As I write this month’s newsletter, the Christmas Holidays are in full swing, a time of year for reflection. Why did we become veterinarians, particularly veterinarians interested in beef and dairy cattle? I was taught in school that phenotype = genetics plus environment. To make it through veterinary school, inheriting some brain power was very helpful, but it’s much more than that. The reason my favorite music genre is Blues is probably because instead of lullabies, my father sang “House of the Rising Sun”, “Sick and Tired” and “Shake Rattle and Roll” to us as kids. I believe that my environment growing up had a major influence on my choice to be a large animal veterinarian who wanted to work in a rural practice.

But what exactly is “rural practice”, and is there a shortage of rural veterinarians or not? Following up on Dr. Saltman’s initiative, AABP has formed an Ad Hoc Committee on Rural Veterinary Practice. This committee will try to examine the current issues surrounding rural practice and determine how AABP can best get involved.

What is rural life and why are we so passionate about it? For those of us who’ve lived in rural communities, there are intangibles that no committee could ever capture.

Here are some examples of what rural life is to me:
- It’s my grandmother putting the cow going through difficult labor on the prayer line.
- It’s my grandfather planting 50 acres of cucumbers and causing 3 generations never to want to see another cucumber again for a long time.
- It’s the same 3 generations, gathering to watch the first saddling of a prize colt.
- It’s watching that same colt being euthanized because it has “swamp fever”.
- It’s my grandmother letting the blind chicken into the kitchen to eat Cheerios.
- It’s my uncle enjoying watching the tom turkey chase me round and round the house.
- It’s waiting to see my first horse arrive from the sale barn, expecting Secretariat and getting something much different.
- It’s my mother allowing us to stand barefoot and ankle deep in manure, waiting for the release of the flush tank to clean the parlor - until a rat comes out of the tank one day and puts an end to the fun.
- It’s getting covered in leeches while crawfishing.
- It’s having pigs named “Porkchop” and calves named “Ribeye”.
- It’s drinking raw milk and surviving.
- It’s wanting my date in high school to take me frog-gigging instead of to the movies.
- It’s returning home from college to see that my father’s idea of good F1’s are Brahman x Holstein.
- It’s seeing the look on my grandfather’s face, when after returning home from college, I tell him he’s not castrating calves properly.
- It’s hoping my 3-year-old son doesn’t get banned from church daycare after telling the quilting group how to deliver a calf in graphic detail.
- It’s having the next generation of kids bragging about harvesting their first deer at Thanksgiving.
- It’s watching my son go from a nervous first year 4-Her to a cattle handler that would make Tom Noffsinger proud.
- It’s being able to jog in my neighborhood carrying a pellet gun to ward off the mean dog, without getting arrested.
And so much more. This Ad Hoc Committee on Rural Veterinary Practice has a very big task. I want to thank the members of this committee for agreeing to serve and taking on this challenge. No matter where you live, city or country, here’s wishing you a Happy and Prosperous New Year.

Christine Navarre

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**DISCLAIMER**

The AABP does not take responsibility for information contained in or accuracy of the abstracts published in this newsletter.

**AABP Board of Directors Requests Member Input**

The AABP Board of Directors is continuing its deliberations on the topic of a name change for the Association. Because this will be an agenda item at the Spring Board of Directors Meeting, **March 12, 2011**, the Board of Directors requests your guidance and assistance. Please go to [www.aabp.org/name_survey/](http://www.aabp.org/name_survey/) to fill out a very short survey on this issue. Included is a history of how we have arrived at this point. The Board needs your input. If you do not have web access, feel free to contact the office for a paper survey (800-269-2227 or aabphq@aabp.org). Survey submissions will be considered up to and including the date of the Board meeting.

**Honor Roll Membership**

Are you at least 70 years of age, and have been an AABP member for 25 or more years? If so, you may be eligible for honor roll membership in the AABP. All honor roll nominees must be approved by the Board of Directors. If approved, an honor roll member retains his or her full membership benefits without continued payment of yearly dues.

If you meet the above criteria, and would like to be considered for honor roll membership, please contact the AABP Headquarters at (800) COW-AABP, aabphq@aabp.org or mgridell@aabp.org.

