São Paulo, Brazil

26. First episode clinical *Staphylococcus aureus* mastitis: comparison of two intramammary 3-day treatments
Guillermo J.B. Ladaga¹,²*, Roberto L. Perna², Eduardo V. Moras², Federico Pont-Lezica¹, Gabriel de Erasquin¹,³
¹Grupo INCA, Buenos Aires, Argentina, ²Universidad de Buenos Aires, Argentina, ³University of South Florida, Tampa, Florida, USA

27. Effect of vaccination against mastitis during lactation on dynamic of *Staphylococcus aureus* infection
Fernando Souza¹*, Adriano Cunha¹, Dalila Rosa¹, Maria Aparecida Brito³, Leticia Mendonça³, Alessandro Guimarães³, Maiara Blagitz³, Alice Della Libera³, Marcos Heinemann¹, Mônica Cerqueira¹
¹EV-UFMG, Belo Horizonte, Minas Gerais, Brazil, ²EMBRAPA-Gado de Leite, Juiz de Fora, Minas Gerais, Brazil, ³FMVZ-USP, São Paulo, São Paulo, Brazil

28. Milk prolactin response after induced intramammary infection with coagulase-negative staphylococci in dairy heifers
Kristine Piccart*, Sofie Piepers¹, Joren Verbeke¹, Noëlita Melo de Sousa³, Jean-François Beckers³, Sarne De Vliegher¹
¹M-team and Mastitis and Milk Quality Research Unit, Ghent University, Belgium, ²University of Liège, Belgium

29. Udder health in a Danish compost bedded pack barn
Line Svennesen*, Carsten Enevoldsen, Bjarne Bjerg, Ilka Christine Klaas
University of Copenhagen, Copenhagen, Denmark
30. Adhesion and resistance to phagocytosis in *Streptococcus uberis* clinical and subclinical isolates in bovine mastitis

Tiina Salomäki*, Joanna Hintukainen, Antti Iivanainen
University of Helsinki, Helsinki, Finland

31. Classification of udder health status of dairy cows and herds by use of time series data of lactate dehydrogenase

Christina Petersen, Carsten Ridder, Kristina Nielsen, John Christensen, Jens Blom
Latttec I/S, Hillerød, Denmark

32. Management practices associated with achieving milk quality premiums in Flemish dairy herds

Pieter Passchyn*, Sofie Piepers and Sarne De Vliegher

*Milk@vice, Tórhout, Belgium, †M-team and Mastitis and Milk Quality Research Unit, Ghent University, Ghent, Belgium

33. Effect of intramammary infections with coagulase-negative staphylococci in early lactating dairy heifers on the quarter somatic cell count and quarter daily milk yield throughout first lactation

Dimitri Valckenier, Sofie Piepers, Sarne De Vliegher
Mastitis and Milk Quality Research Unit, Ghent University, Ghent, Belgium

34. Incidence of *Staphylococcus aureus* and *Streptococcus* species on a commercial dairy farm before and after using pre-milking disinfection (2010-2014)

Goran Bačić*, Nino Mačešić†, Tugomir Karadjole†, Nikica Prvanović Babić†, Martina Lojkić†, Marina Pavlak†

1Veterinary Faculty Zagreb University, Zagreb, Croatia, †Current address: Veterinary Faculty Zagreb University, Zagreb, Croatia

35. Genetic variation among isolates of *Streptococcus dysgalactiae* and *Streptococcus uberis* collected from cases of bovine clinical mastitis

Åsa Lundberg*, Anna Aspán, Karin Persson Waller

1National Veterinary Institute, Uppsala, Sweden, †Swedish University of Agricultural Sciences, Uppsala, Sweden

36. Quantitative stereological analysis of teat tissue composition

Wolfram Petzl*, Monique Lind, Hans-Joachim Schubert, Holm Zerbe

1Clinic for Ruminants, Ludwig-Maximilians-University, Munich, Germany, †University of Veterinary Medicine, Immunology Unit, Hannover, Germany

