

Thirtieth Annual Conference

of the
American Association of Bovine Practitioners
Montréal, Quebec, Canada
September 18 - 21, 1997



Montréal

At the foot of Mount Royal - or "the Mountain" as it is called here - visitors discover one of the world's most fascinating cities, a unique metropolis where rivers and cultures come together.

Founded in 1642 by French colonists intent on evangelizing the Amerindians, Montréal initially became the fur-trading capital of North America and then Canada's major industrial center. Eventually, it grew into the modern cosmopolitan city we know today. All of this is reflected in its rich architectural heritage. A stroll through Old Montréal provides an opportunity to relive great moments in the City's history, while the Olympic installations, downtown skyscrapers and the 29-kilometer underground city all attest to the vitality of

Montréal today.

A university city of note, Montréal has four institutions of higher learning: Université de Montréal, McGill University, Université du Québec à Montréal and Concordia University.

A large metropolis and one of the largest French-speaking cities in the world, Montréal is a wonderful place to live - an island along the mighty St. Lawrence River, built around a mountain and vast green spaces.

To discover Montréal is to open up to the world, to experience an exciting urban life-style in a city renowned for its dynamic cultural life, its rich heritage and its magnificent environment.

Photo courtesy of the Canadian Tourism Commission / Pierre St-Jacques

An Invitation to Montreal

I would like to warmly invite you and your family to Montreal for AABP's 30th Annual Conference in September 1997. A major urban center and one of the world's greatest cities, Montreal is the venue of choice for both business and pleasure. Montreal is ranked as Canada's leading city for international conventions as well as one of the top three in North America by the Brussel - based Union of International Associations. Hospitality with a definite French flavor: one of the hallmarks of Montreal. Growing from a small French colony in middle of the 17th century to a thriving metropolis, Montreal is the second French speaking city in the world. English is also very much in evidence reflecting the British influence that has influenced Montreal's history. Montreal is an important cultural centre dotted by monuments, museums and world-class sports palaces hosting national and international events.

The convention center is located downtown at the foot of Montreal's towering skyscrapers where visitors will also discover some of the city's most beautiful churches and also the major shopping districts: Sainte-Catherine, Sherbrooke, Crescent and Saint-Denis streets, Saint-Laurent boulevard and, of course, the Underground city. A stroll through Old Montreal provides an opportunity to relive great moments in the city's history and to discover the Saint-Lawrence River. Other attractions include the botanical garden, the Olympic park and the biodome. The Montreal botanical garden was created in 1931 and is now one of the largest in the world. Explore ten exhibition greenhouses, and some thirty outdoor gardens including a Chinese and a Japanese garden or venture into the mysterious world of insects at the Montreal Insectarium. The Olympic park was the site of the 1976 Olympic games. It is possible to ride a cable car to the top of the world's tallest inclined tower. The Montreal Biodome is a unique environmental museum that houses thousands of plants and animals within a variety of recreated climates.

Discover why Montreal is known as one of the world's leading gastronomic cities. With more than 4000 restaurants serving up the national cuisine of some 80 countries, Montreal offers a unique tour of the gastronomic pleasures of the world. Anybody that tries them all gets a free ride in my car.

You should also know that the average temperature in Montreal during the month of September is 20°C (68°F). But to give you a taste of winter we will conclude on Saturday with an "Evening at the Ice Skating Rink" at the Bell Amphitheater. This luxurious building will allow us to recreate, eat Quebecois food and then skate to stay in shape. I hope you will not let the opportunity pass to attend the best continuing education available to bovine practitioners in one of the liveliest environments!

Emile Bouchard
Local Arrangements Coordinator

President's Welcome

Right from the start, the Montreal meeting has been special.

It started 6 years ago when a group of bovine practitioners from the province of Quebec urged me to propose Montreal as a choice for an AABP Annual Meeting.

The Quebec group flew a representative to the Board meeting to present the Montreal proposal, handled all the local arrangements for the site visit and offered to combine their local CE with the AABP meeting to encourage local attendance.

We don't usually see that kind of local enthusiasm when we are choosing conference locations. I know it's one of the reasons the Board gave Montreal the nod for 97.

That specialness has continued. This is the first meeting planned using a new process the Board approved last year. The Planning Committee, led by Dr. Jim Sears, met immediately after the 1996 convention to capture that energy that always surrounds a successful meeting. Committees were involved in recommending program content, as were the people who will actually plan our 1998 convention. There has been a real effort to use all our resources to develop a CE package we can all learn from.

And, of course, this meeting will be very special for me. What a pleasure to have the annual meeting in my District this particular year!

So please, read on, and then make your plans to attend this meeting and visit Montreal. You will love the city, the program, and the people. I promise.

PS - don't worry about not speaking French. . . smiles and good cheer are universal languages!

Deborah Stark
President

The Program

Greetings everyone! On behalf of the Program Planning Committee, it is my pleasure to present the program for the 1997 Annual Conference, a joint AABP and Society for Theriogenology meeting. We have held joint meetings with SFT previously with great success, and we believe that will be true again this year. This conference has been designed for the practitioner, and I think you will find the program to be packed full of choices and opportunities. In many cases you will find at least three choices of high quality presentations from which to choose. Making a choice will not always be easy, which is what we intend. Please examine the program carefully, then select your choices and preregister early

so as to not miss out on the educational opportunity and fun in beautiful Montreal!

The pre-convention seminars will again be an integral and prominent part of the meeting. We have a wide variety of excellent seminars from which you can choose. These seminars are the best place to obtain in-depth, cutting edge material in a small group setting. However, attendance is limited, and competition for a spot is often vigorous, so please sign up early! Also, please remember that each seminar must stand alone financially and if registrations are not sufficient by the cut-off date, the seminar could be cancelled. Waiting until the last minute to register may mean that the seminar you wanted to take is no longer being offered.