**DEADLINE REMINDERS**

**Call for AABP Research Assistantship Proposals**

Do you have an idea for a research project related to bovine practice, but don’t have monetary support for the idea? If you do, the AABP may be able to help. The AABP, with generous support from Intervet/Schering-Plough Animal Health and the AABP Foundation, funds research assistantships on a competitive basis in the general field of bovine health and management.
This is the call for project proposals for fiscal year 2011-2012. The amount of these awards is up to $10,000 and is awarded for a period of one year. A successful candidate may re-apply in the competition in a following year.

Eligible candidates must be AABP members and must fulfill one of the two following criteria:

1) A candidate shall be a North American bovine practitioner conducting a scientific research project.

2) A candidate must be registered in a masters or doctoral program at an accredited North American veterinary college (school) or a college with a veterinary science department. Students enrolled at an accredited North American veterinary college (school) who are pursuing a concurrent masters or doctoral degree and are student AABP members are also eligible. University educators/researchers that are not in an advanced degree program are ineligible for this funding.

**All proposals must be submitted electronically via the AABP website.** More complete details can be found on the AABP website at [www.aabp.org](http://www.aabp.org). From the Main Menu, select “Students” from the top menu, then select “Grants/Scholarships” from the left hand menu to view the information, instructions and the online application. **To be considered, your application must be submitted on the website before February 1, 2011.** Thank you and address any questions to:

Jim Brett, District 3 Director
Chair, AABP Research Assistantship Committee
jbrett@cvm.msstate.edu

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**Call for Abstracts:**

**Student Case Presentation Competition**

The AABP Program Committee is pleased to announce the call for abstract submissions for the Student Case/ Research Presentation Competition, to be held Thursday, September 22, 2011, at the AABP 44th Annual Conference in St. Louis, Missouri.

The purpose of the competition is to promote student interest in the AABP, encourage development of investigative and communicative skills, and allow veterinary students to actively participate in the annual meeting program. Students at any level in their veterinary program, as well as those that have graduated within 6 months prior to the competition are eligible. If graduated, try to ensure that your prospective employer(s) will allow you to attend the meeting.

All submissions for the 2011 Student Case Presentation Competition should be submitted online at [www.aabp.org/students/case](http://www.aabp.org/students/case), by February 1, 2011. Abstracts for submission will be limited to 250-300 words. All required information can be submitted via the website; receipt of submissions will be confirmed by e-mail. Ten presentations will be selected. Notification will be made by March 1, 2011 so that adequate time is available for travel and class/clinic coverage arrangements. Further instructions will follow notification.

Presentations will fall into the categories of either Research Reports or Clinical Case Reports. However, research projects should not be part of a graduate program. Students enrolled in masters or doctoral graduate programs should submit their abstracts to the Research Summaries portion of the program. Clinical cases submitted should be practical and representative of those most likely to be encountered with some frequency by recent graduates. The research entries should be applied in nature and directly undertaken by the presenter. Submissions which adhere to these guidelines will receive higher rankings during the selection process.

The contestants will be judged on both the quality of their case investigation or research and the quality of the presentation. This year, the AABP Board of Directors has again agreed to provide $500 for travel for the selected participants. Three or four awards will be made, according to number of entries in each category (Research versus Case Report). For a category involving four or fewer entries, one award of $1,500 will be provided. For a category involving 5 or more entries, a first place award of $1,500 and a second place award of $750 will be presented.

More than one student may be involved with the presentation of a case or research project; however only one prize will be awarded per winning presentation. Please contact your AABP faculty representative for more information and for assistance in preparing your abstract. You may also contact Dr. Daryl Nydam via the contact information listed below or the AABP Headquarters at [aabphq@aabp.org](mailto:aabphq@aabp.org) or 800-269-2227. We look forward to receiving your submissions and appreciate your participation in the program.

Daryl Nydam, DVM
607-253-4391
dvn2@cornell.edu

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**AABP Bovine Veterinary Student Recognition Award**

Intervet/Schering-Plough Animal Health is once again sponsoring the AABP Bovine Veterinary Student Recognition Award. Eight (8) awards of $1,500 will be given this year. In addition to the amount of the award, Intervet/Schering-Plough...
Animal Health will also reimburse the award winners for all travel and lodging expenses to the 44th AABP Annual Conference in St. Louis, Missouri, September 22-24, 2011. The award winners will receive a plaque recognizing this achievement. The administration of each applicant’s school and the applicant’s faculty sponsor need to be aware that the awards will be given at the AABP Annual Conference and it is preferred that the award winners be present and take advantage of the opportunity afforded by Intervet/Schering-Plough Animal Health.