37. Immunomodulatory mastitis prevention post partum

Wolfram Petzl*, Katharina Zimprich, Hans-Joachim Schubert, Holm Zerbe

1Clinic for Ruminants, Ludwig-Maximilians-University, Munich, Germany, †University of Veterinary Medicine, Immunology Unit, Hannover, Germany

38. Farmers’ motivation towards mastitis improvement in a multi-arm randomized field trial

Bart van den Borne*, Aurélie Tschopp, Martin Reist, Michèle Bodmer, Thomas Kaufmann, Adrian Steiner, Marie-Eve Cousin

1University of Bern, Bern, Switzerland, †Bovine Health Service, Lindau, Switzerland, †ETH Zurich, Zurich, Switzerland

39. A case report: Transmission of *Streptococcus agalactiae* could not be related to known human contact to other infected farms

Jørgen Katholm*, Uffe B.S. Sørensen, Torben W Bennedsgaard

1Knowledge center for Agriculture, Cattle, Aarhus N. Denmark, †Department of Biomedicine, Aarhus University, Aarhus, Denmark, †Institute of Animal Sciences, Aarhus University, Tjele, Denmark

40. A case study of a novel approach to mastitis vaccination in two dairy herds in the United Kingdom

Robert B. S. Drysdale
Westpoint Veterinary Group, Warnham, West Sussex, United Kingdom
41. Genotyping of *Staphylococcus aureus* from clinical mastitis in a commercial dairy farm  
Martina Besozzi¹, Clara Locatelli¹, Claudia Pollera¹, Camilla Luzzago¹, Paola Cremonesi², Bianca Castiglioni³, Nicola Rota¹, Antonio Casula¹, Roger Guix³, Valerio Bronzo³, Paolo Moroni⁴*¹  
¹Università degli Studi di Milano, Milan, Italy, ²Istituto di Biologia e Biotecnologia Agraria, Consiglio Nazionale delle Ricerche, Lodi, Italy, ³Hipra, Girona, Spain

42. Multiple cases of mecC-MRSA in a Bavarian dairy herd  
Katharina Schlotter¹, Reglindis Huber-Schlenstedt*¹, Armin Gangl¹, Helmut Hotzel², Stefan Moenecke³*⁴, Elke Müller⁴, Annett Reißig⁴, Sabine Proft⁴, Ralf Ehrlich⁴  
¹Tiergesundheitsdienst Bayern e.V., Poing, Germany, ²Friedrich-Loeffler-Institut, Institute of Bacterial Infections and Zoonoses, Jena, Germany, ³Institute for Medical Microbiology and Hygiene, Technical University of Dresden, Dresden, Germany, ⁴Alere Technologies GmbH, Jena, Germany

43. Control of mastitis and somatic cell count in Mediterranean buffaloes using inactivated vaccine: comparison of two clinical trials  
Jacopo Guccione¹, Antonella Pesce², Diego Piantedosi¹, Caterina Salzano³, Angela De Rosa¹, Gianni Tedeschi², Silvia Fabbri³, Paolo Ciarapicci³  
¹University “Federico II” Naples, Italy, ²Istituto Zooprofilattico Mezzogiorno, Caserta, Italy, ³HIPRA Italia, Rovato, Italy

44. Detection of major mastitis pathogens by real-time polymerase chain reaction in absence of major-pathogen growth by culturing  
Karien Supré*, Koen Lommelen, Luc De Meulmeester  
Flanders Milk Control Centre, Lier, Belgium

45. In vitro growth inhibition of bovine intramammary streptococci against oxacillin  
Karien Supré*, Koen Lommelen, Luc De Meulmeester  
Flanders Milk Control Centre (MCC), Lier, Belgium

46. Bacteriological etiology of mastitis in Finland  
Johanna Vakkamäki*¹, Suvi Taponen¹, Anna-Maija Heikkinen² and Satu Pyörälä¹  
¹University of Helsinki, Helsinki, Finland, ²MTT Agrifood Research Finland, Helsinki, Finland