The format of most of the meeting will be similar to past years. Pre-convention seminars were mentioned above. General Sessions offer material that applies to all practitioners; Dairy Split Sessions are geared specifically toward dairy practitioners; and the Cow-Calf/Feedlot Split Sessions are designed specifically for the beef practitioner. We have more Research Summaries than ever, and the ever-popular Practice Tips will be available to everyone with no competition from other sessions. The SFT/AABP Combined Sessions offer an excellent array of information on bovine reproductive technology, and the SFT Plenary Sessions on other species are also available (at the SFT hotel) for those practitioners who need or want some up-to-date information on what we must refer to here as "minor" (but important) species. We also will continue to provide popular items such as Computer Practice Tips, Meet-the-Professor Luncheons, Poster Sessions and local tours, to name a few.

There are a few format items to which I would call your attention. First, we are not offering a "keynote" speaker during the Welcoming Session this year, in order to keep it short. This is NOT to minimize the importance of this session, as we will be making a few important introductions of awards at this time, so please plan to attend! Second, you will note that we have no scheduled activities for Friday evening. This is to allow each of you to make your own special plans to visit with old friends, make some new ones, explore beautiful Montreal, or just relax. The Program Planning Committee believes that these personal activities are an important component in enjoying a few days away from practice. Third, the program is again "compressed", with no Sunday sessions. This will allow all day Sunday for leisure and/or travel.

The social event this year is a return to a more traditional banquet/social function which many members enjoy. However, we also have a few additions with a definite Canadian flavor which should be a lot of fun. Ice skating and music, for example, and maybe a few other surprises as well. The social event is within easy

walking distance of the hotels and convention center, which is another great plus. Please make plans for yourself and the whole family to join in on the fun on Saturday night!

My sincere thanks go out to each of the members of the Program Planning Committee. They have put forth great deal of effort, and have organized an excellent meeting with plenty of take-home information for everyone. Please take the time to thank these dedicated members -- your thanks are the only compensation they receive.

So folks, here is the Program! We are headed to a beautiful city; the convention center is one of the best we have ever had; the hotels are closely grouped around the convention center; the food is great; and we think we have an outstanding educational and fun-filled meeting planned. Please make your plans now to join us in Montreal, eh?!

Jim Sears
Program Chairman

Program Committee

Program Chairman	Jim Sears
Seminar Coordinator	Walter Guterbock
General Sessions Coordinator	Dale Grotelueschen
Dairy Sessions Coordinator	John Ferry
Cow/Calf Sessions Coordinator	Vincent Traffas
Feedlot Sessions Coordinator	Jerry Stokka
Practice Tips Coordinator	Meg Cattell
Computer Practice Tips	Bill Epperson
Research Summaries Coordinator	Phillip Jardon
Local Arrangements Coordinator	Emile Bouchard
Exhibits Manager	Sam Hutchins
Cont. Education Liaison	Kathy Gloyd

GENERAL SESSIONS

Bovine Clinical Medicine

Thursday, September 18

1:00 p.m. - 4:30 p.m.

Location: Congress Hall 407-C

Moderator:

1:00-2:30	Cattle Hoof Care - Roger Blowey
2:30-3:00	Milk/Refreshment Break
3:00-3:45	Other Bovine Viruses of Importance - John Ellis
3:45-4:30	Implementing Biosecurity in Beef and Dairy Herds - John Thomson

Current Issues in Bovine Medicine

Friday, September 19
1:30 p.m. - 5:00 p.m.
Location: Congress Hall 407-C
Moderator:

- 1:30-2:15 Responsible and Legal Drug Use in the Cattle Industry - **Steve Sundlof**
- 2:15-2:45 Drug Use on the Farm - Telling It Like It Is - **Keith Sterner**
- 2:45-3:00 Questions and Answers
- 3:00-3:30 Milk/Refreshment Break
- 3:30-4:15 Current Thinking Regarding BSE - **Will Hueston**
- 4:15-5:00 Auction Market Cattle Welfare Initiatives - **Bonnie Bargstedt**

DAIRY SPLIT SESSIONS

Internal Medicine - Rational Approaches to Some Common Problems

Friday, September 19
8:00 a.m. - 12:00 noon
Location: Congress Hall 407-C
Moderator: Emile Bouchard

- 8:00-8:45 A Rational Approach to Septic Calves - **Gilles Fecteau**
- 8:45-9:30 Salmonella: Current Concepts - **John House**
- 9:30-9:45 Questions and Answers
- 9:45-10:15 Milk/Refreshment Break
- 10:15-11:00 Parturition Nutrition: The Critical Key to Diagnosis and Management of Periparturient Disease - **Robert Van Saun**
- 11:00-11:45 Down Cows - Causes and Treatments - **Bradford Smith**
- 11:45-12:00 Questions and Answers

Practitioner Panel - Small Herd - Leading Our Producers Into the Future

Saturday, September 20
9:30 a.m. - 11:30 a.m.
Location: Congress Hall 407-C
Moderator: Henry Ceelen

- 9:30-9:45 A Review of the Quebec Dairy Herds Health Improvement (A.S.T.L.Q.) Project - **Emile Bouchard**
- 9:45-10:15 How the A.S.T.L.Q. Project Has Impacted My Relationship with Producers - **Paul Baillargeon**
- 10:15-10:45 Consulting Services that Benefit Small Dairies - **Ewen Ferguson**
- 10:45-11:15 Financial Consulting For the Small Dairy - **Rob Bell**
- 11:15-11:30 Panel Questions and Answers

