

07878
1985
FL-PP-07878

Fol
07878

RELATÓRIO DE PARTICIPAÇÃO

NO

112nd. ANNUAL MEETING OF THE AMERICAN VETERINARY MEDICAL
ASSOCIATION,

30th. ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF
VETERINARY PARASITOLOGISTS,

E

60th. ANNUAL MEETING OF THE AMERICAN SOCIETY OF
PARASITOLOGISTS.

Davis, California

1985

Relatorio de participacao ...
1985 FL-PP-07878

no



CPATSA-31980-1

I - PARTICIPANTE: Terezinha N.P.Charles, médica veterinária, pesquisadora do Centro de Pesquisa Agropecuária do Trópico Semi-Arido da Empresa Brasileira de Pesquisa Agropecuária, atualmente em treinamento na Universidade da Califórnia, Davis, USA.

II - PROGRAMA REALIZADO: Participação nas seguintes reuniões científicas:

- 30th. Annual Meeting of the American Association of Veterinary Parasitologists - Julho 22-24, 1985, realizada no Centro de Convenções de Las Vegas, Nevada.
- 112nd. Annual Meeting of the American Veterinary Medical Association - Julho 23-26, 1985, realizada no Centro de Convenções de Las Vegas, Nevada.
- 60th. Annual Meeting of the American Society of Parasitologists - Agosto 4-8, 1985, realizada na Universidade da Georgia, Athens.

III - COMENTARIOS:

Considerarei estes congressos bastante similares aos que acontecem no Brasil nas mesmas áreas. O Colégio Brasileiro de Parasitologia Animal, a Sociedade Brasileira de Medicina Veterinária e a Associação Brasileira de Parasitologia apresentam simpósios semelhantes no Brasil, em menor escala e menos frequentemente (reuniões a cada dois anos ao invés de a cada ano). Como em toda reunião, trabalhos excelentes, bons e abaixo do nível mínimo aceitável foram apresentados. Como a sociedade científica presente é maior que a usualmente presente nas reuniões científicas brasileiras, o intercambio de ideias é muito maior e bastante produtivo para os participantes.

Durante a reunião de Medicina Veterinária, todas as sociedades científicas ligadas a medicina veterinária se reúnem. As reuniões acontecem no mesmo local e durante a mesma semana. Os primeiros 2 dias da semana são dedicados a reuniões de sociedades científicas específicas e os 3 dias restantes a reunião da Sociedade de Medicina Veterinária. Esta organização me pareceu bastante funcional para o veterinário clínico que pode optar por comparecer ou não as reuniões científicas específicas. Durante os tres últimos dias de reunião, seminários e trabalhos apresentados são voltados exclusivamente para o veterinário clínico e informações práticas de uso imediato nos mais

diversos assuntos são apresentados pelos especialistas na área. Durante e após a reunião, fitas de videocassetes, diapositivos e fitas gravadas sobre os seminários e palestras são disponíveis para aluguel e venda aos veterinários interessados. Varias exibições educacionais e programas autoinstrutivos disponíveis aos participantes proporcionavam um melhor aproveitamento da reunião.

Firmas comerciais dedicadas a Medicina Veterinária e Parasitologia estavam presentes a Reunião da Sociedade de Medicina Veterinária e a Reunião da Sociedade Americana de Parasitologistas, respectivamente. Empresas de grande porte e pequenas empresas apresentavam uma quantidade enorme de produtos e serviços úteis aos veterinários clínicos e aos laboratórios em geral. Os produtos demonstrados variavam desde aventais e botas até instrumento de precisão e programas para computadores a serem usados nas clínicas e laboratórios. O que impressionou bastante nesta demonstração foi a comercialização de kits que auxiliam o diagnóstico de doenças, que aumentam a eficiência da coleta de material e a quantidade de equipamento para auxiliar na contenção de animais. Além disto, muitos destes produtos eram oferecidos por empresas de pequeno porte, o que demonstra o incentivo a criatividade individual e as pequenas indústrias aqui nos Estados Unidos. A localização da reunião da Sociedade de Parasitologia na Universidade da Georgia, me pareceu bastante oportuna, pois instalações da Universidade, que não são usualmente utilizadas durante o verão (anfiteatros, restaurantes, dormitórios) foram utilizados para a realização da reunião, o que proporcionou uma participação bastante econômica e com a presença de grande número de estudantes.

Durante a reunião da Sociedade Americana de Parasitologistas foi apresentado um seminário sobre evidências de hipobiose em nematodeos parasitos de seres humanos, pequenos animais e grande animais. Poucas informações existem disponíveis sobre o Haemonchus contortus que é o principal nematodeo parasito em ruminantes no Brasil. A maioria dos dados disponíveis se referem a Ostertagia spp., e a maioria deles são descritivos, isto é, se relacionam apenas com a descrição do fenômeno, época de ocorrência, etc... Existem poucas informações sobre o mecanismo que leva a hipobiose.

IV - SUGESTÕES:

A criatividade dos pesquisadores, extensionistas, clínicos etc... deve ser incentivada, especialmente quando fins comerciais podem vir a ser obtidos com as ideias geradas. A produção de kits para o diagnóstico de doenças pode ser não somente um resultado de pesquisa gerado pelo pesquisador, como também uma fonte de rendas, se devidamente patenteado.

As Universidades brasileiras que possuem infraestrutura para o acontecimento de eventos científicos poderiam ser utilizadas para as reuniões das nossas sociedades científicas. Isto nos proporcionaria a economia de alguns cruzeiros, a oportunidade de rever lugares onde passamos boa parte dos primeiros anos da nossa juventude (onde começamos a embalar os sonhos), e também a oportunidade de conhecer as condições das universidades que não conhecemos e de nos entrosarmos com os jovens estudantes que na maioria das vezes são impossibilitados de comparecer a reuniões devido ao alto preço cobrado nas taxas de inscrição, oriundo na maioria das vezes do aluguel de centro de convenções.

V - APENDICE:

Programa das reuniões são incluídos no apêndice. Os resumos dos trabalhos estão depositados na minha biblioteca particular e na biblioteca do Centro de Pesquisa Agropecuária do Trópico Semi-Arido da EMBRAPA.

AMERICAN ASSOCIATION OF VETERINARY PARASITOLOGISTS

Founded 1956
Affiliated with the American Veterinary Medical Association

OFFICERS

President	J.B. Malone Louisiana State University Baton Rouge, LA 70803
Vice President	R.M. Corwin University of Missouri Columbia, MO 65211
Secretary-Treasurer	V.J. Theodorides Smith Kline Animal Health Products West Chester, PA 19380

COMMITTEE CHAIRMEN AND AAVP DESIGNEES

Newsletter Editor	G.H. Myers American Hoechst Corp. Sommerville, NJ 08876	Awards	J.F. Williams Michigan State University East Lansing, MI 48824
Historian	T.J. Hayes Hoffmann-La Roche Inc. Nutley, NJ 07110	Publications	R.P. Herd Ohio State University Columbus, OH 43210
Research	T.R. Klei Louisiana State University Baton Rouge, LA 70803	Program	J.A. Hawkins, Chairman Mississippi State University Mississippi State, MS 39762
Outreach	K.D. Murrell A.P.I., U.S.D.A. Beltsville, MD 20705		B.E. Stromberg University of Minnesota St. Paul, MN 55108
Education	C. Johnstone University of Pennsylvania Philadelphia, PA 19104		J.F. Williams Michigan State University East Lansing, MI 48824
			C.R. Sterling University of Arizona Tucson, AZ 85721

PROGRAM AMERICAN ASSOCIATION OF VETERINARY PARASITOLOGY ANNUAL MEETING

Las Vegas Convention Center - Room 4
Monday, July 22

7:00 AM REGISTRATION

SESSION 1: EXPERIMENTAL AND CLINICAL STUDIES I
Moderators: J.F. Williams and P.H. Klesius

1. 8:00 KEYNOTE ADDRESS - In vitro detection of anthelmintic activity - a review of established methods and discussion of a novel approach.
J.L. Bennett - Professor of Pharmacology and Toxicology,
Michigan State University
2. 8:30 A new test for detecting anthelmintic resistant nematodes.
D.J. Giordano, G.C. Coles, J.P. Trischler, and A.L. Schmidt
3. 8:45 Anthelmintic resistant strain of Haemonchus contortus in the Louisiana State University Research Sheep Flock.
J.E. Miller, F.G. Hembry, D. Sims, and L. Staggs
4. 9:00 Secretory/excretory chemotactic substances from L₃ of Ostertagia ostertagi account for eosinophil locomotion.
P. Klesius, T. Haynes, D. Cross, and H. Ciordia
5. 9:15 Discovery of Nematodirus battus in sheep in Oregon.
E.R. Hoberg, G.L. Zimmerman, and J.R. Lichtenfels
6. 9:30 Vacuuming horse pastures: a non-chemical approach to the control of horse parasites.
R.P. Herd
7. 9:45 Anthelmintic usage by New England sheep farmers.
J.P. Tritschler II, D.J. Giordano, and G.C. Coles
- 10:00 COFFEE BREAK

SESSION 2: DIROFILARIA
Moderators: R.B. Grieve and J.W. McCall

8. 10:30 Canine filariasis (Dirofilaria immitis, D. repens, and Dipetalonema spp.) in Italy - historical and epidemiological perspectives.
R.A. Roncalli and P. Tassi
9. 10:45 Development and survival of larval Dirofilaria immitis implanted in diffusion chambers in syngeneic normal and immunized mice.
D. Abraham and R.B. Grieve*

10. 11:00 Evaluation and use of commercially available systems in the serodiagnosis of occult heartworm disease in dogs.
T.W. Schillhorn Van Veen
11. 11:15 Confirmation of heartworm prophylaxis with single dose ivermectin at one month post inoculation by serology and late necropsy.
M.T. Dzimianski, J.W. McCall, L.S. Blair, R.L. Seward, and R.E. Plue
12. 11:30 Serological characterization of heartworm antibody response in ivermectin treated, laboratory raised beagles exposed under field conditions.
J.W. McCall, C. Bagshaw, J. Brown, and M.T. Dzimianski
13. 11:45 Dirofilaria surface antigen preparation for the enzyme linked immunosorbent assay diagnosis of heartworm infection.
B.S. Ebinne, B.J. Packer, R.M. Corwin, T.J. Green, and S.E. Pratt-Green

12:00 PM LUNCH

SESSION 3: EPIDEMIOLOGY
Moderators: C.H. Courtney and J.C. Williams

14. 1:00 Epidemiology and control of gastrointestinal nematodes of cattle in Virginia.
J.W. Hansen, B.D. Perry, and R. Freeman
15. 1:15 An update on the hypobiotic changes in Ostertagia ostertagi during environmental adaptation in Louisiana.
K.S. Marbury, J.C. Williams, and E.R. Willis
16. 1:30 Trichinellosis in an agricultural ecosystem: Transmission under natural and experimentally modified on-farm conditions.
G.A. Shad, C.D. Duffy, D.A. Leiby, K.D. Murrell, and E.W. Zirkle
17. 1:45 Epidemiological significance of intraspecific biological and biochemical variations in Trichinella spiralis.
K.D. Murrell, T.A. Dick, F. Stringfellow, J. Dame, and G. A. Schad
18. 2:00 Pattern of helminth egg counts in pastured horses over two grazing seasons.
V.C. Gutierrez and T.J. Kennedy
19. 2:15 Helminth populations in naturally parasitized grazing foals in Wisconsin and Alabama.
R.M. McCormick and T.J. Kennedy
20. 2:30 Periparturient rise in 3 strains of Florida native sheep and its relation to parasite resistance in lambs.
C.H. Courtney, R. Gessner, S.R. Sholz, and P.E. Loggins