47. Comparison of diagnostic tests for detection of udder health status in Mediterranean Buffalo  
Jacopo Guccione¹, Antonella Pesce², Marcus Doherr³, Francesca Garofalo², Antonio Di Loria⁴, Angela De Rosa¹, Arian Steiner⁴, Paola Ciarapicci¹  
¹University of Napoli “Federico II”, Italy, ²Istituto Zooprofilattico del Mezzogiorno, Caserta, Italy, ³Veterinary Public Health Institute, Vetsuisse-Faculty, University of Bern., Switzerland, ⁴University of Magna Graecia of Catanzaro, Italy, ⁵Clinic for Ruminants, Vetsuisse-Faculty, University of Bern, Switzerland

48. Observation of mastitis parameters in three herds before and during the first 12 months of a vaccination program  
Andrew Biggs*¹, Daniel Zalduendo²  
¹The Vale Veterinary Group, Tiverton Devon, United Kingdom, ²Hipra, Amer, Spain

49. Spatial distribution and association between temperature and coliform concentration in a compost bedded pack  
Ana Oliveira¹, Samuel Fávero¹, Fábio Portuhal¹, Arthur Almeida¹, Cassiano Victória¹, Hélio Langoni¹, José Pantoja*¹  
¹São Paulo State University, Botucatu, São Paulo, Brazil, ¹Current address: São Paulo State University, São Paulo, Brazil

50. Factors associated with bedding concentration of environmental mastitis pathogens on compost bedded pack dairies  
Samuel Fávero¹, Fábio Portuhal¹, Ana Oliveira¹, Hélio Langoni¹, José Pantoja*¹  
¹São Paulo State University, Botucatu, São Paulo, Brazil, ¹Current address: São Paulo State University, São Paulo, Brazil
51. On-farm employee education programs, empowering milk quality teams
G. Andres Contreras*, Ronald Erskine
Michigan State University, East Lansing, Michigan, USA

52. Sample size calculation for non-inferiority teat dip trials conducted in pasture based systems
Paulo César Duque-Madrid*, Alejandro Ceballos-Marquez', Mario López-Benavides², Néstor Alonso Villa-Arcila¹, Sebastián Sánchez-Arias¹, Marcos Muñoz-Domón³
¹Universidad de Caldas, Manizales, Colombia, ²DeLaval Manufacturing, Kansas City, Missouri, USA, ³Universidad de Concepción, Concepción, Chile

53. The effect of sampling technique on the PCR-based bacteriological results of milk samples
Heidi Hiitiö*, Heli Simojoki¹, Suvi Taponen¹, Piret Kalmus², Jani Holopainen³, Satu Pyörälä³
¹University of Helsinki, Finland, ²Estonian University of Life Sciences, Estonia, ³Thermo Fisher Scientific Ltd., Finland

54. Effect of vitamin D metabolites on Staphylococcus aureus invasion into bovine mammary epithelial cells
Yuan Yue*, Charlotte Lauridsen, Søren K. Jensen, Stig Purup
Aarhus University, Tjøle, Denmark

55. The mammary immune response is specific for bacterial species and bacterial strains
Olga Wellnitz, Rupert M. Bruckmaier
Veterinary Physiology, University of Bern, Bern, Switzerland

56. Development of AMS in the Nordic countries from 1996 - 2013
Snorri Sigurdsson*, Jørgen Katholm
Knowledge Center for Agriculture, Cattle, Aarhus N, Denmark

57. Udder health management in modern dairy farms
Mari Hovinen*¹, Timo Hurme², Kristiina Sarjokari², Marianna Norring¹, Leena Seppä-Lassila¹, Timo Soveri¹
¹University of Helsinki, Helsinki, Finland, ²MTT Agrifood Research Finland, Jokioinen, Finland

58. Interpretation of Mycoplasma bovis PCR testing in bulk tank and DHI samples from cattle herds
Jørgen Katholm*, Mette Bisgaard Petersen², Liza Rosenbaum Nielsen², Kaspar Krogh¹
¹Knowledge Centre for Agriculture, Cattle, Denmark, ²University of Copenhagen, Denmark