Manager Panel - Large Herd - Maintaining Cattle Health Through Effective Labor Management

Saturday, September 20
1:30 p.m. - 5:00 p.m.
Location: Congress Hall 407-C
Moderator: John Ferry

- 1:30-2:00 Sick Cow Problems Are People Problems: A Management System For the Periparturient Cow - **David Sumrall**
- 2:00-2:15 Panel Discussion
- 2:15-2:45 Production: Limited or Driven By Feed Bunk Management - **Robbi Pritchard**
- 2:45-3:00 Panel Discussion
- 3:00-3:30 Milk/Refreshment Break
- 3:30-4:00 Labor Systems For Caring For Sick Cows - **Meg Cattell**
- 4:00-4:15 Panel Discussion
- 4:15-4:45 Labor Systems for Maintaining Udder Health - **Ron St. John**
- 4:45-5:00 Panel Discussion

COW/CALF AND FEEDLOT SPLIT SESSIONS

Friday, September 19
8:00 a.m. - 12:00 noon
Location: 408-A, 408-B, 408-C
Moderator:

- 8:00-9:00 Missed Opportunities for Consultation In Beef Cattle Practice - **Steve Henry**
- 9:00-10:00 The Latest In Estrus Synchronization In Beef Cattle - **Larry Corah**
- 10:00-10:30 Milk/Refreshment Break
- 10:30-12:00 Implants - Birth To Finish - **Terry Mader**

Saturday, September 20
9:30 a.m. - 11:30 a.m.
Location: 408-A, 408-B, 408-C
Moderator:

- 9:30-10:30 The Interface Between Energy and Cattle Production - **Cheryl Waldner**
- 10:30-11:30 Use of Ionophores In Grazing Ruminants - **Gerald Huntington**
- 11:30-12:00 Milk/Refreshment Break

Saturday, September 20
1:30 p.m. - 5:00 p.m.
Location: 408-A, 408-B, 408-C
Moderator:

- 1:30-3:30 Cull Cow Programs - **Mark Spire**
- 3:30-5:00 The Economics of Parasite Control - **Craig Reinemeyer**

PRACTICE TIPS

Thursday, September 18

7:00 p.m. - 9:00 p.m.

Location: 407-C

Moderator: Arden Nelson

- 7:00-7:12 Treat Her Nice and Pack Her With Ice -
Dave Horn
- 7:12-7:24 Practical and Humane Cattle Euthanasia -
Don Gardner
- 7:24-7:36 Dairy Barbecue II and Quarters Add Up To
Dollars - **Andy Johnson**
- 7:36-7:48 Photographs on the Farm: Another Tool -
Mark Arnfelt
- 7:48-8:00 Top Ten Uses of a pH Meter in Practice -
Phillip Jardon
- 8:00-8:12 Use it or Lose it: Shoulder Physical
Therapy For Palpators -
Brenda Cummings
- 8:12-8:24 Ouch! My Back: Modified Hoof Trimming
Chute - **Bernard Huot**
- 8:24-8:36 Fashion Tips Trois: Stretching Things a
Bit - **Kelvin Pierce**
- 8:36-8:48 Better Communication Through Manure
Splotches - **Rick Gutierrez**
- 8:48-9:00 Tennessee Tidbits VIII -
Hugh McCampbell

RESEARCH SUMMARIES

BEEF AND GENERAL RESEARCH SUMMARIES I

Thursday, September 18

1:00 p.m. - 4:30 p.m.

Location: 409

Moderator:

- 1:00 p.m. Salmonella typhimurium DT 104. An
emerging salmonella in livestock and
humans - **Clive Gay**
- 1:18 p.m. A novel view of the pathogenesis of
trichomoniasis: Does the dam destroy her
own pregnancy? - **Bob BonDurant**
- 1:36 p.m. Effects of Tilmicosin on the incidence of
bovine respiratory disease when used in
metaphylactic treatment programs -
C.A. Guthrie
- 1:54 p.m. Remote needle-less delivery of ceftiofur to
cattle - **David T. Bechtol**
- 2:12 p.m. Use of transfixation pinning and external
fixation for management of complicated
fractures in cattle: 30 cases -
David E. Anderson
- 2:30 p.m. Milk/Refreshment Break
- 3:00 p.m. The comparative effectiveness of carbicarb-R,
tribonate-R and bicarbonate in the
treatment of acidosis in neonatal calves -
Joachim Berchtold

- 3:18 p.m. The effect of water sulfate content on H2S
Generation, health and performance of
feedlot cattle - **Guy Loneragan**
- 3:36 p.m. Incisor enamel erosion in beef cattle as the
result of feeding an acidic by-product feed -
Glenn Rogers
- 3:54 p.m. Influence of a plant growth regulator on
immune responses and copper status in
steers grazing tall fescue -
Korinn E. Saker
- 4:12 p.m. Liver trace mineral status of cow-calf
ranches in the western high plains -
L. M. Schugel

RESEARCH SUMMARIES

DAIRY AND GENERAL RESEARCH SUMMARIES I

Thursday, September 18

1:00 p.m. - 4:30 p.m.