21. 2:45 Population dynamics of trichostrongylid nematodes in pregnant and non-pregnant Florida native and Dorset/Rambouillet ewes.
A.M. Zajac and R.P. Herd
- 3:00 POSTER SESSION (refreshments will be available)
22. Altered nematode prevalence following three consecutive years of Paratect bolus administration at the same pasture location.
T.A. Yazwinski, B.L. Presson, H. Featherstone, T.J. Newby, and T. Greenway
23. Drug resistance in flukes.
G.C. Coles
24. Dose-titration of fenbendazole in chickens.
L.M. Pote and T.A. Yazwinski
25. Parasitism in overwintering cattle in Missouri.
R.M. Corwin, C.K. Wise, S.E. Pratt-Green, and B. Lucas
26. Site specificity of avian Cryptosporidium sp.
D.S. Lindsay, B.L. Blagburn, and J.A. Ernest
27. Resistance to Ascaris suum infection in pigs induced by post-migration larvae.
T.B. Stewart and T.J. Rowell
28. Evaluation of ivermectin as a microfilaricide in Dirofilaria immitis infected dogs.
A.J. Paul, K.S. Todd, Jr., J.A. DiPietro, and J.J. Liu
29. Use of ELISA to detect serum antibodies against avian coccidia.
M.D. Ruff and M.B. Chute
30. Use of hybridoma antibodies in the study of host cell interaction with Eimeria sporozoites.
H.D. Danforth and P.C. Augustine
31. The inhibition of growth and development of Ascaris suum larvae in vitro by proline analogs.
R. Fetterer and J. Urban
32. Combined effects of feeding stimulants and inhibitors on in vitro ingestion by Trichostrongylus colubriformis.
L.W. Bone and K.P. Bottjer
33. Combined effect of feeding stimulants or inhibitors and anthelmintics on in vitro ingestion by Trichostrongylus colubriformis.
K.P. Bottjer and L.W. Bone
34. Comparison of helminth larval counts from adult and immature horses over two grazing seasons.
T.J. Kennedy and D.J. Bruer

Tuesday, July 23

35. Experimental Fascioloides magna infection in calves.
B.E. Stromberg, G.A. Conboy, D.W. Hayden and J.C. Schlotthauer

36. Influence of fenbendazole treatment on yearling steers with pre-type II Ostertagiasis.
G.L. Zimmerman, D.W. Weber, G.H. Myers, M.J. Nelson, C.R.B. Clark, and T. Brundage

37. Cuticular ridge patterns separate Haemonchus contortus of sheep from H. placei of cattle.
J.R. Lichtenfels, P.A. Pilitt, and L.F. LeJambre

38. Moniezia spp. in Cattle and Sheep in Wyoming.
R.C. Bergstrom

39. Dye-sensitized photo-oxidation of ovine gastrointestinal nematode larvae.
M.B. Smith and M.C. Healey

40. Equine Dermatitis Associated with Black Fly (Simuliidae) Infestation.
F.L. Anderson and M.G. Shupe

SESSION 4:
Moderator: TREMATODES
G.L. Zimmerman

41. 4:00 The guinea pig as a model for Fascioloides magna infection in sheep.
G.A. Conboy, B.E. Stromberg, and D.W. Hayden

42. 4:15 Clorsulon efficacy against naturally occurring Fasciola hepatica in cattle as compared with albendazole.
R.L. Kilgore, M.L. Williams, G.W. Benz, and S.J. Gross

43. 4:30 Activity of SCH 32481 against gastrointestinal nematodes in yearling heifers and Fasciola hepatica in sheep.
L.S. Richards, G.L. Zimmerman, D.W. Weber, S.D. Dawley, M.J. Nelson, and C.R.B. Clark

PRESIDENTIAL ADDRESS

44. 4:45 Brainstorms on rainstorms and Louisiana snailforms - liver flukes in cattle.
J.B. Malone - President AAVP

5:05 BUSINESS MEETING

6:00 SOCIETY SOCIAL HOUR

SESSION 5:
Moderators: CHEMOTHERAPY
S.D. Folz and G.H. Myers

45. 8:00 AM Efficacy of SCH 32481 (Schering Corp.) against inhibited larvae of Ostertagia ostertagi.
J.C. Williams, J.W. Knox, K.S. Marbury, M.D. Kimball, E.R. Willis, T.G. Snider, and J.E. Miller

46. 8:15 Efficacy of oxfendazole as administered to cattle by intraruminal injection.
B.L. Presson and T.A. Yazwinski

47. 8:30 Late season nematode acquisition by calves previously treated with the Paratect bolus.
T.A. Yazwinski, B.L. Presson, T.J. Newby, and H.E. Featherstone

48. 8:45 The antistrongyle activity of a propylene glycol-glycerol formal based formulation of ivermectin in horses.
J.A. DiPietro, K.S. Todd, Jr., and V. Reuter

49. 9:00 Comparative efficacies of VET 220 (Dienbendazole, prop. nom) and ivermectin against immature Parascaris equorum resulting from experimental infection of pony foals.
T.R. Bello

50. 9:15 Determination of rate and efficiency of gain of pigs following infection with Ascaris suum and anthelmintic treatment.
J.F. Urban and N.C. Steele

51. 9:30 Parasitism and production of once-daily suckling calves: effects of anthelmintic medication.
H. Ciordia and J.A. Stuedemann

52. 9:45 PRO-SPOT (fenthion) solution for control of fleas on dogs.
R.G. Arther and D.D. Cox

10:00 COFFEE BREAK

53. 10:30 Mitaban liquid concentrate: a tick and flea repellent and tick detachment drug.
S.D. Folz, K.A. Ash, G.A. Conder, and D.L. Rector

54. 10:45 Residual efficacy of a new class of pyrethrin flea and tick control products.
T.A. Miller

SESSION 6: VETERINARY ENTOMOLOGY SYMPOSIUM
Moderator: J.A. Hawkins

55. 11:00 The significance of ticks in cattle production in the United States.
J.A. Hair - Professor of Entomology, Oklahoma State University
56. 11:15 An update on horn fly pyrethroid resistance.
D.C. Sheppard - Associate Professor of Entomology, Coastal Plains Experiment Station, University of Georgia
57. 11:30 Tick-borne spotted fever in the United States.
B.R. Norment - Professor of Entomology, Mississippi State University

12:00 PM LUNCH

SESSION 7: PROTOZOA
Moderators: C.R. Sterling and M.D. Ruff

58. 1:00 KEYNOTE ADDRESS - Prevention of Toxoplasmosis by hygienic means and vaccination.
J.K. Frenkel - Professor of Pathology and Oncology, University of Kansas Medical Center
59. 1:30 Toxoplasma - induced abortions in sheep in Maryland.
J.P. Dubey, S. Miller, E.C. Powell, and W.R. Anderson
60. 1:45 Cryptosporidium infections detected by direct immunofluorescence using a monoclonal antibody recognizing an oocyst determinant.
M.J. Arrowood and C.R. Sterling
61. 2:00 Host specificity of avian Cryptosporidium sp.
B.L. Blagburn, D.S. Lindsay, and J.A. Ernest
62. 2:15 Measurement of antibody response to experimentally induced Eimeria bovis and E. zuernii infection in calves by enzyme linked immunosorbent assay.
H. Saatara Oz, B.E. Stromberg, W.J. Bemrick, and H.H. Oz
63. 2:30 A quantitative study of coccidia of beef calves from the coastal plains area of Georgia.
J.V. Ernst and T.B. Stewart
64. 2:45 Treatment of bovine trichomoniasis with Iprnidazole.
J.M. Cheney, L. Ball, R.G. Mortimer, and C.K. Kimberling
- 3:00 COFFEE BREAK

SESSION 8: EXPERIMENTAL AND CLINICAL STUDIES II
Moderators: T.A. Yazwinski and H. Ciordia

65. 3:15 Characterization of horn fly induced equine dermatitis and its potential relationship to onchocerciasis.
L.D. Foil, T.R. Klei, R.F. Miller, C.S. Foil, D.D. French
66. 3:30 The antifecundity effect on Trichinella spiralis in immune pigs.
H.P. Marti and K.D. Murrell
67. 3:45 Immunization of swine against Trichinella spiralis using ES antigens.
H.R. Gamble and K.D. Murrell
68. 4:00 Local and systemic blastogenic responses of cattle to infection with Ostertagia ostertagi.
L.C. Gasbarre
69. 4:15 Potential antigens for serodiagnosis of bovine cysticercosis.
E. Sollo, M. Rhoads, K.D. Murrell, and K.J. Lindquist
70. 4:30 Detection and assessment of subclinical lungworm infection in calves by fecal analysis, hematological changes, biochemical profiling and scanning electron microscopy.
F.M. Seesee and D.E. Worley
71. 4:45 Strategic control of strongyles in ponies with ivermectin in Ontario.
J.O.D. Slocombe

Wednesday, July 24

Las Vegas Convention Center, East Meeting Rooms, Room N2

SESSION 9: VETERINARY PROTOZOOLOGY - UPDATE*

Moderator: B.E. Stromberg

72. 8:30 Treatment and control of coccidiosis in food producing animals.
John V. Ernst
73. 9:00 Coccidiosis in companion animals: a clinical impression.
William D. Schall and Janet A. Grace
- 9:30 Discussion and break
74. 10:00 The importance of Sarcocystis to animals and humans.
Ronald Fayer
75. 10:30 Cryptosporidium: is the veterinarian at risk?
William L. Current
76. 11:00 Toxoplasma: update on public health significance.
Jacob K. Frenkel

*Cosponsored by the American Association of Veterinary Parasitologists and the American Veterinary Medical Association

Program Timetable **Sunday, July 21 Through Friday, July 26**

Sunday, July 21

8:00 AM Speaker Ready Room—Hilton, Registration Desk
 Auxiliary to the AVMA—Executive Board Meeting (Continental Breakfast)—Hilton, Conference Room 1
 American Board of Veterinary Practitioners—Certifying Exam—Specialty—Hilton, Pavilion 6
 Professional Examination Services—NBEC Item Development Workshop—Hilton, Grand Salon
 American College of Veterinary Preventive Medicine—Oral Examination—Hilton, Board Room
 American Board of Veterinary Practitioners—Committee Room—Hilton, Conference Room 3
 9:00 AM Breakfast for Dr. Richard Fink—California VMA—Hilton, Ballrooms F and G
 American Board of Veterinary Practitioners—Item Development Workshop—Hilton, Conference Room 14
 1:00 PM AVMA House of Delegates—Hilton, Ballrooms B & C
 American Board of Veterinary Practitioners—Candidates Wine & Cheese Reception—Hilton, Ballroom E
 2:00 PM American Association of Veterinary Laboratory Diagnosticians—Long Range Planning—Hilton, Conference Room 7
 3:00 PM American Board of Veterinary Practitioners—Annual Business Meeting—Hilton, Ballroom D
 7:30 PM Christian Veterinary Mission—Hilton, Conference Room 11

Monday, July 22

7:00 AM American Board of Veterinary Practitioners—Regents Meeting—Hilton, Conference Room 13
 7:30 AM A/V Center/Speaker Ready Room—Convention Center, Room D-2, East Meeting Rooms
 8:00 AM Registration Opens—Convention Center
 Speaker Ready Room—Hilton, Registration Desk
 Placement Service Opens—Convention Center, Room 7
 State Associations Secretaries Conference Breakfast—Hilton, Conference Room 2
 Past Presidents' Breakfast—Hilton, Royal Salon
 American Veterinary Neurology Association—Scientific Meeting—Hilton, Conference Room 10
 Christian Veterinary Mission—Convention Center, Room 2
 American Association of Veterinary Clinicians—Hilton, Ballroom E
 American Board of Veterinary Toxicology—Examination—Hilton, Conference Room 11
 American Board of Veterinary Toxicology—Examination grading—Hilton, Conference Room 12
 American Association of Veterinary Parasitologists—Scientific Presentation and Poster Presentation—Convention Center, Room 4
 American College of Veterinary Preventive Medicine—Board of Officers and Councillors Meeting—Hilton, Conference Room 14
 American College of Laboratory Animal Medicine—Certifying Exam—Convention Center, Room E-3, East Meeting Rooms
 American Association of Avian Pathologists—Board Meeting—Hilton, Club Salon
 American College of Veterinary Anesthesiologists—Executive Board Meeting—Hilton, Conference Room 1
 American Association of Veterinary Laboratory Diagnosticians Lab Accreditation Board—Hilton, Board