A full description of the award, the requirements and selection criteria is available on the AABP website at www.aabp.org (click on “Students”, then “Grants/Scholarships”, then “Student Recognition Award”). Any interested student, currently in their 2nd or 3rd year, is encouraged to apply. All application materials must be submitted online by March 15, 2011. The online application form will be available on or before February 1, 2011. Only applications and supporting letters submitted via the AABP website will be considered.

This is a tremendous opportunity for students interested in careers in bovine medicine and provides a great opportunity to attend an outstanding continuing education meeting. Please contact the AABP Headquarters at aabphq@aabp.org or 800-269-2227 with any questions that you might have.

Call for Abstracts:
Research Summaries and Scientific Poster Sessions
44th Annual Conference of the AABP
September 22-24, 2011 in St. Louis, Missouri

The 44th Annual Conference of the American Association of Bovine Practitioners will once again feature scientific sessions focused on cutting-edge research that is directly applicable to the health, welfare and productivity of cattle. These sessions provide the opportunity for researchers from around the world to disseminate state of the art information to bovine practitioners who can then utilize it to improve the cattle industry.

Research projects having direct application to the health, welfare and productivity of cattle are being solicited for presentation at the Oral and Scientific Poster Sessions for the 2011 Annual Conference of the AABP. Project summaries focused on all areas of bovine health, welfare and production are welcome, including pharmacology, epidemiology, medicine, surgery, economic analysis, pathology, pre-harvest food safety, diagnostics, and health monitoring. Projects should have relevance to bovine practitioners and may be broadly applicable to the cattle industry or more specifically applicable to the beef or dairy industry.

Special instructions for mastitis and milk quality research projects: In 2011, AABP and NMC are once again collaborating to co-sponsor the 3rd International Symposium on Mastitis and Milk Quality. All research abstracts related to the subject of mastitis or milk quality should be submitted for presentation at the International Symposium. Papers for the International Symposium should be submitted to the NMC website at http://www.nmconline.org. The deadline for submission of the NMC abstracts is March 1, 2011. Abstracts on the subject of mastitis or milk quality will not be considered for oral (or poster) presentation during the AABP research summaries – only the International Symposium.

Oral presentations made by graduate students in the AABP Research Summaries will be eligible to compete in the “AABP Graduate Student Research Summary Presentation” competition. The top three presenters from the graduate student competition will receive cash awards.

To be considered for the AABP Research Summary sessions (either the oral or poster sessions) and publication in the annual meeting proceedings, your abstract must be submitted to AABP by May 1, 2011. Abstracts submitted after May 1, 2011, will be considered for the POSTER SESSION ONLY, but those abstracts will NOT be published in the meeting proceedings. Abstracts must be submitted electronically. For more information and to submit an abstract, go to www.aabp.org and click on the “Conference” link located on the top of the page and then click on the “Abstract Submission” link located in the left column of the convention page. If you have questions about the research summaries program, contact Drs. Paul Rapnicki (rapni001@umn.edu) or David Smith (dsmith8@unl.edu). Again, abstracts on the subject of mastitis or milk quality will not be considered for oral (or poster) presentation during the AABP research summaries – only the International Symposium.

Manuscript Submission Deadlines for the Bovine Practitioner

Manuscript submission deadlines for the Bovine Practitioner are October 15 and February 15, respectively, for the Spring and Summer issues. Contact AABP Editor, Dr. Bob Smith, at 405-372-8666 or cowdr@sbcglobal.net with questions or submissions.
The Potential for Zoonotic Transmission of *Giardia duodenalis* and *Cryptosporidium* spp. from Beef and Dairy Cattle in Ontario, Canada