Location: 411-A & B

Moderator: Pam Ruegg

- 1:00 p.m. Dairy producer opinions and farm
practices used to assure milk and dairy
beef quality: a five state survey -
David J. Wilson
- 1:18 p.m. Milk residue testing: Issues of concern -
Stephen A. Connell
- 1:36 p.m. The effects of M. paratuberculosis infection
on reproductive performance, somatic cell
count and longevity in dairy herds -
Larry Hutchinson
- 1:54 p.m. Comparison of calf performance, morbidity
and mortality of purchased Holstein calves
based upon immunoglobulin status at time
of arrival - **Mike Fowler**
- 2:12 p.m. Maternal influence on cellular immunity
in the calf - **Brian Aldridge**
- 2:30 p.m. Milk/Refreshment Break
- 3:00 p.m. Evaluation of the prevalence and risk
factors for dictyocaulus viviparus
infestation in first lactation cows: A sero-
epidemiological survey -
Vincent Caldwell
- 3:18 p.m. The effect of GnRH therapy on the
hormonal profile and ovarian
ultrasonographic images in cows with
cystic ovarian disease - **C. J. Johnson**
- 3:36 p.m. Timing of insemination of dairy cattle
when pedometers are used for estrus
detection - **Thomas Sarosy**
- 3:54 p.m. Efficacy trials for electronic transponders
implanted in bovine animals -
Robert Kleemeier
- 4:12 p.m. Daily feed cost and production accounting
for dairy businesses - **Kenn Buelow**

RESEARCH SUMMARIES

BEEF AND GENERAL RESEARCH SUMMARIES II

Friday, September 19

1:30 p.m. - 5:00 p.m.

Location: 409

Moderator:

- 1:30 p.m. Priming the immune system for IBR and BVD with one dose of killed vaccine: Immunization with a follow up dose of modified live vaccine - **Michael Vaughn**
- 1:48 p.m. SN titer response comparison among fourteen diagnostic laboratories for antibodies protecting against IBR, BVD, and BRSV virus following the administration of a modified live vaccine to weaning aged calves - **Michael Vaughn**
- 2:06 p.m. Five hours to identify immunotolerant persistently infected cattle with bovine viral diarrhea virus (I.P.I.) - **Norman L. Habermehl**
- 2:24 p.m. Respiratory bovine coronavirus infections in feedlot cattle - **Sarah L. Lathrop**
- 2:42 p.m. Persistent bovine viral diarrhea virus infection in beef herds - **Thomas E. Wittum**
- 3:00 p.m. Milk/Refreshment Break
- 3:30 p.m. Studies in vaccine induced cell-mediated immunity in cattle: The challenge - **Bob Compton**
- 3:48 p.m. Efficacy of bovine papilloma virus vaccines in preventing papillomas in yearling bulls - **W. Dee Whittier**
- 4:06 p.m. A diagnostic tool for fescue toxicosis - **Frederick N. Thompson**
- 4:24 p.m. Epirinometin: discovery and implications for parasite control in dairy cattle - **William Ryan**
- 4:42 p.m. Comparison of serum - versus colostrum - derived IgG supplements on the attainment of passive immunity in newborn calves - **John C. Haupt**

RESEARCH SUMMARIES

DAIRY AND GENERAL RESEARCH SUMMARIES II

Friday, September 19

1:30 p.m. - 5:00 p.m.

Location: 411-A & B

Moderator: Pam Ruegg

- 1:30 p.m. Blood calcium and phosphorus relationships in the parturient paresis syndrome in mature Holstein cows - **Luc DesCoteaux**
- 1:48 p.m. Effects of an oral calcium chloride gel on prevention of hypocalcemic relapses in dairy cattle - **Garret R. Oetzel**
- 2:06 p.m. Anionic salts for the dry cow: Evaluation of various salts and the CAD equation - **Jesse Goff**
- 2:24 p.m. Hypokalemia in dairy cattle: a retrospective study - **Nicolas Sattler**
- 2:42 p.m. Preliminary results from an investigation into the effect of sampling time, cow factors and feeding management factor on diurnal variation of milk urea nitrogen - **Sandra Godden**
- 3:00 p.m. Milk/Refreshment Break
- 3:30 p.m. Effect of monensin on cow health and milk production in early lactation - **Todd Duffield**
- 3:48 p.m. Comparison of oro-ruminal probe and rumenocentesis for prediction of rumen pH in dairy cattle - **Greg P. Keefe**
- 4:06 p.m. Epidemiology of Neospora caninum infection in Quebec dairy herds - **Julie Pare**
- 4:24 p.m. Low and high dose antibiotic spray trials for treatment of papillomatous digital dermatitis (footwarts) - **Steven L. Berry**
- 4:42 p.m. Field trial models for the evaluation of hairy wart treatment products - **Thomas C. Hemling**

"MEET THE PROFESSOR" LUNCHEONS

Friday, September 19

Saturday, September 20

12:10 p.m. - 1:20 p.m.

Fee: \$ 35.00 per luncheon

These have been popular sessions, and are again offered in 1997. They are designed to provide an opportunity to interact with the speaker in a small-group setting. The professor may provide a brief presentation at the beginning, such as an overview of the topic, a short case report, clinical problem, etc., in order to help promote discussion, questions and interaction.

Attendance is limited to pre-registrants only, and 30 attendees per session. The registration fee is only to cover the cost of the luncheon.

Friday, September 19

1. **Brad Smith** - Baby Calf Diseases
Location: 401-A

2. **Steve Sundlof and Keith Sterner** - Current Regulatory Issues Affecting the Practitioner
Location: 405-A

Saturday, September 20

1. **John Thompson** - Herd Biosecurity
Location: 401-A
2. **Roger Blowey** - Hoof Care
Location: 405-A

Limited to 30 per session (Pre-registered only). Please indicate your luncheon selection(s) on the registration form (1st, 2nd, 3rd, 4th choice) by the corresponding professor.

ANNUAL AABP BUSINESS MEETING AND AWARDS BREAKFAST
Continental Breakfast
Sponsored in part by a grant from:
Rhone Poulenc and West Agro, Inc.