8:30 AM American Society of Veterinary Ophthalmology—Lectures and Seminars—Convention Center, Room 3
 9:00 AM Veterinary Racing Chemists—Business Meeting—Convention Center, Room C, East Meeting Rooms
 American Veterinary Society of Animal Behavior—Hilton, Embassy Salon
 9:30 AM House of Delegates—Hilton, Ballrooms B and C
 10:00 AM Association for Women Veterinarians—Meeting and Reception—Hilton, Ballroom F
 12:30 PM American Association of Industrial Veterinarians—Board Meeting—Hilton, Conference Room 3
 1:00 PM Executive Board—Hilton, Conference Rooms 7 and 8
 Association of American Veterinary Medical Colleges—AAVMC Minority Affairs Committee—Hilton, Grand Salon
 American Association of Extension Veterinarians—Educational Program and Business Meeting—Convention Center, Room T2 and T4, East Meeting Rooms
 American College of Laboratory Animal Medicine—Board of Directors Meeting—Hilton, Board Room
 American Veterinary Exhibitors Association—Executive Committee Meeting—Convention Center, East Meeting Room F-1
 3:00 PM American Association of Food Hygiene Veterinarians—Board Meeting (Outgoing)—Convention Center, Room F-2, East Meeting Rooms
 American Association of Veterinary Laboratory Diagnosticians—Board of Governors Meeting—Convention Center, Room C
 American College of Veterinary Preventive Medicine—Diplomates Meeting—Hilton, Ballroom G
 Auxiliary to the AVMA—Student Auxiliary Get-Acquainted Wine and Cheese Party/SA Orientation and Male Spouses Party—Hilton, Conference Room 9
 4:00 PM American Association of Food Hygiene Veterinarians—General Business Meeting—Convention Center, Room T-1, East Meeting Rooms
 4:00 PM American Association of Avian Pathologists—Poultry Health Advisory Committee—Hilton, Royal Salon
 4:30 PM American College of Veterinary Preventive Medicine—Reception—Hilton, Ballroom G
 5:00 PM American Association of Food Hygiene Veterinarians—Board Meeting (Incoming)—Convention Center, Room F-2, East Meeting Rooms
 American Academy of Veterinary Pharmacology and Therapeutics—Business Meeting—Hilton, Conference Room 13
 National Society of Phi Zeta Business Meeting—Hilton, Conference Room 2
 6:00 PM American Academy of Veterinary Pharmacology and Therapeutics—Reception—Hilton, Conference Room 14
 American Academy of Veterinary and Comparative Toxicology—Business Meeting—Hilton, Conference Room 3
 SAVMA Workshop and Reception—Hilton, Ballroom D
 6:30 PM Squibb Student Program—Reception—Hilton, Conference Room 10
 7:00 PM Association of American Veterinary Medical Colleges—Executive Committee—Hilton, Conference Room 1

Tuesday, July 23

7:00 AM Registration Opens—Convention Center
 American Society of Laboratory Animal Practitioners—Board of Directors—Hilton, Board Room

7:30 AM Association of Veterinary Medical Data Program Participants—Executive Board—Hilton, Conference Room 1
 American Board of Veterinary Toxicology—Breakfast/Business Meeting—Hilton, Embassy Room
 A/V Center/Speaker Ready Room—Convention Center, Room D-2, East Meeting Rooms
 8:00 AM Placement Service Opens—Convention Center, Room 7
 Auxiliary to the AVMA—SA Delegates, Sponsors, State Liaisons, Dean's Wives Coffee—Hilton, Conference Rooms 9 and 10
 Auxiliary to the AVMA—Delegates Registration—Hilton, Ballrooms F and G
 Speaker Ready Room—Hilton, Registration Desk
 Autotutorial Programs—Convention Center, Rooms A-1 thru A-6, East Meeting Rooms
 SAVMA—Convention Center, Room 2
 American College of Laboratory Animal Medicine—Exam Review—Convention Center, Room E-3, East Meeting Rooms
 American Association of Veterinary Parasitologists—Scientific Presentation and Posters—Convention Center, Room 4
 AM Animal Technicians Symposium—Convention Center, Room P1, East Meeting Rooms
 Auxiliary to the AVMA—SA Sponsors, State Liaisons, Dean's Wives Meeting—Hilton, Conference Rooms 7 and 8
 Auxiliary to the AVMA—SA Delegates Workshop and Business Meeting—Hilton, Conference Rooms 13 and 14
 American Association of Avian Pathologists—Symposium—Convention Center, Rooms B-1 and B-2, East Meeting Rooms
 Society of Aquatic Veterinary Medicine—Convention Center, Room E-2, East Meeting Rooms
 American College of Veterinary Microbiologists—Board Meeting—Hilton, Conference Room 12
 American Association of Industrial Veterinarians—Board Meeting—Hilton, Conference Room 3
 Avian Poster Session—Convention Center, Room B-3, East Meeting Rooms
 8:30 AM Section on Laboratory Animal Medicine—Convention Center, Room E-1, East Meeting Rooms
 8:45 AM Auxiliary to the AVMA—1984-1985 Committee Meetings—Hilton, Ballrooms F and G
 9:00 AM Auxiliary to the AVMA—Session for Members of State Auxiliaries—Hilton, Ballroom E
 Air Force Environmental Health Officers—Informational/Educational Meeting—Convention Center, Room P2
 American Association of Swine Practitioners—Board of Directors—Hilton, Conference Room 2
 American Veterinary Medical Records Association—Guest Speakers—Convention Center, Room K-2, East Meeting Rooms
 Seminar #1—Convention Center, Room L-2, East Meeting Rooms
 Seminar #2—Convention Center, Room N-2, East Meeting Rooms
 Seminar #3—Convention Center, Room R-2, East Meeting Rooms
 Seminar #4—Convention Center, Room L-1, East Meeting Rooms
 Seminar #5—Convention Center, Room N-4, East Meeting Rooms
 Seminar #6—Convention Center, Room S-2, East Meeting Rooms
 Seminar #7—Convention Center, Room M-1, East Meeting Rooms
 Seminar #8 (Part 1)—Convention Center, Room N-3, East Meeting Rooms
 Seminar #9—Convention Center, Room M-2, East Meeting Rooms

Seminar #10—Convention Center, Room R-3, East Meeting Rooms
 Seminar #11—Convention Center, Room N-1, East Meeting Rooms
 Seminar #12 (Part 1)—Convention Center, Room S-1, East Meeting Rooms
 Association of American Veterinary Medical Colleges—Admissions Officers—Convention Center, Room R-1, East Meeting Rooms
 9:15 AM Auxiliary to the AVMA—1985-1986 Committee Meetings—Hilton, Ballrooms F and G
 10:00 AM US Public Health Service Veterinarians—Convention Center, Room J
 Conference of Public Health Veterinarians—Annual Business Meeting—Convention Center, Room C
 10:30 AM Auxiliary to the AVMA—House of Delegates Meeting—Hilton, Ballrooms F and G
 11:30 AM Merck & Company, Inc.—Deans' Luncheon—Hilton, Continental and Club Salon
 11:45 AM Norden Laboratory's State Veterinary Association Presidents' Luncheon—Hilton, Grand Salon and Royal
 12 noon US Army Veterinary Corps—Specialty Group Meeting—Luncheon—Hilton, Pavilion 6
 American Association of Bovine Practitioners Board—Hilton, Conference Room 11
 1:00 PM Auxiliary "Pair-O'Dice Luncheon"—Hilton, Ballroom C
 American Association of Veterinary State Boards—Convention Center, Room 3
 Association of Teachers of Veterinary Public Health and Preventive Medicine—Business Meeting—Convention Center, Room C
 Intermountain Veterinary Medical Association—Hilton, Conference Room 2
 1:30 PM Section on Avian Medicine—Convention Center, Rooms B-1 and B-2, East Meeting Rooms
 American Academy of Veterinary and Comparative Toxicology—Scientific Program—Convention Center, Room T-1, East Meeting Rooms
 2:00 PM American Society of Tropical Veterinary Medicine—Hilton, Conference Room 12
 Association of American Veterinary Medical Colleges—Deans—Convention Center, Rooms T2 and T4, East Meeting Rooms
 Seminar #13—Convention Center, Room L-2, East Meeting Rooms
 Seminar #14—Convention Center, Room M-1, East Meeting Rooms
 Seminar #15—Convention Center, Room R-2, East Meeting Rooms
 Seminar #16—Convention Center, Room L-1, East Meeting Rooms
 Seminar #17—Convention Center, Room N-2, East Meeting Rooms
 Seminar #18—Convention Center, Room S-2, East Meeting Rooms
 Seminar #19—Convention Center, Room M-2, East Meeting Rooms
 Seminar #20 (Part 2)—Convention Center, Room N-3, East Meeting Rooms
 Seminar #21—Convention Center, Room N-4, East Meeting Rooms
 Seminar #22—Convention Center, Room N-1, East Meeting Rooms
 Seminar #23 (Part 2)—Convention Center, Room S-1, East Meeting Rooms
 3:00 PM Auxiliary "Parade of States"—Hilton, Ballrooms F and G
 4:00 PM Veterinary Amateur Radio Operators—Hilton, Board Room
 4:30 PM Auxiliary to the AVMA—Tea for international visitors and past presidents—Hilton, Auxiliary President's Suite

5:00 PM National Association of Federal Veterinarians—General Membership—Convention Center, Room C
American Association of Avian Pathologists—Toxic and Miscellaneous Infectious Diseases Committee—Convention Center, Room F-2, East Meeting Rooms

6:30 PM President's Reception—Hilton, Ballrooms A-B-C
Teen's Party—Hilton, Ballroom D
Preteen's Party—Hilton, Ballroom E

7:00 PM American Association of Avian Pathologists—Avian Medicine Residency Program Seminar—Hilton, Conference Room 11

8:00 PM American Veterinary History Society Seminar and Business Meeting—Hilton, Conference Room 12

Wednesday, July 24

7:00 AM Ecumenical Fellowship Breakfast—Hilton, Ballroom E
Association of Veterinarians Administration Veterinary Medical Officers—Business Meeting—Hilton, Conference Room 10
Association of American Veterinary Medical Colleges—AVMA/AAVMC Joint Committee—Hilton, Conference Room 2

7:30 AM A/V Center/Speaker Ready Room—Convention Center, Room D-2, East Meeting Rooms

8:00 AM Placement Service Opens—Convention Center, Room 7
Registration Opens—Convention Center
American Association of Bovine Practitioners—Business Committee—Hilton, Conference Room 12
Squibb—Selected Veterinarians and Spouses Breakfast
Morris Animal Foundation Breakfast—Hilton, Conference Rooms 13 and 14
American Association of Veterinary State Boards—Board Meeting—Convention Center, Room 3
Association of American Veterinary Medical Colleges—Educational Session—Convention Center, Room R-1, East Meeting Rooms
Association of Veterinary Medical Data Program Participants—General Business Meeting—Convention Center, Room J
American Academy of Veterinary Nutrition—Breakfast, Business, and Scientific Session—Hilton, Conference Room 8
SAVMA—Convention Center, Room 2
Speaker Ready Room—Hilton, Registration Desk
Autotutorial Programs—Convention Center, Rooms A-1 thru A-6, East Meeting Rooms

8:30 AM Animal Technicians Symposium—Convention Center, Room P1, East Meeting Rooms
Section on Public Health—Convention Center, Room E-2, East Meeting Rooms
Section on Avian Medicine—Convention Center, Rooms B-1 and B-2, East Meeting Rooms
Avian Poster Session—Convention Center, Room B-3, East Meeting Rooms
Section on Sheep and Goats—Convention Center, Rooms L-1 and L-3, East Meeting Rooms
Section on Laboratory Animal Medicine—Convention Center, Room E-1, East Meeting Rooms
Section on Small Animal Medicine (1)—Convention Center, Room G-1, East Meeting Rooms
Section on Small Animal Medicine (2)—Convention Center, Room G-2, East Meeting Rooms
Section on Equine Medicine—Convention Center, Rooms L-2 and L-4, East Meeting Rooms

Section on Swine Medicine—Convention Center, Room N-1, East Meeting Rooms
Section on Research—Convention Center, Room N-2, East Meeting Rooms