59. Success of a natural exposure mastitis trial over a three month period to demonstrate the efficacy of a novel iodine barrier teat disinfectant
Mario Lopez-Benavides*, Alfonso Lago², Tom Hemling²
¹DeLaval Manufacturing, Kansas City, Missouri, USA, ²DairyExperts, Tulare, California, USA

60. Parameters for describing the relation between pressure at the teat tip during milking and their connection to development of hyperkeratosis
Ute Müller¹*, Martin Spoehr², Franz Uhlenbruck²
¹Rheinische Friedrich-Wilhelms-University of Bonn, Bonn, Germany, ²Udder Health Service Baden-Wuerttemberg, Fellbach, Germany

61. Systematic review and meta-analysis of the effect of selenium supplementation on udder health in cattle
Claudia Cobo¹, Néstor Villa¹, Paulo Duque¹, Jeff Wichtel², Javier Sánchez², Alejandro Ceballos³*
¹Universidad de Caldas, Manizales, Colombia, ²University of Prince Edward Island, Charlottetown, PEI, Canada

62. Milk yield, reticulorumen temperature, rumination time, and neck activity changes around mastitis
Amanda Sterrett*, Barbara Wadsworth, Katherine Akers, Joey Clark, Constance Wood, Kristen McQuerry, Robert Harmon, Michelle Arnold, William Silvia, Jeffrey Bewley
University of Kentucky, Lexington, Kentucky, USA
63. Mastitis control: the use of a vaccine
Elena de Torres*, Guillermo Sierra, Fernanda Zorrilla
Facultad de Veterinaria, Universidad de la República, Montevideo, Uruguay

64. Social influences on clinical mastitis treatment
Jantijn Swinkel*, Aniek Hilkens, Veit Zoche-Golob, Volker Krömker, Manon Buddiger, Jolanda Jansen, Theo Lam
1GD Animal Health, Deventer, The Netherlands, 2Wageningen University, The Netherlands, 3Hanover University, Germany

65. Performance of a hydrogen peroxide teat disinfectant
Anouk Lancriet*, Sarah Couder, Tom Hemling, Elisabeth French
1DeLaval NV, Ghent, Belgium, 2DeLaval Inc., Kansas City, Missouri, USA

66. Motivations for frequent SCC indications in mastitis management
Anneke Gouw*, Vera Voogt, Rik van der Tol, Arjen van der Kamp
1Lely International, Maassluis, the Netherlands, 2Wageningen University, Wageningen, the Netherlands, 3Lely Industries, Maassluis, the Netherlands

67. Risk factors for Staphylococcus aureus in bulk tank milk
Ingrid den Uij, Jantijn Swinkels, Christian Scherpenzeel, Michel Swarts, Hans Miltenburg
GD Animal Health, Deventer, the Netherlands

68. Use of bulk tank milk culture on Dutch dairy farms
Hans Miltenburg*, Ingrid den Uijl, Christian Scherpenzeel, Michel Swarts, Jantijn Swinkels
GD Animal Health Service, Deventer, the Netherlands

69. Evaluation of the use of dry cow antibiotics in low somatic cell count cows
Christian Scherpenzeel*, Ingrid den Uijl, Gerdien van Schaik, Richard Olde Riekerink, Judith Keurentjes, Theo Lam
1GD Animal Health, Deventer, the Netherlands, 2Utrecht University, Utrecht, the Netherlands

70. Retrospective analysis of Prototheca bovine mastitis in the northwest of Portuguese dairy farms
Sara Marques*, Eliane Silva, Gertrude Thompson
1CIBIO/InBIO – University Porto, Vila do Conde, Portugal, 2ICBAS- University Porto, Porto, Portugal

71. Studies of Staphylococcus aureus infection in mammary epithelial cells
Karin Artursson*, Mikaela Magnusson, Jenny Schelin, Jonas Bergquist
1National Veterinary Institute, Uppsala, Sweden 2Technical Microbiology, Lund University, Lund, Sweden, 3Science for Life Laboratory, Uppsala, Sweden