Saturday, September 20:
7:00 a.m. - 9:00 a.m.
Location: Congress Hall 407-C

Membership business will be conducted. Highlights are presentation of Bovine Practitioner of the Year and Preventive Medicine Awards. Results of officer elections will be announced.

SOCIETY FOR THERIOGENOLOGY WELCOME

Gordon Spronk
SFT President

The Society for Theriogenology (SFT) and the American College of Theriogenologists (ACT) are pleased to welcome you to the Dairy Reproduction Symposia and the Annual Meeting of the Society and College. We hope that these joint efforts of the American Association of Bovine Practitioners (AABP) and the SFT/ACT will reward you with a highly educational experience. We are pleased to team with the AABP in this cooperative effort. The spirit of cooperation of all the organizations and their members is self evident both in the enthusiastic response to previous joint meetings and hopefully in this and future meetings.

For those of you new to the SFT, our organization is focused on the advancement and education of practitioners, educators and researchers in the discipline of reproduction while recognizing that there are special specific differences. Those differences unique to each species, require a timely and

up-to-date symposia for that particular species. This year's symposia focus on (and dates they will take place):

- Dairy - September 16-17 (Tues-Wed)
Canine - September 16-17 (Tues-Wed)
Pathology - September 15-17 (Mon-Wed)

The general session begins on Thursday, September 18, with the theme "Putting New Reproductive Technologies to Work" and concludes on Saturday morning, September 20, with the research abstract session. Program Chairperson Dr. Brian Buckrell and his committees have gone the extra mile to ensure a high quality educational experience. In the general sessions, speakers include several national and internationally recognized experts that will share their knowledge and provide in-depth reviews of their respective topics. Be sure to begin your educational experience by attending the "Test Your Theriogenology Knowledge" session on Wednesday evening at 7:00 p.m. Other general sessions include: Plenary sessions, Small Animal, Equine, Small Ruminants/Swine, Bovine, Research Abstracts, The David Bartlett Address.

We hope that you plan to attend not only the Dairy symposia, but also the bovine topics during the general session. This unique opportunity provided to all participants and members, offers the best in species specific and broad based educational forums. See you in Montreal!

SFT BOVINE SESSIONS

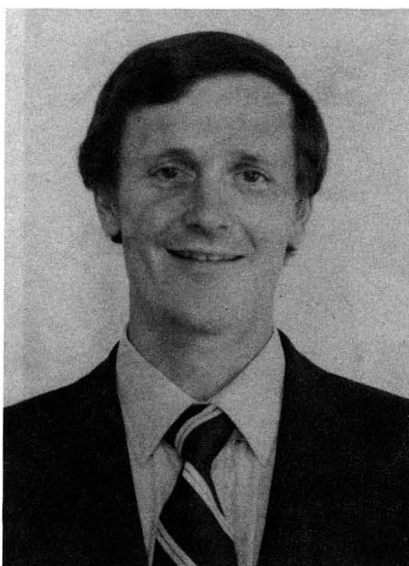
Thursday, September 18
1:00 p.m. - 4:30 p.m.

- 1:00-1:45 New Technologies Applied in Bovine Reproduction - **Daniel Bousquet**
1:45-2:30 Transgenics in Dairy Animal Reproduction: Current Status and Future Potential - **Carol Keefer**
2:30-3:00 Coffee Break
3:00-3:45 Target Breeding Programs - **Milo Wiltbank**
3:45-4:30 Cystic Ovarian Disease - New Ideas - **Walter Johnson**

Friday, September 19
1:00 p.m. - 5:30 p.m.

- 1:00-2:00 Breeding Soundness Examinations of Yearling Bulls - **John Spitzer**
2:00-3:00 The Accuracy of the Bull BSE - **Kammy Johnson**
3:00-3:30 Coffee Break
3:30-4:30 Analysis of the Spermogram - **Albert Barth**
4:30-5:30 Health Management Programs for Beef Cattle - **Ed Hamilton**

NMC President



Dr. Keith Sterner, Ionia, Michigan was elected President of the National Mastitis Council (NMC) at the annual meeting in Albuquerque, New Mexico on February 16-19, 1997.

Dr. Sterner is the second veterinarian to receive this honor; Dr. Jeff Reneau, University of Minnesota Extension was President three years ago. The NMC has about 2000 members. They are a diverse group with veterinarians comprising the largest individual percentage of the membership - about 28%, followed by suppliers (19%) producers (11%), University personnel (11%), plus a number of other categories. They meet twice a year: the annual meeting in February and a summer regional meeting in August. Dr. Sterner stated, "attendance and membership affords an opportunity to meet and have dialogue with many well known experts in the production of quality milk."

Dr. Sterner is a Past President of the AABP and a recipient of the Bovine Practitioner of the Year Award.

Congratulations, Keith!

BCVA OFFICE

XIX World Buiatrics Congress

Proceedings of the XIX World Buiatrics Congress are available from the BCVA Office. Details of cost and postage are shown below:

ALL PRICES ARE IN POUNDS STERLING

Volume 1 & 2 plus Posters Volume	£40
Proceedings plus CD	£50
CD only	£10
CD plus Poster Presentation	£20

NOTE - CD has Volumes 1 and 2 Proceedings - No Posters

POSTAGE AND PACKING

U.K.	1 st Class	£10.00
	Parcel Rate	£7.00
	CD & Poster Volume	£5.00
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	CD & Poster Volume	Proceedings (+/-CD)
EEC	£5.00	£21.00
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Please send amount in sterling with the relevant postage made out to BCVA, The Green, Frampton-on-Severn, Glos. GL27ER, England. The Proceedings will then be sent together with a receipted invoice for your records.