9:00 AM Marketplace of States—Hilton, Pavilions 9-10-11
American Veterinary Medical Record Association—Guest Speakers—Convention Center, Room K-2, East Meeting Rooms
Seminar #7R—Convention Center, Room M-1, East Meeting Rooms
Seminar #9R—Convention Center, Room M-2, East Meeting Rooms
Seminar #25—Convention Center, Room N-3, East Meeting Rooms
Seminar #27—Convention Center, Room R-2, East Meeting Rooms

10:00 AM American Association of Bovine Practitioners Board Meeting—Hilton, Conference Room 11

11:45 AM Flying Veterinarians Association—Luncheon—Hilton, Conference Room 9

12 noon Inaugural Luncheon—Hilton, Ballroom C

1:00 PM Veterinary School Development Officers—Development Work Group—Convention Center, Room C, East Meeting Rooms
Association of American Veterinary Medical Colleges—Business Session—Convention Center, Rooms R1 and R3, East Meeting Rooms

1:30 PM Section on Public Health and Equine Medicine—Convention Center, Rooms L-2 and L-4, East Meeting Rooms
Drug Availability Committee—Hilton, Board Room

Section on Bovine Medicine—Convention Center, Rooms L-1 and L-3, East Meeting Rooms
Section on Regulatory Veterinary—Medicine—Convention Center, Room D-1, East Meeting Rooms

2:00 PM Auxiliary to the AVMA—Seminar—Hilton, Ballrooms F and G
Auxiliary to the AVMA-SA Delegates Workshop and Business Meeting—Hilton, Conference Room 13
Seminar #19R—Convention Center, Room M-2, East Meeting Rooms
Seminar #21R—Convention Center, Room N-4, East Meeting Rooms
Seminar #26—Convention Center, Room M-1, East Meeting Rooms
National Board Examination Committee—Hilton, Conference Room 7

3:30 PM American Association of Avian Pathologists—Business Meeting—Convention Center, B-1 and B-2, East Meeting Rooms

4:00 PM American Veterinary Exhibitors Association Annual Membership Meeting—Convention Center, Room 16

4:30 PM American College of Laboratory Animal Medicine—Business Meeting—Convention Center, Room E-3, East Meeting Rooms

5:00 PM American Society of Laboratory Animal Practitioners—General Membership—Convention Center, Room 3

6:00 PM American Veterinary Exhibitors Association Reception—Convention Center, Room 17

6:30 PM Alumni Receptions—See page 12 for locations
Animal Medical Center—Reception—Hilton, Embassy

Thursday, July 25

7:00 AM Association of American Veterinary Medical Colleges—Executive Committee—Hilton, Conference Room 2
National Academies of Practice Breakfast Meeting—Hilton, Conference Room 3
American Association of Avian Pathologists—Board—Hilton, Conference Room 8

7:00 AM Committee for Scientific Program—Breakfast Meeting—Hilton, Conference Room 11
AVMA/AVEA Breakfast—Hilton, Conference Room 12
American College of Laboratory Animal Medicine—Board of Directors Meeting—Hilton, Board Room
A/V Center/Speaker Ready Room—Convention Center, Room D-2, East Meeting Rooms

8:00 AM Placement Service Opens—Convention Center, Room 7
Registration Opens—Convention Center
Squibb Student Program—Breakfast—Hilton, Conference Room 10

Auxiliary to the AVMA—Continental Breakfast—Executive Board—Hilton, Conference Room 1
Speaker Ready Room—Hilton, Registration Desk
Autotutorial Programs—Convention Center, Rooms A-1 thru A-6, East Meeting Rooms
SAVMA—Convention Center, Room 2
AVMA Group Insurance Trust Meeting—Hilton, Conference Room 9

8:30 AM Section on Swine Medicine—Convention Center, Room N-1, East Meeting Rooms

Section on Small Animal Medicine (1)—Convention Center, Room G-1, East Meeting Rooms
Section on Small Animal Medicine (2)—Convention Center, Room G-2, East Meeting Rooms
Section on Avian Medicine—Convention Center, Rooms B-1 and B-2, East Meeting Rooms
Avian Poster Session—Convention Center, Room B-3, East Meeting Rooms

Section on Laboratory Animal Medicine—Convention Center, Room E-1, East Meeting Rooms
Section on Public Health—Convention Center, Room E-2, East Meeting Rooms
Section on Research—Convention Center, Room N-2, East Meeting Rooms
Section on Equine Medicine—Convention Center, Rooms L-2 and L-4, East Meeting Rooms
Section on Bovine Medicine—Convention Center, Rooms L-1 and L-3, East Meeting Rooms
Section on Regulatory Veterinary Medicine—Convention Center, Room D-1, East Meeting Rooms

9:00 AM Association of Veterinarians for Animal Rights—Hilton, Conference Room 7
Veterinary Academy on Disaster Medicine—Scientific and Educational Discussion on Animal Disasters—Convention Center, Room J
American Veterinary Medical Record Association—Guest Speakers—Convention Center, Room K-2, East Meeting Rooms
Seminar #24—Convention Center, Room N-4, East Meeting Rooms

Seminar #28—Convention Center, Room N-3, East Meeting Rooms

11:30 AM American Veterinary Epidemiology Society—Lunch and Honors—Hilton, Club and Continental Salon

12 noon AVMA Group Insurance Trust—Luncheon—Hilton, Conference Rooms 12-13-14

1:30 PM Section on Regulatory Veterinary Medicine and Swine Medicine—Convention Center, Room D-1, East Meeting Rooms
Council on Biologic and Therapeutic Agents—Hilton, Board Room

2:00 PM American Association of Wildlife Veterinarians—Business Meeting—Short Program—Convention Center, Room P1, East Meeting Rooms
Seminar #29—Convention Center, Room N-1, East Meeting Rooms

6:30 PM American Association of Animal Welfare Veterinarians—Business and Presentations—Hilton, Conference Room 1

Friday, July 26

7:30 AM A/V Speaker Ready Room—Convention Center, Room D-2, East Meeting Rooms

8:00 AM Placement Office Opens—Convention Center, Room 7
Registration Opens—Convention Center
Speaker Ready Room—Hilton, Registration Desk
Autotutorial Programs—Convention Center, Rooms A-1 thru A-6, East Meeting Rooms

8:30 AM Section on Regulatory Medicine—Convention Center, Room D-1, East Meeting Rooms
Section on Small Animal Medicine (1)—Convention Center, Room G-1, East Meeting Rooms
Section on Small Animal Medicine (2)—Convention Center, Room G-2, East Meeting Rooms
Section on Research—Convention Center, Room N-2, East Meeting Rooms

9:00 AM American Veterinary Medical Record Association—Business Meeting/Guest Speakers—Convention Center, Room K-2, East Meeting Rooms
Seminar #11R—Convention Center, Room N-1, East Meeting Rooms
Seminar #30—Convention Center, Room N-3, East Meeting Rooms

Student AVMA

Las Vegas Hilton and
Convention Center

Monday, July 22

6:00-10:00 PM SAVMA Workshop and Reception—Hilton,
Ballroom D

Tuesday, July 23

8:00 AM-5:00 PM SAVMA House of Delegates—Convention Center,
Room 2
6:30 PM AVMA President's Reception—Hilton, Ball-
rooms A, B, C

Wednesday, July 24

8:00 AM-5:00 PM SAVMA House of Delegates—Convention Center,
Room 2
6:30 PM Alumni Receptions—See Convention Program
for locations

Thursday, July 25

8:00 AM-5:00 PM SAVMA House of Delegates—Convention Center,
Room 2
Noon-2:00 PM Group Insurance Trust Luncheon—Hilton,
Conference Rooms 12, 13, 14

AVMA Placement Service

Continuing a service established 19 years ago, the AVMA Placement Service will arrange personal interviews between members of the Association seeking employment and representative of organizations wishing to employ veterinarians. The service is available without charge to AVMA members in good standing who have registered with the Placement Service and to exhibitors at the annual meeting, as well as potential employers registered with the Placement Service.

Both candidates and employers who have not previously done so are urged to register at the Placement Service office immediately upon arrival in Las Vegas. The Placement Service office will be located in the Convention Center, Room 7. An adjoining room will be available for interviews. Registration prior to July is desirable. Requests for forms should be sent to the Division of Scientific Activities, American Veterinary Medical Association, 930 N Meacham Rd, Schaumburg, IL 60196.

All advance registrants, both veterinarians and employers, should check in with the Placement Service office immediately upon arrival to establish a contact point for arrangement of interviews.

The Placement Service accepts listings of positions for animal technicians and résumés of animal technicians seeking employment, both for interview purposes at the annual meeting and for distribution on request.

Student AVMA Auxiliary

Las Vegas Hilton

Monday, July 22

3:00 PM Student Auxiliary Get-acquainted Wine and
Cheese Party/Student Auxiliary Orientation
and Male Spouses Party—Conference
Room 9

(Complimentary Auxiliary luncheon tickets
will be given to Student Auxiliary delegates
and alternates at orientation.)

Tuesday, July 23

8:00 AM Student Auxiliary Delegates, Sponsors',
State Liaisons, Deans' Wives Coffee—Con-
ference Rooms 9 and 10

8:00 Delegates Registration—Ballrooms F and G

8:30 Student Auxiliary Sponsors, State Liaisons,
Deans' Wives Meeting—Conference Rooms 7
and 8

8:30 Student Auxiliary Delegates Workshop and
Business Meeting—Conference Rooms 13
and 14

10:30 AM-12:30 PM Student Auxiliary Delegates and Alternates
to attend Auxiliary House of Delegates as
guests—will be excused after to return to
their workshops—Ballrooms F and G

1:00 PM-3:00 PM Auxiliary House of Delegates Luncheon and
Auxiliary Installation—Ballroom C

6:30 PM President's Reception—Ballrooms A, B, C

Wednesday, July 24

7:00 AM Preparation for Marketplace of States—Pa-
vilions 9, 10, 11

9:00 Marketplace of States—Pavilions 9, 10, 11

2:00 PM Student Auxiliary Delegates Workshop and
Business Meeting—Conference Room 13

6:30 Alumni Receptions—See Convention Program
for location. Student AVMA and Student
Auxiliary delegates to attend their college
receptions.

Seminar Program

Seminar income in excess of expenses is assigned to the
AVMA Foundation for support of veterinary research

The fee for each seminar is \$20. Repeat seminars are designated by the letter "R." A seminar ticket is valid only for the seminar and date shown. It cannot be used at any other time.

All seminars will be located in the Convention Center, East Meeting Rooms

Small Animal Medicine

Ocular manifestations of systemic disease—small animal and equine

#1 Paul F. Dice, VMD, Seattle, Wash.
3 Hours Reuben E. Merideth, DVM, Tucson, Ariz.
Fee \$20 Tuesday, 9:00 AM, Room L4

This presentation discusses ocular involvement in systemic disease processes. Evaluation of the eyes can occasionally give us a "head start" in evaluating the etiopathogenesis of a systemic problem. Sequential observations of ocular lesions in patients being treated for associated systemic disease provide for the evaluation of response to treatment and valuable information as to prognosis. The diagnosis and current therapy for some related systemic diseases also will be included, as time allows.

Clinical differentiation of "red eye" and "prominent eye"—small animal

#13 Paul F. Dice, VMD, Seattle, Wash.
3 Hours Tuesday, 2:00 PM, Room L2
Fee \$20

This seminar will focus on 2 clinical conditions, "red eye" and "prominent eye". An algorithm will be used to consider the differential diagnosis of red eye in the clinical setting. This is 1 of the most confusing conditions in the canine. A more rapid general evaluation and treatment regimen for affected eyes is presented. Various causes of exophthalmos and buphthalmos, or prominent eye, will be clinically differentiated.

Oncology: Clinical guidelines

#2 Nancy O. Brown, VMD, Plymouth Meeting, Pa.
3 Hours Tuesday, 9:00 AM, Room N2
Fee \$20

This seminar will provide an overview of current concepts relating to the diagnosis and management of dogs and cats with neoplastic disease. The discussion will begin with general guidelines such as diagnostic principles, nutritional management, and clinical staging. It will then proceed into a more detailed discussion of specific tumor types, such as canine mammary gland tumors, feline mammary gland tumors, and soft tissue sarcomas.