The objective of this study was to compare the occurrence and the genotypes and species of *Giardia duodenalis* and *Cryptosporidium* spp. in beef and dairy cattle from farms in the Regional Municipality of Waterloo, Ontario, in an effort to determine the potential for zoonotic transmission from these animals. Pooled manure samples were collected from 45 dairy cattle farms and 30 beef cattle farms. The presence of *Giardia* cysts and *Cryptosporidium* oocysts was determined by immunofluorescence microscopy, while nested-PCR and DNA sequencing were used to determine genotypes and species. **The overall farm prevalence was very high for both *Giardia* and *Cryptosporidium*, and was similar for dairy cattle farms (96 and 64%, respectively) and beef cattle farms (97 and 63%, respectively). However, on dairy cattle farms, *G. duodenalis* and *Cryptosporidium* spp. were detected in 44% and 6% of total pooled pen manure samples, respectively, with the occurrence of both parasites being generally higher in calves than in older animals.** Most *Giardia* isolates were identified as either the host-adapted genotype *G. duodenalis* Assemblage E or the zoonotic Assemblage B. *Cryptosporidium parvum* and *Cryptosporidium andersoni* were the most frequently identified species in dairy cattle, while the non-zoonotic species *Cryptosporidium ryanae* and *Cryptosporidium bovis* were also found. On beef cattle farms, 72% and 27% of the total pooled pen manure samples were positive for *Giardia* and *Cryptosporidium*, respectively, with no obvious correlation with age. All *Giardia* isolates in beef cattle were identified as *G. duodenalis* Assemblage E, while all *Cryptosporidium* isolates were identified by sequence analysis as *C. andersoni*, although microscopic analyses, and subsequent restriction fragment length polymorphism analyses, indicated that other *Cryptosporidium* species were also present. **The results of this study indicate that although *Giardia* and *Cryptosporidium* were identified in a higher overall percentage of the pooled beef cattle manure samples than in dairy cattle, firmly established zoonotic genotypes and species were much more common in dairy cattle than in beef cattle in this region. Dairy cattle, and especially dairy calves, may, therefore, pose a greater risk of infection to humans than beef cattle. However, these results may also provide evidence of potential zooanthroponotic transmission (human to animal).**

Effect of Shade on Body Temperature and Performance of Feedlot Steers

J. Gaughan, S. Bonner, I. Loxton, T. Mader, A. Lisle, R. Lawrence

A 120-d feedlot study using 164 Angus steers (BW = 396.7 ± 7.0 kg) was undertaken in Queensland, Australia (24°8′S, 149°7′8′′N) to determine the effect of shade on body temperature (T_B) and performance. Cattle were allocated to 20 pens: 16 with an area of 144 m² (8 steers/pen) and 4 with an area of 168 m² (9 steers/pen). **Treatments (10 pens/treatment) were unshaded (NS) vs. shaded (SH). Shade (3.3 m²/steer) was provided by 80% solar block shade cloth. Before the study (d – 31), 63 steers were implanted (between the internal abdominal muscle and the peritoneum at the right side flank) with a T_B transmitter. Within each pen, 3 steers had a T_B transmitter. Individual T_B was obtained every 30 min.** The cattle were fed a feedlot diet and had ad libitum access to water. Water usage and DMI were recorded daily on a pen basis. Average daily gain and G:F were calculated on a pen basis. Climatic variables were obtained from an on-site weather station every 30 min. Individual panting scores (PS) were obtained daily at 0600, 1200, and 1600 h. From these, mean PS (MPS) were calculated for each pen. At slaughter (d 121), individual HCW, loin muscle area (LMA), rump fat depth (P8), 12th-rib fat depth, and marbling score were obtained. Mean T_B was not affected (P > 0.05) by treatment (SH = 39.58°C; NS = 39.60°C). However, during a 21-d heat wave when cattle were exposed to a mean ambient temperature (T_AM) > 30°C for 8 h each day (T_AM between 0800 and 1800 h = 29.7°C, and 23.4°C between 1830 and 0730 h), the T_B of SH steers (40.41 ± 0.10°C) was less (P < 0.01) than the T_B of NS steers (41.14 ± 0.10°C). During this period, pen-MPS were greater (P < 0.05) for the NS cattle at all observation times. **Over the first 6 d of the heat wave, MPS of NS steers at 1200 h was 2.47 (P < 0.01) vs. 1.39 for SH steers.** Hip height,
DMI, ADG, and G:F were greater ($P < 0.05$) for SH cattle. Exit BW (final BW) of SH steers (596.1 kg) was greater ($P < 0.05$) when compared with NS steers (578.6 kg). **During the heat wave, DMI was 51% less for NS steers and 39% less for SH steers when compared with the pre-heat wave period ($P < 0.01$).** The HCW of SH steers (315.4 ± 0.8 kg) was greater ($P < 0.05$) than for NS steers (321.4 ± 0.8 kg). No treatment differences ($P > 0.05$) were found for LMA, P8, or marbling score. Access to shade improved ($P < 0.05$) ADG and G:F, increased HCW, and decreased MPS; however, shade did not completely eliminate the impact of high heat load.