Theme: "Cattle Medicine Heads Down Under in 1998"

XXth World Association for Buiatrics Congress

Sydney, Australia

5 – 9 July, 1998



FOR MORE INFORMATION CONTACT:

AVA Conference Organising Service
(AVACOS)
7 Phipps Place
Deakin ACT 2600
Australia

Ph. 61-6-285 3600

Fx. 61-6-285 3913

Email: avacos@ava.com.au

HOSTS: AUSTRALIAN ASSOCIATION OF CATTLE VETERINARIANS

- An exciting **three-stream scientific program** on dairy cattle, the cow and calf and feedlot cattle will feature papers on pasture-fed production, practice tips, research snippets, workshops and much more.
- A **stunning social program** has been organised and will inspire overseas delegates and locals alike. Events will include a welcome to be held in the fabulous Sydney Opera House, an evening dinner and cruise on spectacular Sydney Harbour and much more.
- **Pre- and post-conference tours** on offer provide many opportunities to view some of the wonderful attractions of Australia.

SUPREME CHAMPION SPONSORS OF THE XXTH WORLD ASSOCIATION OF BUIATRICES CONGRESS:



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NOTES

NOTES

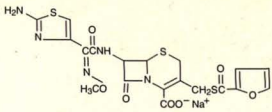
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For intramuscular injection in cattle, swine, and horses. For subcutaneous injection in dogs and day-old chickens. This product may be used in lactating dairy cattle.

CAUTION: Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

DESCRIPTION: NAXCEL Sterile Powder contains the sodium salt of cefitiofur which is a broad spectrum cephalosporin antibiotic active against gram-positive and gram-negative bacteria including β -lactamase-producing strains. Like other cephalosporins, cefitiofur is bactericidal *in vitro*, resulting from inhibition of cell wall synthesis. Each mL of the reconstituted drug contains cefitiofur sodium equivalent to 50 mg cefitiofur. The pH was adjusted with sodium hydroxide and monobasic potassium phosphate.

Chemical Structure of Cefitiofur Sodium



Chemical Name of Cefitiofur Sodium

5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(2-amino-4-thiazolyl) (methoxyimino)acetyl]amino]-3-[[[(2-furanylcarbonyl)thio] methyl]-8-oxo-, monosodium salt, [6R-[6a,7b(Z)]]-

CLINICAL MICROBIOLOGY

Cattle: Cefitiofur has demonstrated *in vitro* and *in vivo* activity against *Pasteurella haemolytica*, *Pasteurella multocida* and *Haemophilus somnus*, three of the major pathogenic bacteria associated with bovine respiratory disease (pneumonia, shipping fever). This drug has also demonstrated *in vitro* activity against *Corynebacterium pyogenes*, another bacterial pathogen associated with bovine respiratory disease (BRD). The clinical significance of this *in vitro* activity is not known.

Swine: Cefitiofur has demonstrated *in vitro* and *in vivo* activity against gram-negative pathogens, such as *Actinobacillus (Haemophilus) pleuropneumoniae*, *Salmonella choleraesuis*, *Pasteurella multocida* and the gram-positive pathogen *Streptococcus suis*, all of which singly or in combination can be associated with swine bacterial respiratory disease (swine bacterial pneumonia).

Horses: Cefitiofur has demonstrated *in vitro* and *in vivo* activity against *Streptococcus zooepidemicus*, a major bacterial pathogen associated with equine respiratory infections. The drug also demonstrated *in vitro* activity against *Pasteurella spp.*, *Streptococcus equi*, *S. equisimilis*, *Actinobacillus spp.* and *Moraxella spp.*, bacterial pathogens also associated with equine respiratory disease. The clinical significance of this *in vitro* activity is not known.

Dogs: Cefitiofur sodium has demonstrated *in vivo* and *in vitro* activity against bacterial pathogens from dogs with urinary tract infections. Cefitiofur was more potent (*in vitro*) than other beta-lactam antibiotics against strains of uropathogens (*Escherichia coli* and *Proteus mirabilis*).

Day-old Chickens: Cefitiofur has demonstrated *in vitro* and *in vivo* activity against *E. coli*, the major pathogenic bacteria associated with early chick mortality.

LABORATORY MICROBIOLOGY: Cefitiofur has demonstrated *in vitro* activity against other gram-negative pathogens, such as *E. coli*, *P. mirabilis*, *P. vulgaris*, *Klebsiella pneumoniae/oxytoca* and *Salmonella typhimurium* and against gram-positive pathogens such as *Streptococcus bovis*, *Staphylococcus intermedius*, *S. xylosum*, *S. simulans*, *S. epidermidis* and beta hemolytic streptococci. Cefitiofur was effective when tested in a variety of mouse disease models involving *E. coli*, *Pasteurella haemolytica*, *Haemophilus somnus*, *Pasteurella multocida* or *Salmonella typhimurium*. However, the clinical significance of these findings in cattle, swine, horses, dogs, and day-old chicks is not known.

ANIMAL SAFETY

Cattle: Results from a five-day tolerance study in normal feeder calves indicated that formulated cefitiofur was well tolerated at 25 times (25 mg/lb/day) the highest recommended dose of 1.0 mg/lb/day for five consecutive days. Cefitiofur administered intramuscularly had no adverse systemic effects.