Diagnostic approaches to chronic diarrhea in dogs and cats

#3 Michael S. Leib, DVM, Virginia Tech
3 Hours Tuesday, 9:00 AM, Room R2
Fee \$20

This seminar will focus on chronic diarrhea in dogs and cats that is a common but frustrating problem for the small animal practitioner. Because many etiologies may produce chronic diarrhea, the veterinarian must follow a logical and thorough diagnostic plan to arrive at an accurate diagnosis. This seminar will discuss localization of disease to the small or large bowel, a complete list of rule outs, a practical diagnostic plan, and descriptions of the tests needed for accurate diagnosis. Case examples will be used to demonstrate diagnostic approaches and to emphasize important concepts.

Gastric dilatation-volvulus in the dog

#15 Michael S. Leib, DVM, Virginia Tech
3 Hours Tuesday, 2:00 PM, Room R2
Fee \$20

Gastric dilatation-volvulus (GDV), which is a common emergency in small animal practice, will be the topic of this seminar. Pathophysiology, medical stabilization, surgical treatment, and postoperative care will be emphasized. New information concerning acid-base and electrolyte changes, the relationship between hypergastrinemia and GDV, the pathogenesis and treatment of cardiac arrhythmias, gastric emptying and GDV, and surgical management with circumcostal gastropexy will be discussed. Selected examples will be used to illustrate unusual cases.

Cardiovascular disorders in systemic and metabolic diseases

#4 Philip R. Fox, DVM, Animal Medical Center
3 Hours Tuesday, 9:00 AM, Room L3
Fee \$20

Many systemic diseases produce associated disorders of cardiovascular structure and function, sometimes constituting major medical and surgical concerns. Detection of cardiovascular involvement based on clinical signs, radiographic changes, ECG abnormalities, and laboratory findings will be discussed. Systemic disorders affecting the heart, including hyperthyroidism, hypothyroidism, hypoadrenocorticism (Addison's disease), hypercalcemia, hypocalcemia, hyperkalemia, uremia, hyperpyrexia, toxemia, and infectious inflammatory agents will be presented.

Management of congestive heart failure in the dog: New concepts in diagnosis and treatment

#16 Philip R. Fox, DVM, Animal Medical Center
3 Hours
Fee \$20
Tuesday, 2:00 PM, Room L1

A clinical, practical approach to congestive heart failure will be discussed. Diagnostic tips from history taking and physical examination will be presented. Electrocardiographic and radiographic abnormalities associated with left and right heart failure will be reviewed. New concepts in medical management will be introduced for heart failure due to mitral/tricuspid insufficiency, cardiomyopathy, and congenital heart disease.

The estrous cycle in the bitch and management of infertility

#6 Edward C. Feldman, DVM,
University of California
3 Hours
Fee \$20
Tuesday, 9:00 AM, Room S2

Breeding pure-bred dogs is a rapidly growing hobby. Veterinarians are expected to manage more reproductive problems in the bitch than ever before. This seminar will be directed at a review of the estrous cycle in the bitch; its endocrinology and the changes in both behavior and vaginal cytology. From this foundation, a straight-forward review of the management of infertility in the bitch will be built. This review will include the differential diagnosis as well as the diagnostic approach.

A review of the major endocrinopathies in cats: Hyperthyroidism and Diabetes Mellitus

#18 Edward C. Feldman, DVM,
University of California
3 Hours
Fee \$20
Tuesday, 2:00 PM, Room S2

Hyperthyroidism is not only the most common endocrine problem in cats, but it is one of the most common disorders encountered in small animal practice. This discussion will review the clinical features of hyperthyroidism; its diagnosis and management. Diabetes Mellitus in cats is not diagnosed easily and is often difficult to manage. This discussion will focus on a practical, cost-effective, straight-forward approach to this endocrinopathy.

Cytology for the practitioner

#14 Alan H. Rebar, DVM, Purdue University
3 Hours
Fee \$20
Tuesday, 2:00 PM, Room M1

This seminar will focus on the proper evaluation of cytologic preparations. Photographs of actual case material will be used to demonstrate the features of acute, subacute and chronic inflammation. Effects of some etiologic agents, such as bacteria and systemic mycotic agents, ie *Histoplasma capsulatum* and *Cryptococcus neoformans*, will be illustrated. The cytology of neoplasms and the criteria for malignancy will also be presented. Lymphoma, mast cell tumor, prostatic carcinoma, osteogenic sarcoma, and others will be among the tumors described. A specific discussion of the cytologic appearance of lymph node reactions also will be included.

Hemograms and biochemical profile interpretations

#26 Alan H. Rebar, DVM, Purdue University
3 Hours
Fee \$20
Wednesday, 2:00 PM, Room M1

This seminar will begin an indepth discussion of hemogram data. Actual cases will be used to demonstrate the interpretation of WBC, RBC, and platelet parameters. The remainder of the program will focus upon the systematic interpretation of the large chemistry profile. Once again a case oriented approach will be used. Hepatic and pancreatic diseases will be discussed. Chemistry panel alterations in diseases such as acute hepatitis, cirrhotic liver disease, and acute pancreatitis will be illustrated. The seminar will emphasize a logical approach to the evaluation of laboratory data in the seriously ill patient.

Feline internal medicine

#5 John R. August, BVM and Andrew S. Loar, DVM,
Virginia-Maryland Regional College of
Veterinary Medicine
3 Hours
Fee \$20
Tuesday, 9:00 AM, Room N4

This seminar will take the format of a clinicopathologic conference in which carefully selected cases will be utilized to demonstrate current knowledge concerning the more important hepatic, renal, and gastrointestinal disorders of cats. These case studies will be expanded to emphasize differential diagnosis, diagnostic test selection and interpretation, and patient management.

Feline infectious diseases

#17 John R. August, BVM and Andrew S. Loar, DVM,
Virginia-Maryland Regional College of
Veterinary Medicine
3 Hours
Fee \$20
Tuesday, 2:00 PM, Room N2

This seminar will take the format of a clinicopathologic conference in which carefully selected cases will be utilized to demonstrate current knowledge concerning feline leukemia, feline infectious peritonitis and the upper respiratory viral diseases of cats. These case studies will be expanded to emphasize differential diagnosis, diagnostic test interpretation, and methods of control.

Feline hematology and oncology

#24 John R. August, BVM and Andrew S. Loar, DVM,
Virginia-Maryland Regional College of
Veterinary Medicine
3 Hours
Fee \$20
Thursday, 9:00 AM, Room N4

This seminar will take the format of a clinicopathologic conference in which carefully selected cases will be utilized to demonstrate current knowledge concerning the more important neoplastic and hematopoietic disorders of cats. These case studies will be expanded to emphasize differential diagnosis, diagnostic test selection and interpretation, and patient management.

Feline medicine and dermatology

#27 John R. August, BVM and Andrew S. Loar, DVM,
Virginia-Maryland Regional College of
Veterinary Medicine
3 Hours
Fee \$20
Wednesday, 9:00 AM, Room R2

This seminar will take the format of a clinicopathologic conference in which carefully selected cases will be utilized to

demonstrate current knowledge concerning the important endocrine, pruritic and nonpruritic dermatoses of cats. These case studies will be expanded to emphasize differential diagnosis, diagnostic test selection and interpretation, and patient management.

Feline cardiopulmonary medicine

#30 John R. August, BVM and Andrew S. Loar, DVM,
Virginia-Maryland Regional College of
Veterinary Medicine
3 Hours
Fee \$20
Friday, 9:00 AM, Room N3

This seminar will take the format of a clinicopathologic conference in which carefully selected cases will be utilized to demonstrate current knowledge concerning the important cardiac, pulmonary, and pleural diseases of cats. Case studies will be expanded to emphasize differential diagnosis, diagnostic test selection and interpretation, and patient management.

Food Animal Medicine

Part 1. Dairy nutrition: Birth to 4 months—the first growth phase

#8 Francis Kallfelz, DVM, Cornell University and
H. Fred Troutt, VMD, Virginia Tech
3 Hours
Fee \$20
Tuesday, 9:00 AM, Room N3

This seminar will discuss the nutrition and management of dairy calves and young heifers. Nutritional schemes and malnutrition through weaning will be discussed using clinical situations.

Part 2. Dairy nutrition: Four months to calving and the dry cow

#20 H. F. Troutt, VMD, Virginia Tech and
Francis Kallfelz, DVM, Cornell University
3 Hours
Fee \$20
Tuesday, 2:00 PM, Room N3

This seminar describes the nutrition of the growing dairy heifers emphasizing factors related to optimum performance for growth, breeding, and subsequent calving. This seminar will include clinical problems related to the over conditioned heifer and cow.

Seminars #8 and #20 will approach nutrition/malnutrition of the calf and heifer from the viewpoint of "Too much—too little" and the associated clinical implications. The seminars are arranged to permit audience participation.

Bovine genital tract examination and pregnancy diagnosis

#9 (9R) R. G. Elmore, DVM, Texas A&M University
3 Hours
Fee \$20
Tuesday, 9:00 AM (9), Room M2
Wednesday, 9:00 AM (9R), Room M2

An in-depth discussion of bovine genital tract examination by rectal palpation will be presented. Particular attention will be given to pregnancy examination, postpartum examination, estrous cycle staging, and genital tract pathology. The diagnosis and treatment of bovine ovarian cysts will be covered. A rapid milk progesterone enzyme immunoassay (EIA) diagnostic test will be

discussed. This test will be demonstrated as a part of seminar #21 to be presented on Tuesday afternoon and #21R on Wednesday afternoon.

Dairy goat practice tips

#10 Joan S. Bowen, DVM, Wellington, Colo
3 Hours
Fee \$20
Tuesday, 9:00 AM, Room R3

The nationwide increase in dairy goat population can broaden the horizon of the veterinary practitioner. Herd health programs emphasizing management, nutrition, and parasite control will be presented. Practical methods and applications of local and general anesthesia will be discussed. Various aspects of reproduction including infertility, pregnancy diagnosis, abortion, metabolic disease, and dystocia will be reviewed. Case histories will be utilized to discuss specific infectious diseases including chlamydia, mycoplasmosis, caseous lymphadenitis, and caprine arthritis-encephalitis.

The practitioner's use of a rapid progesterone assay for management of infertility in the cow and mare

#21 (21R) C. J. Bierschwal, DVM and
Robert Youngquist, DVM, University of Missouri
3 Hours
Fee \$20
Tuesday, 2:00 PM (21), Room N4
Wednesday, 2:00 PM (21R), Room N4

A recently developed and highly accurate rapid milk and blood plasma progesterone assay will be described and demonstrated. It will be shown how this assay can be practically used in the practitioner's laboratory. This seminar will discuss in detail the use of milk progesterone determinations for pre- and postbreeding management of anestrus in dairy cattle. Other applications to be presented will include blood progesterone assays for the selection of more fertile embryo transfer recipients in the bovine and the management of anestrus in the mare.

Laboratory diagnostics, recordkeeping, and herd health programs in a swine practice

#22 Wayne R. Freese, DVM, Worthington, Minn
3 Hours
Fee \$20
Tuesday, 2:00 PM, Room N1

In an ever changing farm economy, services delivered are becoming more important to keep both small and large producers satisfied. In this presentation, laboratory procedures will be reviewed that can be routinely used in a practice setting. Record keeping systems that can be employed in a swine practice and Herd Health programs to fit the needs of the swine producer and swine veterinarian will be discussed.