### Environmental Factors Affecting Daily Water Intake on Cattle Finished in Feedlots

R. Arias, T. Mader

Records from 7 studies conducted during 1999 to 2005 were utilized to assess the effects of environmental factors on daily water intake (DWI) of finishing cattle. Data from unshaded feedlot pens (up to 24 pens utilized per study; 6 to 9 animals·pen$^{-1}$) containing predominantly Angus crossbred cattle were obtained by dividing total water intake by the number of animals utilizing that waterer. Each waterer was shared by 2 pens; therefore, data were derived from a database containing 72 experimental units comprising 144 pen records. Climatic data were compiled from weather stations located at the feedlot facility. The database included daily measures of mean ambient (Ta), maximum (Tmax), and minimum (Tmin) temperature (°C), precipitation, relative humidity (%), wind speed (m·s$^{-1}$), solar radiation (SR, W·m$^{-2}$), and temperature-humidity index (THI), as well as DMI (kg·d$^{-1}$) and DWI (L·d$^{-1}$). Simple and multiple regression analyses were conducted by season and for the overall data set. Results confirmed that DWI increases during the summer ($P < 0.01$).

When seasons were combined and analyzed by linear regression, the best predictors of DWI were THI ($r^2 = 0.57$), Ta ($r^2 = 0.57$), Tmin ($r^2 = 0.56$), and Tmax ($r^2 = 0.54$). In multiple regression analyses, smaller coefficients of determination ($R^2 < 0.25$) were found within summer and winter seasons. Across season, the largest $R^2$ (0.65) were obtained from the following prediction equations: 1) $DWI = 5.92 + (1.03·DMI) + (0.04·SR) + (0.45·Tmin)$; and 2) $DWI = –7.31 + (1.00·DMI) + (0.04·SR) + (0.30·THI)$. **In conclusion, Ta, Tmin, and THI were found to be the primary factors that influence DWI in finishing cattle, whereas SR and DMI were found to have a smaller influence on DWI.**

### Association between Risk-assessment Scores and Individual-cow Johne's Disease-test Status over Time on Seven Michigan, USA Dairy Herds