In a 15-day safety/toxicity study, five steer and five heifer calves per group were intramuscularly administered formulated cefitiofur at 0 (vehicle control), 1, 3, 5 and 10 times the highest recommended dose of 1.0 mg/lb/day to determine the safety factor. There were no adverse systemic effects indicating that the formulated cefitiofur has a wide margin of safety when injected intramuscularly into the feeder calves at 10 times (10 mg/lb/day) the recommended dose for three times (15 days) the recommended three to five days of therapy. The formulation was shown to be a slight muscle irritant based on results of histopathological evaluation of the injection sites at 1 and 3 times the highest recommended dose of 1.0 mg/lb/day. The histopathological evaluations were conducted at posttreatment days 1, 3, 7 and 14.

Swine: Results from a five-day tolerance study in normal feeder pigs indicated that formulated cefitiofur was well tolerated when administered at 57 mg/lb (more than 25 times the highest recommended daily dosage of 2.27 mg/lb of body weight) for five consecutive days. Cefitiofur administered intramuscularly to pigs produced no overt adverse signs of toxicity.

To determine the safety factor and to measure the muscle irritancy potential in swine, a safety/toxicity study was conducted. Five barrows and five gilts per group were intramuscularly administered formulated cefitiofur at 0, 2.27, 6.81 and 11.36 mg/lb of body weight for 15 days which is 0, 1, 3 and 5 times the highest recommended dose of 2.27 mg/lb of body weight/day and 5 times the recommended treatment length of 3 days. There were no adverse systemic effects indicating that formulated cefitiofur has a wide margin of safety when injected intramuscularly into feeder pigs at the highest recommended dose of 2.27 mg/lb/day for 3 days or at levels up to 5 times the highest recommended dose for 5 times the recommended length of treatment. The formulation was shown to be a slight muscle irritant based on results of histopathological evaluation of the injection sites at posttreatment days 1, 2, 3 and 4. By day 10 post injection the muscle reaction was subsiding and at day 15 post injection there was little evidence of muscle damage in any pigs in any of the treatment groups.

Horses: In a safety study, horses received a daily intramuscular injection of either 0 mg/lb/day (saline control), 1.0 mg/lb/day (50 mg/mL), 3.0 mg/lb/day (100 mg/mL), or 5.0 mg/lb/day (200 mg/mL) of an aqueous solution of cefitiofur sodium for 30 or 31 days. Cefitiofur sodium was well tolerated when administered intramuscularly to male and female horses at doses up to 5.0 mg/lb/day for 30 or 31 days. No clinical evidence of irritation was noted at any dose. The drug-related changes detected in this study were limited to a transient decrease in food consumption in horses receiving 3.0 or 5.0 mg/lb/day cefitiofur, and general mild skeletal muscle irritation at the injection sites which resolved by regeneration of muscle fibers.

In a tolerance study, horses received a single daily intravenous infusion of either 0 (saline), 10.0 or 25.0 mg/lb/day of an aqueous solution (50 mg/mL) of cefitiofur for 10 days. The results indicated that cefitiofur administered intravenously at a dose of 10.0 or 25.0 mg/lb/day apparently can change the bacterial flora of the large intestine thereby leading to inflammation of the large intestine with subsequent diarrhea and other clinical signs (loose feces, eating bedding straw, dehydration, rolling or colic and a dull, inactive demeanor). Decreased food consumption, a loss of body weight, hematologic changes related to acute inflammation and stress, and serum chemistry changes related to decreased food consumption and diarrhea were also associated with treatment at these doses. The adverse effects were most severe a few days after dosing was initiated and tended to become less severe toward the end of the 10-day dosing period.

Dogs: Cefitiofur sodium was well tolerated at the therapeutic dose and is safe for the treatment of urinary tract infections in dogs. In the acute safety study, cefitiofur was well tolerated by dogs at the recommended level (1.0 mg/lb) for 5-14 days. When administered subcutaneously for 42 consecutive days, one of four females developed thrombocytopenia (15 days) and anemia (36 days). Thrombocytopenia and anemia also occurred at the 3X and 5X dose levels. In the reversibility phase of the study (5X dose), the thrombocytopenia reversed within 8 days, and of the two anemic animals the male recovered within 6 weeks and the female was sacrificed due to the severity of the anemia.

In the 15-day tolerance study in dogs, high subcutaneous doses (25 and 125 times the recommended therapeutic dose) produced a progressive and dose-related thrombocytopenia, with some dogs also exhibiting anemia

and bone marrow changes. The hematopoietic changes noted in dogs treated with cefitiofur were similar to those associated with long-term cephalosporin administration in dogs and also man. The hematopoietic effects are not expected to occur as a result of recommended therapy.

Day-old chickens: In an acute toxicity study of cefitiofur in day-old chicks, a total of 60 male and 60 female chicks were each given single subcutaneous injections of 10, 100 or 1,000 mg/kg of body weight. Treatment on day 1 was followed by 6 days of observation; body weight was determined on days 1, 4 and 7; and selected hematology parameters were evaluated on day 4. No meaningful differences were noted among the treated and control groups of chicks for the parameters evaluated. Histopathologic evaluation of all deaths and chicks surviving to termination did not reveal a target organ or tissue of potential toxicity of cefitiofur when administered at up to 20 times (100 mg/kg) the intended highest use dosage.

INDICATIONS

Cattle: NAXCEL Sterile Powder is indicated for treatment of bovine respiratory disease (shipping fever, pneumonia) associated with *Pasteurella haemolytica*, *Pasteurella multocida* and *Haemophilus somnus*.

Swine: NAXCEL Sterile Powder is indicated for treatment/control of swine bacterial respiratory disease (swine bacterial pneumonia) associated with *Actinobacillus (Haemophilus) pleuropneumoniae*, *Pasteurella multocida*, *Salmonella choleraesuis* and *Streptococcus suis* type 2.