Swine enteric and respiratory infections: Diagnosis, treatment, and prevention

#29 Wayne R. Freese, DVM, Worthington, Minn
3 Hours
Fee \$20
Thursday, 2:00 PM, Room N1

Enteric and respiratory problems are the number 1 problems practitioners deal with in the farrowing house and grower finisher areas. Emphasis will be applied to diagnosis and treatment based

Scientific Program

Small Animal Medicine

Wednesday, July 24, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room G1

Presiding Officer: Phillip D. Watson

Update on urinary tract problems

- 8:30 (1) Hemologic and chemical findings in urinary tract disease
A. H. Rebar
- 10:30-11:30 (2) Pharmacotherapeutic aspects of renal and urinary tract disease
William L. Jenkins

Wednesday, July 24, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room G2

Presiding Officer: Robert E. Lewis

Animal behavior

- 8:30 (17) Small animal behavior: Assessment, therapy, and case reports
John E. Stump
- 11:00 (18) The management of pit bulls
Donald H. Clifford

Wednesday, July 24, 2:00 PM

Las Vegas Convention Center, East Meeting Rooms, Room G2

Presiding Officers: H. Richard Adams and Arthur Aronson

Symposium on new perspectives in pharmacotherapeutics in small animal medicine

- 2:00 (18A) Introduction
H. Richard Adams and Arthur L. Aronson
- 2:05 (19) Narcotic antagonists and other novel therapies in managing trauma and shock patients
John W. Holaday
- 2:35 (20) Receptor—Selective adrenergic drugs in cardiopulmonary medicine
H. Richard Adams
- 3:05 (21) Second and third generation antibiotics: Advantages and applications in treating infectious diseases
Arthur L. Aronson
- 3:35 (22) New indication for drugs that affect prostaglandins, leukotrienes, and other "Eicosanoids"
S. Ganjam

4:05

- (23) Calcium entry-blocking drugs: New approaches to old diseases
H. Richard Adams

4:35

Panel available for audience questions

Cosponsored by the American Academy of Pharmacology and Therapeutics

Wednesday, July 24, 1:30 PM

Las Vegas Convention Center, East Meeting Rooms, Room G1

Presiding Officer: Phillip D. Watson

Update on urinary tract problems

- 1:30-2:30 (3) Canine urologic disorders
George E. Lees
- 2:30-4:00 (4) Diagnosis and management of uremia
George E. Lees
- 4:00-5:00 (5) Canine renal disease update
George E. Lees

Thursday, July 25, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room G1

Presiding Officer: Phillip D. Watson

Oncology I

- 8:30 (6) Introduction—Cancer diagnosis and treatment planning
Ralph C. Richardson
- 9:30 (7) Surgical oncology
Ralph A. Henderson
- 10:00 Break
- 10:15 (8) Principles of chemotherapy and immunotherapy
K. Ann Jeglum
- 10:45 (9) Radiographic diagnosis and treatment of canine solid tumors
Glen K. King
- 11:15 Panel discussion
- 12:00 noon Lunch

Cosponsored by the Veterinary Cancer Society

Thursday, July 25, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room G2

Presiding Officer: Robert E. Lewis

Practice management

- 8:30 (25) Upward trend of malpractice in small animals
Jack R. Dinsmore
- 9:00 (26) and (29) Planning, developing, and managing net worth
Robert Behar

Scientific Program

Thursday, July 25, 1:30 PM

Las Vegas Convention Center, East Meeting Rooms, Room G1
Presiding Officer: Phillip D. Watson

Oncology II

- 1:30 (10) Mammary tumors in the dog and cat
K. Ann Jeglum
- 2:10 (11) Mast cell tumors
Ralph C. Richardson
- 2:30 (12) Canine, nasal, oral, and pharyngeal neoplasia
Glen K. King
- 3:00 Break
- 3:15 (13) Selected solid tumors of the oral cavity
Ralph A. Henderson
- 3:45 (14) Lymphoreticular tumors in the dog and cat
Ralph C. Richardson and K. Ann Jeglum

Cosponsored by the Veterinary Cancer Society

Thursday, July 25, 1:30 PM

Las Vegas Convention Center, East Meeting Rooms, Room G2
Presiding Officer: Robert E. Lewis

Practice management

- 1:30 (24) AVMA manpower study
J. Karl Wise
- 2:00 (26) and (29) Planning, developing, and managing net worth (continued)
Robert Behar

Friday, July 26, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room G1
Presiding Officer: Phillip D. Watson

Practice management

- 8:30-11:30 (15) Improving the way you market your veterinary services
James Gurney

Friday, July 26, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room G2
Presiding Officer: Robert E. Lewis

Dermatology

- 8:30 (27) and (28) New facts and ideas in dermatology (Parts 1 and 2)
George H. Muller

Friday, July 26, 1:00 PM

Las Vegas Convention Center, East Meeting Rooms, Room G2
Presiding Officer: Robert E. Lewis

Dermatology

- 1:00 (27) and (28) New facts and ideas in dermatology (Parts 1 and 2)
George H. Muller

Friday, July 26, 1:30 PM

Las Vegas Convention Center, East Meeting Rooms, Room G1
Presiding Officer: Phillip D. Watson

Practice management

- 1:30-5:00 (16) Proven concepts to put you in control of your practice, profits, and future
James Gurney

Bovine Medicine

Wednesday, July 24, 1:30 PM

Las Vegas Convention Center, East Meeting Rooms, Rooms L1 and L3

Presiding Officer: G. D. Osweiler

Toxicology of feeds and forages

- 1:30 (30) Diagnosis of plant intoxication
John Reager
- 2:00 (31) Chronic hepatic syndromes associated with plants
E. Muri Bailey, Jr.
- 2:30 (32) Evaluation of toxic components of ammoniated forages
Sandra Morgan and William C. Edwards
- 3:00 (33) Toxicities from common pasture grasses
Steven S. Nicholson
- 3:30 (34) Toxic and nutritional factors in silage
Richard L. Vetter
- 4:00 (35) Effects of chelated minerals on bovine fertility
J. E. Manspeaker, M. G. Robl, and G. H. Edwards

Cosponsored by the American Academy of Veterinary and Comparative Toxicology; American Association of Bovine Practitioners

Natural Toxins in Ruminants, Thursday, July 25, 1:30 PM, Room N2. See page 919 for complete program.

Scientific Program

Thursday, July 25, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Rooms L1 and L3

Presiding Officer: Larry Hutchinson

- 8:30 (36) Cost effectiveness for three different treatments for bovine pinkeye
Lisle W. George
- 9:00 (37) Interrelationships of deer and cattle diseases at Ames Plantation
Robert D. Linnabary and Allan E. Houston
- 9:30 (38) Erythromycin use in cattle
George E. Burrows, D. D. Griffin, A. Pip-pin, K. Harris, R. Christler, and R. D. Keeton
- 10:00 (39) Malpractice—it can be avoided
Jack R. Dinsmore
- 10:30 (40) Foot problems—therapeutics and prevention
James R. Thompson
- 11:00 (41) Prevalence and economic impact of Johne's disease in dairy cattle
Lawrence J. Hutchinson and Robert H. Whitlock

Cosponsored by the American Association of Bovine Practitioners

Thursday, July 25, 1:30 PM

Las Vegas Convention Center, East Meeting Rooms, Rooms L1 and L3

Presiding Officer: Steve Hopkins

- 1:30 (42) Bull in a test tube
Steven M. Hopkins
- 2:00 (43) Therapeutic uses of prostaglandin
Paul Doig
- 2:30 (44) Estrus synchronization with natural service in beef cattle
James R. Piotrowski
- 3:00 (45) Records in cow-calf production
Duane Miksch
- 3:30 (46) Reproductive records in large dairy herds
Leon D. Weaver
- 4:00 (47) Coding clinical data with SNOMED/SNOVET in a veterinary teaching hospital
Walter E. Weirich

Cosponsored by the American College of Theriogenologists and American Association of Bovine Practitioners

Swine Medicine

Wednesday, July 24, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room N1
Presiding Officer: Nancy Langwith

- 8:30 (48) Toxicology and residue problems in swine production
Val Richard Beasley
- 9:00 (49) Selenium toxicosis in swine
L. F. James, W. J. Hartley, K. E. Panter, and H. F. Mayland
- 9:30 (50) Effects of mycotoxins on reproduction in swine
Gerald G. Long
- 10:00 (51) Factors affecting feed refusal in swine
G. D. Osweiler
- 10:30 (52) Feed additives in swine rations
Gary L. Cromwell
- 11:00 (53) Animal feed regulations: How they affect the veterinary practitioner
Kenneth G. Davis

Cosponsored by the American Academy of Veterinary and Comparative Toxicology; American Association of Swine Practitioners, and American Association of Industrial Veterinarians

Thursday, July 25, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room N1
Presiding Officer: Rodney Johnson

Problems in swine medicine

- 8:30 (54) Salmonellosis in the growing-finishing period
Roy Schultz
- 9:00 (55) Clostridial enteritis—Diagnosis and control
Bernard J. Curran
- 9:30 (56) Postweaning diarrhea in pigs: Rotavirus and *Escherichia coli*
Kent H. Hoblet, Erwin M. Kohler, Linda J. Saif, Kenneth W. Theil, and William L. Ingalls
- 10:00 (57) Managing the high producing sow
Rodney Johnson
- 10:45 (58) Veterinary armamentarium—health, safety, and availability in the next decade
Steve C. Henry

Cosponsored by the American Association of Swine Practitioners

Swine Medicine and Swine Inspection, Thursday, July 25, 1:30 PM, Room D1. See page 918 for complete program.

Scientific Program

Equine Medicine and Surgery

Wednesday, July 24, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Rooms L2 and L4

Presiding Officer: James R. Coffman

Urinary medicine and surgery

- | | | |
|-------|------|--|
| 8:30 | (59) | Clinical medicine of the urinary system
<i>Anna M. Koterba</i> |
| 9:25 | (60) | Nephrosis and enzymuria
<i>Warwick M. Bayly</i> |
| 10:05 | (61) | Renal biopsy and surgery of the lower urinary tract
<i>Richard M. DeBowes</i> |
| 10:50 | (62) | Surgery of the external urinary tract
<i>Gayle W. Trotter</i> |

Cosponsored by the American Association of Equine Practitioners

Equine Medicine and Public Health

Wednesday, July 24, 1:30 PM

Las Vegas Convention Center, East Meeting Rooms, Rooms L2 and L4

Presiding Officer: Manual A. Thomas

Equine medicine and public health

- | | | |
|------|------|---|
| 1:30 | (63) | Epidemiologic considerations in the control of equine viral arteritis in 1984 in Kentucky
<i>Stuart J. Burns</i> |
| 2:15 | (64) | Isolation, experimental transmission, and characterization of the causative agent of Potomac horse fever
<i>Cynthia J. Holland, Miodrag Ristic, Adeyinka I. Cole, Philip Johnson, Gordon J. Baker, and Thomas E. Goetz</i> |
| 2:45 | (65) | Risk factors for salmonellosis in hospitalized horses
<i>David W. Hird, James D. Carter, Donald B. Casebolt, Marguerite Pappaioanou, and Charles A. Hierpe</i> |
| 3:30 | (66) | Nosocomial colonization of horses by multiple-antibiotic-resistant Enterobacteriaceae
<i>Robert L. Jones and Dennis M. McCurnin</i> |
| 4:00 | (67) | Rabies in horses—diagnosis and prevention: Update
<i>Joseph R. Joyce</i> |
| 4:30 | (68) | Protective immunity to <i>Streptococcus equi</i>
<i>John F. Timoney and Jorge E. Galan</i> |

Cosponsored by the Section on Public Health

Equine Medicine and Surgery

Thursday, July 25, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Rooms L2 and L4

Presiding Officer: John P. Hughes

Theriogenology

- | | | |
|-------|------|--|
| 8:30 | (69) | Therapy of endometritis in mares—a review
<i>Dwight G. Bennett</i> |
| 9:00 | (70) | Cytology of the cervix and uterus
<i>John P. Hughes and Marcelo A. Couto</i> |
| 9:25 | (71) | Polymorphonuclear leukocytes in uterine defense against infection
<i>Irwin K. Liu and A. T. W. Cheung</i> |
| 10:10 | (72) | Fertility of ovulations occurring during the luteal phase of the estrous cycle
<i>John P. Hughes, Marcelo A. Couto, and George H. Stabenfeldt</i> |
| 10:35 | (73) | Sepsis evaluation in the neonate
<i>Anne M. Koterba</i> |
| 11:15 | (74) | Antibiotic therapy in the neonate
<i>W. David Wilson</i> |