72. Herd level risk factors associated with the presence of coagulase-negative Staphylococcus species in bulk milk
Anneleen De Visscher*, Freddy Haesebrouck, Sofie Piepers, Karlien Supré, Sarne De Vliegher
1M-team and Mastitis and Milk Quality Research Unit, Ghent University, Ghent, Belgium, 2Department of Pathology, Bacteriology, and Avian Diseases, Ghent University, Ghent, Belgium, 3Milk Control Centre Flanders, Lier, Belgium

73. Effect of clinical mastitis on conception rate before and after mastitis occurrence in Holstein dairy cows
Mehran Farhoudi*, Mohammad Shams, Davoud Naseri, Bahram Salasel, Orang Ataei
1Department of Clinical Sciences, Faculty of Veterinary Medicine, Karaj Branch, Islamic Azad University, Karaj, Iran, 2Graduated from Faculty of Veterinary Medicine, Karaj Branch, Islamic Azad University, Karaj, Iran, 3Private General Practitioner, Ghazvin, Iran

74. Evaluation of electrical conductivity (EC) measurement for detection of subclinical mastitis
Martina Baumgartner, Kathrin Hecker, Vera Adams, Thomas Wittek
Clinic for Ruminants, University of Veterinary Medicine, Vienna, Austria

75. Germicidal activity of a new teat disinfectant containing copper
Juan Kruze*, Alejandra Ganga, Fernando Ulloa, Armin Mella
Universidad Austral de Chile, Valdivia, Chile
76. Use of mass spectrometry for rapid identification of pathogens causing subclinical mastitis
Patrícia A.C. Braga1, Juliana R. Barreiro2, Christina R. Ferreira1, Juliano L. Gonçalves2, Tiago Tomazi2, Daniele C. Beuron2, Marcos N. Eberlin1, Marcos V. dos Santos*2
1University of Campinas, Campinas, SP, Brazil, 2University of São Paulo, Pirassununga, SP, Brazil

77. Efficiency of sanitizing agents against Prototheca species isolated from bovine subclinical mastitis
University of São Paulo, Pirassununga, SP, Brazil

78. Biofilm-producing ability of Prototheca species isolated from bovine subclinical mastitis
University of São Paulo, Pirassununga, SP, Brazil

79. Economic assessment of an on-farm culture system used in a selective dry cow therapy program
Marguerite Cameron*1, Greg Keefe1, Jean-Philippe Roy2, Reuben Domike1, Ian Dohoo1
1University of Prince Edward Island, Charlottetown, Prince Edward Island, Canada, 2Université de Montréal, Saint Hyacinthe, Quebec, Canada

80. CellCheck: a collaborative approach to milk quality in Ireland
Finola McCoy*, Joe O’Flaherty, Karol Harvey
Animal Health Ireland, Carrick-on-Shannon, Co. Leitrim, Ireland

81. Interdependence of quarters towards intramammary infection with coagulase negative staphylococci during the dry period and the effect of internal teat sealants
Marguerite Cameron*1, Greg Keefe1, Jean-Philippe Roy2, Ian Dohoo1
1University of Prince Edward Island, Charlottetown, Prince Edward Island, Canada, 2Université de Montréal, Saint Hyacinthe, Quebec, Canada

82. Evaluation of cow-level selective dry cow therapy based on diagnosis by milk leucocyte differential
Mitchell Hockett*1, Martha Payne1, Rudy Rodriguez1,2
1Advanced Animal Diagnostics, Morrisville, North Carolina, USA, 2North Carolina State University, Raleigh, North Carolina, USA

83. Milk leucocyte differential diagnosis as a tool to guide quarter-level, selective dry cow therapy
Mitchell Hockett*1, Martha Payne1, Rudy Rodriguez1,2
1Advanced Animal Diagnostics, Morrisville, North Carolina, USA, 2North Carolina State University, Raleigh, North Carolina, USA
Program Committee