R. Pillars, D. Grooms, J. Gardiner, J. Kaneene

To evaluate the effectiveness of management practices implemented to control the spread of Johne's disease (JD), we conducted a 5-year observational study (January 2003 to December 2007) on seven Michigan, USA dairy herds containing cows infected with *Mycobacterium avium* subsp. *paratuberculosis* (MAP; the causative agent of the disease). The JD incidence and prevalence was monitored in each herd annually by serum ELISA and/or fecal culture of all adult cows. A JDCP was designed specifically for each herd based on the results of an initial risk-assessment. The risk-assessment was repeated annually and the control program updated as needed. **Herd risk-assessment scores were used to measure compliance with the control program and create JD-risk profiles for individual cows raised on the farms.** The association between specific risk-assessment scores and the JD-test status of individual cows was evaluated using logistic regression. We accounted for clustering of cows within herds using generalized estimating equations (GEE). Multivariable models were built with purposeful selection of risk factors assessed on univariable analyses. The dataset analyzed consisted of 3707 cows raised on the respective farms, of which 616 were classified as infected with MAP based on testing positive on fecal culture or serum ELISA. Of the cows that were not exposed to the control program, 20% were classified as infected, while only 7% of cows that were exposed to the control program were infected. The final multivariable model consisted of two factors: exposure to adult cows other than dam at birth (OR = 1.09, 95% CI: 1.06, 1.13), and feeding colostrum from one cow to multiple calves (OR = 1.10, 95% CI: 1.09, 1.12). **Based on this study, implementing practices that minimize the exposure of newborn calves to MAP being shed by infected adult cows should take priority.**
The objective was to improve pregnancy per artificial insemination (P/AI; 35–42 d after AI) in virgin Jersey heifers bred by AI of sex-sorted semen after being detected in estrus. Giving 100 μg of GnRH at first detection of estrus, with AI 12 h later, did not affect P/AI in Experiment I [GnRH = 47.2% (100/212) vs. No GnRH = 51.7% (104/201); P = 0.38] or Experiment II [GnRH = 53.1% (137/258) vs. No GnRH = 48.6% (122/251); P = 0.43]. In these two experiments, estrus detection was done with tail-head chalk or a HeatWatch® system, respectively. In Experiment III, a single insemination dose (2.1 × 106 sperm) 12 h after estrus detection (n = 193), a double dose at 12 h (n = 193), or a double dose involving insemination 12 and 24 h after estrus detection (n = 190) did not affect P/AI (87/193 = 45.1%, 85/193 = 44.0%, and 94/190 = 49.5%, respectively; P = 0.51). However, P/AI was influenced by the number of AI service (First, 115/208 = 55.3%; Second, 94/204 = 46.1%; and Third, 57/165 = 34.8%; P = 0.004). In Experiment IV, the P/AI of heifers inseminated from 12 to 16 h after the onset of estrus (40/106 = 37.7%) was less (P = 0.03) than those inseminated from 16.1 to 20 h (85/164 = 51.8%), and 20.1 to 24 h (130/234 = 55.6%). However, the P/AI for heifers inseminated from 24.1 to 30 h (61/134 = 45.5%) did not differ from that of any other interval. In conclusion, in Jersey heifers inseminated with sex-sorted semen, P/AI was not significantly affected by giving GnRH at detection of estrus or a double insemination dose, but it was higher with AI 16.1 to 24 h vs. 12 to 16 h after the onset of estrus.
Cows showed signs of arthritis, 3 of which were confirmed as having *M. bovis* arthritis. *M. bovis* isolates from cows with CM, arthritis and bulk tank milk had indistinguishable chromosomal digest pattern fingerprints. Incidence rates of *M. bovis* CM cases in the milking and hospital pens were 0.01 and 1.7 cases per 100 cow-days at risk. Approximately 70% of cows with *M. bovis* CM became infected within 12 days of entering the hospital pen. Transmission of *M. bovis* in the hospital pen occurred as 3 episodes. Each episode corresponded to the introduction of a cow with *M. bovis* CM from a milking pen. Evidence indicates that cows with *M. bovis* CM from milking pens were the source of transmission of the disease in the hospital pen and thus their presence in the hospital pen appeared to be a risk factor for transmission of *M. bovis* mastitis in this single case study herd.

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**Review: Feeding Behaviour of Dairy Cattle: Measures and Applications**  
M. von Keyserlingk, D. Weary

There is growing scientific interest in feeding behaviour of dairy cattle, in part because dairy nutritionists are now becoming interested in how changes in feed intake are mediated by changes in behaviour and, in part, because changes in feeding behaviour are increasingly recognized as useful indicators of cow health. In this review we describe key methodological approaches to the study of feeding behaviour in dairy cattle. We also review empirical work addressing how changes in management and housing can affect this behaviour. We show how cows divide their daily intake into several discrete feeding events made up of a number of visits or “meals” that are separated by longer periods with little feeding activity. Feeding behaviour can be described using several measures, including the number and duration of meals, as well as intake and feeding rate. Feeding behaviour within a group of intensively managed cows is often highly synchronized, similar to that seen in extensively housed cattle, with delivery of fresh feed appearing to be the primary factor stimulating feeding by housed dairy cows. Competition at the feed bunk can affect feeding behaviour, increasing the feeding rate and reducing intake, especially for subordinate animals. We also review empirical work showing that feed intake, feeding times, and feeding rate are altered when cows are ill. Feeding behaviour changes in the days before calving, and these changes are greatest among cows at greatest risk of succumbing to disease in the early post partum period. These results suggest that monitoring changes in feeding behaviour may be useful in early detection and prevention of disease in transition cows.