Horses: NAXCEL Sterile Powder is indicated for treatment of respiratory infections in horses associated with *Streptococcus zooepidemicus*.

Dogs: NAXCEL Sterile Powder is indicated for the treatment of canine urinary tract infections associated with *Escherichia coli* and *Proteus mirabilis*.

Day-old Chickens: NAXCEL Sterile Powder is indicated for the control of colibacillosis infections in day-old chicks (early chick mortality) associated with *E. coli* organisms sensitive to cefitiofur.

DOSAGE

Cattle: Administer to cattle at the dosage of 0.5 to 1.0 mg cefitiofur per pound of body weight (1-2 mL reconstituted sterile solution per 100 lb body weight). Treatment should be repeated at 24 hour intervals for a total of three consecutive days. Additional treatments may be given on days four and five for animals which do not show a satisfactory response (not recovered) after the initial three treatments. Selection of dosage (0.5 to 1.0 mg/lb) should be based on the practitioner's judgment of severity of disease (i.e., extent of elevated body temperature, depressed physical appearance, increased respiratory rate, coughing and/or loss of appetite).

Swine: Administer to swine at a dosage of 1.36 to 2.27 mg cefitiofur/lb (3.0 to 5.0 mg/kg) of body weight (1 mL of reconstituted sterile solution 22 to 37 pounds of body weight). Treatment should be repeated at 24 hour intervals for a total of three consecutive days.

Horses: Administer to horses at a dosage of 1.0 to 2.0 mg cefitiofur per pound of body weight (2-4 mL reconstituted sterile solution per 100 lb body weight). A maximum of 10 mL may be administered per injection site. Treatment should be repeated at 24-hour intervals, continued for 48 hours after clinical signs have disappeared and should not exceed 10 days.

Dogs: Administer to dogs by subcutaneous injection at a dosage of 1.0 mg cefitiofur per pound of body weight (0.1 mL reconstituted sterile solution per 5 lbs of body weight). Treatment should be repeated at 24-hour intervals for 5-14 days.

Day-old Chickens: Administer by subcutaneous injection in the neck region of day-old chicks at a dosage of 0.08 to 0.20 mg cefitiofur/chick. One mL of the 50 mg/mL reconstituted solution will treat approximately 250 to 625 day-old chicks.

ADMINISTRATION

Cattle, Swine and Horses: Reconstituted NAXCEL Sterile Powder is to be administered by intramuscular injection only.

Dogs: Reconstituted NAXCEL Sterile Powder is to be administered to dogs by subcutaneous injection. No viral closure should be entered more than 20 times. Therefore, only the 1 gram vial is approved for use in dogs.

Day-old Chickens: Reconstituted NAXCEL Sterile Powder is to be administered by subcutaneous injection only. A sterile 26 gauge needle and syringe or properly cleaned automatic injection machine should be used.

RESTITUTION OF THE STERILE POWDER

NAXCEL Sterile Powder should be reconstituted as follows:

1 gram vial—Reconstitute with 20 mL Sterile Water for Injection. Each mL of the resulting solution contains cefitiofur sodium equivalent to 50 mg cefitiofur.

4 gram vial—Reconstitute with 80 mL Sterile Water for Injection. Each mL of the resulting solution contains cefitiofur sodium equivalent to 50 mg cefitiofur.

STORAGE CONDITIONS

Store unconstituted product in a refrigerator 2° to 8° C (36° to 46° F). Store reconstituted product either in a refrigerator 2° to 8° C (36° to 46° F) for up to 7 days or at controlled room temperature 15° to 30° C (59° to 86° F) for up to 12 hours.

Reconstituted NAXCEL Sterile Powder can be frozen for up to 8 weeks without loss in potency or other chemical properties. Carefully thaw the frozen material under warm to hot running water, gently swirling the container to accelerate thawing. The frozen material may also be thawed at room temperature.

Protect from light. Color of the cake may vary from off-white to a tan color. Color does not affect potency.

CONTRAINDICATIONS

As with all drugs, the use of NAXCEL Sterile Powder is contraindicated in animals previously found to be hypersensitive to the drug.

WARNINGS

NOT FOR HUMAN USE. KEEP OUT OF REACH OF CHILDREN.

Antimicrobial drugs, including penicillins and cephalosporins, can cause allergic reactions in sensitized individuals. To minimize the possibility of reactions, users of such antimicrobials, including cefitiofur, are advised to avoid direct contact of the product with the skin and mucous membranes.

Residue Warnings: Neither a pre-slaughter drug withdrawal interval nor a milk discard time is required when this product is used according to label indications, dosage, and route of administration. Use of dosages in excess of those indicated or by unapproved routes of administration, such as intramammary, may result in illegal residues in edible tissues and/or in milk.

Not for use in horses intended for human consumption.

PRECAUTIONS

The safety of cefitiofur has not been determined for swine, horses, or dogs intended for breeding, or pregnant dogs.

The administration of antimicrobials to horses under conditions of stress may be associated with acute diarrhea that could be fatal. If acute diarrhea is observed, discontinue use of this antimicrobial and initiate appropriate therapy.

ADVERSE REACTIONS

The use of cefitiofur may result in some signs of immediate and transient local pain to the animal.

HOW SUPPLIED

NAXCEL Sterile Powder is available in the following package sizes:

1 gram vial	NDC 0009-3362-03
4 gram vial	NDC 0009-3362-04

NADA # 140-338, Approved by FDA

Mfd. for: **The Upjohn Company, Kalamazoo, MI 49001, USA**
By: SmithKline Beecham Corporation, Philadelphia, PA 19101

Revised August 1994

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Sterile Powder (cefitiofur sodium)

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