Kevin Anderson - Barkema@ucalgary.ca – University of Calgary, Canada
Sarne De Vliegher - Sarne.Devliegher@UGent.be – Ghent University, Belgium
Larry Fox - Fox@vetmed.wsu.edu – Washington State University, US
Theo Lam - T.Lam@gddeventer.com – Animal Health Service and Utrecht University, The Netherlands
John Middleton - MiddletonJr@missouri.edu – University of Missouri, US
Pieter Passchyn - Pieter.Passchyn@telenet.be – Independent Dairy Consultant, Milk@vice and Ghent University, Belgium
Sofie Piepers - Sofie.Piepers@UGent.be – Ghent University, Belgium
Ynte Hein Schukken - Yschukken@cornell.edu – Animal Health Service, The Netherlands and Cornell University, US

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Christian Hill Dairy
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Mayville, WI 53050
Phone: 920-517-5028
Email: patrick.christian79@gmail.com

Sarne De Vliegher (Treasurer)
Ghent University
Salisburylaan 133
Merelbeke, Oost-Vlaanderen 9820
Belgium
Phone: +32-9-264-75-45
Email: sarne.devliegher@UGent.be

Ron Erskine
Michigan State University
Dept. of Large Animal Clinical Sciences
D-202 VMC
E. Lansing, MI 48824
Phone: 517-353-4637
Email: erskine@cvm.msu.edu

Joe Gillespie
Gillespie Veterinary Service
PO Box 545
McCook, NE 69001
Phone: 308-345-6978
Email: jcgdvm@gmail.com

Sandra Godden (2nd Vice President)
University of Minnesota
1365 Gortner Ave
St. Paul, MN 55108
Phone: 612-625-8177
Email: godde002@umn.edu

Jason Lombard (advisory member)
USDA:APHIS:VS:CEAH
2150 Centre Ave Bldg B
Ft. Collins, CO 80526
Phone: 970-494-7245
Email: jason.e.lombard@aphis.usda.gov

Mario Lopez (Secretary)
DeLaval, Inc.
11100 N. Congress Ave.
Kansas City, MO 64153
Phone: 816-891-1677
Email: mario.lopez@delaval.com
John Middleton (President)*
University of Missouri College of Veterinary Medicine
A310 Clydesdale Hall
900 East Campus Drive
Columbia, MO 65211
Phone: 573-882-6857
Email: middletonjr@missouri.edu

Gary Neubauer (1st Vice President)*
Zoetis
45 Woodland Dr
New Ulm, MN 56073 USA
Phone: 507-359-5750
Email: gary.d.neubauer@zoetis.com

Ian Ohnstad
The Dairy Group
New Agriculture House
Blackbrook Park Avenue
Taunton, Somerset, United Kingdom
Phone: +44 1300 341138
Email: ian.ohnstad@thedairygroup.co.uk

Christina Petersson-Wolfe
Virginia Tech
2160 Litton-Reaves Hall
Blacksburg, VA 24061
Phone: 540-231-4767
Email: cspw@vt.edu

Gina Pighetti
University of Tennessee
240 Brehm Animal Science
2506 River Drive
Knoxville, TN 37996-4574
Phone: 865-974-7225
Email: pighetti@utk.edu

David Reid
(Immediate Past President)*
Rocky Ridge Dairy Consulting
P.O. Box 187
Hazel Green, WI 53811
Phone: 608-854-2243
Email: dreiddvm@gmail.com

Bruce Tonkin
United Dairymen of Arizona
2601 S. Hardy Drive
Tempe, AZ 85282
Phone: 480-966-7211
Email: bttonkin@aol.com

Staff:

Anne Saeman
(Executive Director)*
National Mastitis Council
421 S. Nine Mound Rd.
Verona, WI 53593
Phone: 608-848-4615
Email: anne@nmconline.org

* indicates Executive Committee member
NMC is a not-for-profit professional organization devoted to reducing mastitis and enhancing milk quality. NMC promotes research and provides information to the dairy industry on udder health, milking management, milk quality and milk safety. Founded in 1961, NMC now has close to 1,500 members in more than 40 countries throughout the world.

M-teamUGent is a part of the Mastitis and Milk Quality Research Unit at the Faculty of Veterinary Medicine at Ghent University in Belgium. The team’s mission is to provide advice, service and training related to udder health and milk quality, tailored to the needs of dairy producers.
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