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**IgG and IgM Levels in Dairy Cows during the Periparturient Period**  
M. Herr, H. Bosted, K. Failing

In dairy cows, the incidence of infectious diseases during the periparturient period is high. The most common diseases ante partum (a.p.) and post partum (p.p.) are mastitis and puéperal toxicaemia, puéperal septicaemia, and chronic endometritis, respectively. Studies suggest that this is related to an immunosuppressed status during this period. Therefore, the aim of this study was to determine the periparturient immune status characterized by concentrations of IgG and IgM in peripheral blood and colostrum samples of dairy cows and to assess in detail whether variations in immunoglobulin levels may be related to age and status of productivity. In addition, a possible correlation between the course of immunoglobulin levels and lymphocyte concentrations was assessed. Eighteen clinically healthy German Holsteins and Red Holsteins dams were selected for this study and sampled regularly between the 8th week a.p. and the 4th week p.p. IgG and IgM levels were determined using two novel competitive ELISAs. Results demonstrated a dramatic decrease of serum IgG and IgM levels beginning at the 8th week and 4th week a.p., respectively, both reaching trough at parturition. The IgG level recovered by the 4th week p.p., while IgM concentrations remained low. The extent of IgG reduction seemed to be dependent on the initial IgG concentration when the cow was dried-off (8th week a.p.). In contrast to IgM, the degree of IgG reduction correlated significantly with the IgG concentrations in the colostrum. Furthermore, a cross-correlation between the IgG levels and the lymphocyte counts was detectable (P < 0.01). In conclusion, the antepartal decline of blood IgG and IgM levels as well as the low periparturient IgG levels could reflect a “physiological phenomenon” of dairy cattle. If the phenomenon is associated with an unstable immune system, it must be assessed in future studies. Nonetheless, a sensitive immune system could explain the high incidence for infectious diseases during this period.
Effect of Rumen-protected Choline and Methionine on Physiological and Metabolic Disorders and Reproductive Indices of Dairy Cows
M. Ardalan, K. Rezayazdi, M. Dehghan-Banadaky

The objective of this study was to investigate the effect of feeding different levels of ruminally protected methionine and choline on the incidence of physiological and metabolic disorders, production, and some of the reproductive indices of Holstein dairy cows. Forty Holstein dairy cows in their first and second lactation were used from 4-week pre-partum through 20-week post-partum and randomly assigned to receive one of the following treatments: 18 g/day of rumen-protected methionine (RPM), 60 g/day of rumen-protected choline (RPC), 18 g/day of RPM + 60 g/day of RPC, and neither supplement (control). The treatments significantly affected services per conception and open days of lactating dairy cows (p < 0.05), but did not affect significantly on days to first oestrus and number of pregnant cows. RPM + RPC-fed cows had the lowest open days, days to first oestrus and services per conception compared with other groups. The effect of treatments was significant on the incidence of metabolic and physiological problems except for foot/leg problems. Cows fed RPM+RPC had the lowest health problems compared with other groups (p < 0.05). Results indicate that the supplementation of RPM and RPC can improve reproductive performance and health status of dairy cows.

Submitting an Online Letter of Recommendation for a Student Funding Opportunity Using the AABP Website

All of the AABP student funding opportunities (Externships, Student Recognition Awards, Education Grants and Amstutz Scholarships) now feature online application processes. The AABP website also supports the online submission of supporting documents, such as letters of recommendation, faculty assessments and practice or course descriptions. To facilitate application review by the respective committees, to minimize the amount of materials that have to be printed and mailed, and to enhance the ease with which the materials are submitted, the AABP Headquarters and Board of Directors strongly encourage the use of the website for electronic submission of these documents. For access to all of these electronic submissions go to http://www.aabp.org/students/grants.asp and follow the links through the specific program to the letter submission and then to the specific student being supported. Do not hesitate to call (800-269-2227) or e-mail the AABP Headquarters with questions (aabphq@aabp.org)

Become a Part of the AABP Externship Database

The AABP Membership Committee has created a searchable database on the AABP website for Externship opportunities for veterinary students. Please add your practice to this database by going to http://www.aabp.org/jobs/mentor/selectstate.asp and selecting “Add an Externship Opportunity”. It will take five minutes of your time to complete the form and add your practice to the searchable database for students seeking externship opportunities. Please participate in the recruitment and training of future bovine practitioners.