Cosponsored by the American College of Theriogenologists

Thursday, July 25, 1:00 PM

Las Vegas Convention Center, East Meeting Rooms, Rooms L2 and L4

Presiding Officer: Sarah L. Ralston

Equine medicine

- | | | |
|------|------|--|
| 1:00 | (75) | A new vaccine for the prevention of endotoxin-mediated diseases in horses
<i>Harold E. Garner, Ronald F. Sprouse, Dorothy Brandon, and D. G. Hatfield</i> |
| 1:30 | (76) | Feeding the sick horse
<i>Sarah L. Ralston</i> |
| 2:15 | (77) | Medical management of equine liver disease
<i>Nat T. Messer, IV</i> |
| 3:00 | (78) | Diagnosis and medical management of metabolic acidosis
<i>K. A. Gossett, D. D. French, K. J. Wolfshiemer, D. B. Brooks, and B. Cleghorn</i> |
| 3:40 | (79) | Clinical diagnosis using pleural fluid
<i>Dwight G. Bennett and Ann E. Wagner</i> |
| 4:15 | (80) | Medical management of equine pleuropneumonia
<i>Nat T. Messer, IV</i> |

Scientific Program

Sheep and Goat Medicine and Surgery

Wednesday, July 24, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Rooms L1 and L3

Presiding Officer: Russell E. Rasmussen

Sheep and goat medicine

- | | | |
|-------|------|---|
| 8:30 | (81) | Real time ultrasound pregnancy diagnosis in ewes
<i>Nancy E. East</i> |
| 9:00 | (82) | Medical management of goat diseases
<i>Joan S. Bowen</i> |
| 9:45 | (83) | Diseases related to dietary deficiency or excess of copper in small ruminants
<i>Jeanne Lofstedt</i> |
| 10:30 | (84) | Livestock protection collars in predator control
<i>Guy Connolly</i> |
| 11:15 | (85) | Newer aspects of parasite control in sheep and goats
<i>Norman F. Baker</i> |

Cosponsored by the American Association of Sheep and Goat Practitioners

Laboratory Animal Medicine

Wednesday, July 24, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room E1

Presiding Officers: Dennis Kohn and Susan Wilson

New cancer therapy modalities—for animal and human applications

- | | | |
|-------|------|--|
| 8:30 | (86) | Targeted chemotherapy with magnetic microspheres
<i>Ralph C. Richardson</i> |
| 9:15 | (87) | Active specific immunotherapy in tumors of the dog and cat
<i>K. Ann Jeglum</i> |
| 10:00 | (88) | Responses of canine spontaneous tumors to radiation therapy
<i>Glen K. King</i> |
| 10:45 | (89) | Hyperthermia treatment of spontaneous animal tumors
<i>Andrew J. Milligan</i> |
| 11:30 | | Discussion |

Cosponsored by the American College of Laboratory Animal Medicine and the American Society of Laboratory Animal Practitioners and Veterinary Cancer Society

Wednesday, July 24, 1:30 PM

Las Vegas Convention Center, East Meeting Rooms, Room E1

Presiding Officers: Christian E. Newcomer and Robert J. Russell

Environmental carcinogens and other hazards: animals as sentinels and models

- | | | |
|------|------|--|
| 1:30 | (90) | An overview of environmental hazards and environmental carcinogens
<i>James H. Steele</i> |
| 2:15 | (91) | Neoplastic diseases in bivalve mollusks
<i>Michael C. Mix</i> |
| 3:00 | | Break |
| 3:15 | (92) | Sharing our wealth of carcinogens with the fishes: An old error leading to new areas of research on cancer causes and prevention
<i>Clyde J. Dawe</i> |
| 4:00 | (93) | Domestic animals as models and sentinels for environmental carcinogens and other hazards
<i>Howard Hayes</i> |

Cosponsored by the American College of Laboratory Animal Medicine and the American Society of Laboratory Animal Practitioners

Thursday, July 25, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room E1

Presiding Officers: Donald D. Holmes and Robert J. Leonpacher

Euthanasia

- | | | |
|-------|------|---|
| 8:30 | (94) | Consideration of humaneness in euthanasia
<i>James E. Breazile</i> |
| 9:15 | (95) | An overview of current methods of euthanasia
<i>Donald H. Clifford</i> |
| 10:00 | | Break |
| 10:15 | (96) | Selecting the most suitable method of euthanasia for warm-blooded animals
<i>Philip C. Tullman</i> |
| 11:00 | (97) | Euthanasia of cold blooded animals. What are appropriate methods of euthanasia for poikil thermic vertebrates?
<i>David H. Sesline</i> |

Cosponsored by the American College of Laboratory Animal Medicine and the American Society of Laboratory Animal Practitioners

Scientific Program

Thursday, July 25, 1:30 PM

Las Vegas Convention Center, East Meeting Rooms, Room E1
Presiding Officers: Donald D. Holmes and George A. Vogler

What's your diagnosis?
Case studies involving laboratory animals

Each participant will present a diagnostic case selected with both the practitioner and the clinical laboratory animal veterinarian in mind.

Cases are intended to be practical exercises and representative of disease conditions encountered in a normal practice setting.

Each case will be summarized by an announcement of the correct diagnosis, discussion of the etiology, pathogenesis, prognosis, prevention, and treatment.

- | | | |
|------|-------|--|
| 1:30 | (98) | Case study—gerbil
<i>David Michael Moore</i> |
| 1:45 | (99) | Case study—hamster
<i>Craig S. Frisk</i> |
| 2:00 | (100) | Case study—hamster
<i>August H. Battles</i> |
| 2:15 | (101) | Case study—rat
<i>Jack R. Hessler</i> |
| 2:30 | (102) | Case study—rabbit
<i>Bobby R. Collins</i> |
| 2:45 | (103) | Case study—rabbit
<i>Karen I. Timm-Wood</i> |
| 3:00 | | Break |
| 3:15 | (104) | Case study—rabbit
<i>Anthony M. Fletcher, Gerald A. Olson,
and Charles W. Leffler</i> |
| 3:30 | (105) | Case study—chinchilla
<i>Jay H. Fortner</i> |
| 3:45 | (106) | Case study—ferret
<i>Cynthia Besch-Williford</i> |
| 4:00 | (107) | Case study—goat
<i>William J. White and James W. Griffith</i> |
| 4:15 | (108) | Case study—pig
<i>William R. Voss</i> |
| 4:30 | (109) | Case study—chimpanzee
<i>Stanley D. Kosanke and Gary L. White</i> |

Cosponsored by the American College of Laboratory Animal Medicine and the American Society of Laboratory Animal Practitioners

Public Health

Wednesday, July 24, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room E2
Presiding Officer: David W. Hird

Applied epidemiology

- | | | |
|-------|-------|--|
| 8:30 | (110) | Trends in veterinary epidemiology
<i>Hans Riemann</i> |
| 9:00 | (111) | Human health economics of plague control in California
<i>Tim E. Carpenter, Sally Kimsey, Marguerite Pappaianou, and Ernest Lusk</i> |
| 9:30 | | Break |
| 9:45 | (112) | Application of epidemiologic methods in practice using time-and-event matrices
<i>Mark C. Thurmond</i> |
| 10:15 | (113) | A clinical epidemiologic study of mortality in veal calves associated with natural zinc toxicity
<i>Thomas W. Graham, Mark C. Thurmond, Charles A. Holmberg, Michael S. Clegg, Carl Keen, M. R. Slanker, and William J. Goodger</i> |
| 10:45 | (114) | Application of epidemiology and economics to problems in veterinary medicine
<i>Pheben W. Willeberg</i> |

Cosponsored by the American College of Veterinary Preventive Medicine and Association of Teachers of Veterinary Public Health and Preventive Medicine. Dr. Willeberg's participation was made possible through a grant from Alpo Petfoods, Inc.

Ownership of Papers

Authors representing papers at the scientific sessions of the American Veterinary Medical Association annual meeting may be granted permission, upon making written request, to submit their papers elsewhere or to distribute copies of their papers to others. Use of the papers or their contents without permission of the AVMA will constitute an infringement of rights possessed by the AVMA. This does not apply to papers presented at independently sponsored programs of other groups.

Tape recordings of presentations made at scientific sessions of the American Veterinary Medical Association annual meeting may be used only for strictly personal purposes. Any reproduction, distribution, or commercial use of such tape recordings not specifically approved by the AVMA is prohibited.

Scientific Program

Thursday, July 25, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room E2
Presiding Officers: Lea R. Hutchinson and William J. Kelch

Veterinary medical opportunities and responsibilities in an urban-influenced society

- | | | |
|-------|-------|---|
| 8:30 | | Introductory remarks
<i>William F. McCulloch</i> |
| 8:45 | (115) | Current trends and distribution patterns of US veterinarians
<i>J. Karl Wise</i> |
| 9:15 | (116) | Alternate career opportunities for doctors of veterinary medicine
<i>Richard B. Fink</i> |
| 9:45 | (117) | Educating veterinarians in an urban-influenced society
<i>William F. McCulloch</i> |
| 10:15 | (118) | Human/animal bond economics
<i>Marvin L. Samuelson</i> |
| 10:45 | (119) | Designing an environment for people and animals
<i>Albert O. Griffiths</i> |
| 11:15 | (120) | Pet interaction with institutionalized aged residents
<i>Charles A. Neer</i> |
| 11:45 | | Lunch |

Cosponsored by the AVMA Public Health Section, the Conference of Public Health Veterinarians, the American Association of Animal Welfare Veterinarians, and the AVMA Human/Animal Bond Committee

Equine Medicine and Public Health, Wednesday, July 24, 1:30 PM, Rooms L2 and L4. See page 914 for complete program.

Thursday, July 25, 1:30 PM

Las Vegas Convention Center, East Meeting Rooms, Room E2
Presiding Officers: William F. McCulloch and Robert O. Shannon

Veterinary medical opportunities and responsibilities in an urban-influenced society

- | | | |
|------|-------|---|
| 1:30 | (121) | Animal welfare and control programs on military installations in the United States
<i>William J. Kelch</i> |
| 2:00 | (122) | Veterinary medical opportunities and responsibilities in animal welfare organizations
<i>Robert O. Shannon</i> |
| 2:30 | (123) | The veterinarian's role in local government
<i>Lea R. Hutchinson</i> |
| 3:00 | (124) | Public and private veterinary medical relationships
<i>William J. Kay</i> |
| 3:30 | | Panel discussion |

Cosponsored by the AVMA Public Health Section, the Conference of Public Health Veterinarians, the American Association of Animal Welfare Veterinarians, and the AVMA Human/Animal Bond Committee

Regulatory Veterinary Medicine

Wednesday, July 24, 1:30 PM

Las Vegas Convention Center, East Meeting Rooms, Rooms D1
Presiding Officer: Norman D. Heidelbaugh

New frontiers for veterinarians in . . .

- | | | |
|------|-------|--|
| 1:30 | (125) | US Air Force environmental health officer—a new role for the veterinarian
<i>Gary L. Glisan</i> |
| 2:00 | (126) | Biotechnology—Its dramatic value for veterinary medicine in 1990 and beyond
<i>Terence Harvey</i> |
| 2:30 | (127) | Epidemiology and laboratory diagnostics
<i>Robert A. Crandell, William L. Schwartz, and Donald B. Lawhorn</i> |
| 3:15 | (128) | New frontiers for veterinary medicine food hygiene
<i>Jack C. Leighty</i> |
| 3:45 | (129) | New frontiers for veterinarians in extension veterinary medicine
<i>George W. Meyerholz</i> |
| 4:15 | (130) | International programs
<i>Hans J. Seyffert</i> |

Cosponsored by the American Association of Extension Veterinarians, the American Association of Food Hygiene Veterinarians, the American Association of Veterinary Laboratory Diagnosticians, and the National Association of Federal Veterinarians

Thursday, July 25, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Rooms D1
Presiding Officer: Larry D. Rollins

Antibiotic-resistant bacteria

- | | | |
|-------|-------|--|
| 8:30 | (131) | Mechanisms of antibiotic resistance transfer among bacteria
<i>Donald J. LeBlanc</i> |
| 9:00 | (132) | Benefits of using antibiotics in animal agriculture
<i>Carl S. Pruitt</i> |
| 9:30 | (133) | Disadvantages of using subtherapeutic concentrations of antibiotics in animal feeds
<i>Richard F. Bevil</i> |
| 10:15 | (134) | Impact of using low-level antibiotics in swine feed
<i>Steven C. Henry</i> |
| 10:45 | (135) | Impact of using low-level antibiotics in cattle feed
<i>David T. Bechtol</i> |
| 11:15 | (136) | Public health implications of feeding low-level antibiotics to animals
<i>George W. Beran</i> |

Scientific Program

Regulatory Veterinary Medicine and Swine Medicine

Thursday, July 25, 1:30 PM

Las Vegas Convention Center, East Meeting Rooms, Room D1

Presiding Officers: James D. McKean and Norman D. Heidelbaugh

Swine medicine and swine inspection

- 1:30 (137) Inflammation or neoplasia? Exfoliative cytology can expand the scope of postmortem dispositions
Roger Guy Feldman
- 2:00 (138) Problems and cooperation between practicing veterinarians and the Meat Inspection Service
Bernard J. Curran
- 2:30 (139) Current clinical problems in swine
James D. McKean
- 3:15 (140) The national residue program: Trends seen in swine
Ronald E. Engel
- 3:45 (141) Using USDA slaughter data in swine practice
John C. Prucha, Barbara J. Balsley, and Douglas L. Berndt
- 4:15 (142) The pork producer's view of carcass inspection and traceback
David J. Meisinger
- 4:45 Panel discussion

Cosponsored by the American Association of Food Hygiene Veterinarians, the American Association of Swine Practitioners, and the National Association of Federal Veterinarians

Regulatory Veterinary Medicine

Friday, July 26, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room D1

Presiding Officers: William W. Rosser and William R. Miller

Veterinary food hygiene: what? why? and how?

- 8:30 (143) Can we eat it, doc?
Michael M. Pullen
- 9:00 (144) Public health responsibilities of veterinary medicine
W. W. Armistead
- 9:30 (145) Food hygiene as a public health responsibility of veterinary medicine
Everett D. Besch
- 10:15 (146) The responsibilities of veterinary practitioners in food hygiene
Billy E. Hooper
- 10:45 (147) Defining food hygiene for the veterinary profession
William R. Miller
- 11:15 (148) Food hygiene in a new curriculum
Manuel A. Thomas, Jr.

Cosponsored by the American Association of Food Hygiene Veterinarians

Research

Wednesday, July 24, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room N2

Presiding Officer: Bert E. Stromberg

Veterinary protozoology—update

- 8:30 (149) Prevention and treatment of intestinal coccidiosis
John V. Ernst
- 9:00 (150) Coccidiosis in companion animals: A clinical impression
William D. Schall and Janet A. Grace
- 9:30 Discussion and break
- 10:00 (151) The importance of *Sarcocystis* to animals and humans
R. Fayer
- 10:30 (152) *Cryptosporidium* spp: Is the veterinarian at risk?
William L. Current
- 11:00 (153) Prevention of toxoplasmosis by hygienic means and vaccine
J. K. Frenkel

Cosponsored by the American Association of Veterinary Parasitologists

Scientific Program

Wednesday, July 24, 2:00 PM

Las Vegas Convention Center, East Meeting Rooms, Room N2

Presiding Officer: William L. Jenkins

Current topics in clinical physiology and pharmacology for practitioners

- 2:00 (154) What are the prostaglandins and leukotrienes?
William L. Jenkins
- 2:30 (155) The role of the prostaglandins and leukotrienes in inflammation and the clinical use of anti-inflammatory drugs
Lloyd E. Davis
- 3:00 (156) The clinical significance of prostaglandins in circulatory shock
Donald R. Clark
- 3:30 Break
- 3:45 (157) Role of leukotrienes and other lipoxigenase products in respiratory disease
Peter Eyre
- 4:15 (158) The importance of prostaglandin $F_{2\alpha}$ in the control of reproductive cycles of domestic animals
George H. Stabenfeldt and Hans Kindahl

Cosponsored by the American Society of Veterinary Physiologists and Pharmacologists

Thursday, July 25, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room N2

Presiding Officer: Robert W. Dellers

Clinical significance and application of recent findings in microbiology

- 8:30 Introduction
Robert W. Dellers
- 8:35 (159) The clinical significance of bovine viral diarrhea virus immunosuppression
Leon N. D. Folgieter
- 9:20 (160) Persistent bovine viral diarrhea virus infection and mucosal disease: Clinical, virologic, and immunologic aspects
Steven R. Bolin
- 10:05 Break
- 10:15 (161) Antibiotic resistance: Epidemiology and clinical implication in veterinary medicine
John F. Timoney
- 11:00 (162) Antibiotic resistance: Human health significance and concerns
Lester M. Crauford

Cosponsored by the American College of Veterinary Microbiologists

Thursday, July 25, 1:30 PM

Las Vegas Convention Center, East Meeting Rooms, Room N2

Presiding Officer: Gary D. Osweiler

Natural toxins in ruminants

- 1:30 (163) Pine needle abortion in cattle
L. F. James, K. E. Panter, R. E. Short, and R. B. Staigmillar

- 2:00 (164) Nitrate evaluation in beef cattle
Norman R. Schneider
- 2:30 (165) Primary photosensitization in ruminants associated with *Thamnosoma texana*
E. H. Oertli, G. W. Irie, E. Murl Bailey, L. D. Rowe, and Ross C. Beier
- 3:00 Break
- 3:15 (166) Hepatotoxicity and toxic myodegeneration in goats produced by *Cassia roemeriana* (twoleaf senna)
L. D. Rowe, D. E. Corrier, J. C. Reagor, and L. P. Jones
- 3:45 (167) Effect of rumen function on pyrrolizidine alkaloid poisoning
A. Morrie Craig, Linda L. Blythe, and E. Duane Lassen
- 4:15 Discussion

Cosponsored by the American Academy of Veterinary and Comparative Toxicology

Friday, July 26, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room N2

Presiding Officer: Raymond W. Loan

- 8:30 (168) The metabolism of mature erythrocytes and its importance in sensitivity to hyperthermia
Johnathan L. Kiel and David N. Erwin
- 9:00 (169) Lack of effect of age on digestibility of protein, fat, and dry matter in Beagle dogs
C. A. Buffington, J. E. Branam, and G. C. Dunn
- 9:30 (170) Infectious bovine keratoconjunctivitis: Further evidence for genetic modulation of resistance in purebred hereford cattle
George W. Fugh, Jr., Timothy J. McDonald, Kenneth E. Kopecky, and William A. Kvasnicka
- 10:00 (171) The immunology of bovine respiratory disease
Raymond W. Loan and Charles William Purdy
- 10:30 (172) Comparison of the results of card, rivanol, complement fixation and milk ring tests with the isolation rate of *Brucella abortus*
Jan D. Huber and Paul Nicoletti
- 11:00 (173) Effect of irradiation on the viability of *Toxoplasma gondii* cysts in tissues of mice and pigs
J. P. Dubey, R. J. Brake, K. D. Murrell, and R. Fayer
- 11:30 (174) Some aspects of the pharmacology of thiamphenicol in horses and cattle
C. M. Stowe, E. Abdennebi, and M. Ashraf

Poster Presentations

Las Vegas Convention Center, East Meeting Rooms, Room N2
Wednesday, July 24 through Thursday, July 25

- (175) Canine parvovirus—Its survival in nature
John C. Gordon and Elisabeth J. Angrick
- (176) Response of anemic calves to exertion
William O. Reece
- (177) Identification by transfer blot of antigens reactive in the ELISA in rabbits immunized and calves infected with *Cryptosporidium*
Aristides Lazo, Omar O. Barriga, Donald R. Redman, and Steen Bech-Nielsen

Scientific Program

Avian Medicine

Tuesday, July 23, 1:00 PM

Las Vegas Convention Center, East Meeting Rooms, Rooms B1 and B2

Presiding Officers: W. W. Adams and Craig Riddell

- 1:00 (178) Glycoproteins of avian infectious bronchitis virus: Structure, virion location, and roles in immunogenicity and infectivity
David Cavanagh, Philip Davis, Matthew M. Binns, Michael E. G. Boursnell, and T. David K. Brown
- 1:20 (179) Comparison of immunocompetence and lesion response in chicks vaccinated against infectious bronchitis virus as embryos or at hatch
Patricia S. Wakenell and Jagdev M. Sharma
- 1:40 (180) Some characteristics of a nephropathogenic isolate of infectious bronchitis virus: Infection, pathogenesis, and immunity
Gary D. Butcher and Roland W. Winterfeld
- 2:00 (181) Studies on methods for determining the efficacy of oil emulsion vaccines against infectious bronchitis virus (IBV)
S. R. Hopkins and C. W. Beard
- 2:20 Break
- 2:40 (182) Evaluation of dissociated Newcastle disease virus as an agar-gel precipitin test antigen
Jack Gelb, Jr. and Curtis G. Cianci
- 3:10 (183) Protective effect of amount of antigen and age of application of mineral oil emulsions combined with live Newcastle disease vaccines
Benjamin Lucio and Eduardo Lucio
- 3:30 (184) Characterization of Newcastle disease virus (avian paramyxovirus-1) isolated from pigeons in the northeastern United States
James E. Pearson and Dennis A. Senne
- 3:50 (185) Feather pulp organ cultures for assessing host resistance to infection with leukosis-sarcoma viruses
J. L. Spencer, J. S. Gavora, and F. Gilka
- 4:10 (186) Efficacy of HVT plus SB₁ vaccine for Marek's disease control—a field report
Edwin M. Odor
- 4:30 (187) Public health concerns from human exposure to oncogenic avian herpesviruses
H. Graham Purchase and R. L. Witter

Cosponsored by the American Association of Avian Pathologists

Wednesday, July 24, 8:20 AM

Las Vegas Convention Center, East Meeting Rooms, Rooms B1 and B2

Presiding Officer: Calvin E. Anthony

- 8:20 (188) Transmissibility of *Mycoplasma gallisepticum* from seropositive chicken flocks to susceptible commercial turkeys
S. J. Mason, D. H. Ley, and H. J. Barnes
- 8:40 (189) Vaccination of turkeys with MG bacterin to prevent airsacculitis due to *Mycoplasma gallisepticum* infection
John R. Glisson and Stanley H. Kleven
- 9:00 (190) Enumeration of tracheal population of *Mycoplasma gallisepticum* after challenge of bacterin vaccinated chickens
S. H. Kleven
- 9:20 (191) Renal pathology of water deprivation in chicks
D. K. Onderka, J. A. Hanson, F. L. Leggett and L. D. Armstrong
- 9:40 (192) The virulence and immunosuppressive potential of intermediate vaccine strains of infectious bursal disease virus
Phil D. Lukert and Luis A. Mazariegos
- 10:00 Poster viewing

Cosponsored by the American Association of Avian Pathologists

Wednesday, July 24, 1:00 PM

Las Vegas Convention Center, East Meeting Rooms, Rooms B1 and B2

Presiding Officer: Jack T. Tumlin

- 1:00 (193) Epidemiology, significance, and control of fowl pox in a large egg complex in Maine
H. Michael Opitz and W. Gerencer
- 1:20 (194) Recent respiratory epornitosis in Washington poultry
A. Singh Dhillon
- 1:40 (195) Propagation of hemorrhagic enteritis virus in normal (nontumor derived) cell culture
J. V. van den Hurk
- 2:00 (196) An evaluation of an inactivated type II adenovirus vaccine against HE/MSD
Barrett S. Cowen, Maximilian O. Braune and Kenneth Bedell
- 2:20 Break
- 2:40 (197) Immunogenicity of different endogenous stages of *Eimeria tenella*
Peter L. Long, T. K. Jeffers, and M. E. McKenzie
- 3:00 (198) Use of ELISA to detect serum antibodies against avian coccidia
M. D. Ruff and M. B. Chute
- 3:20 Business meeting

Cosponsored by the American Association of Avian Pathologists

Scientific Program

Thursday, July 25, 8:20 AM

Las Vegas Convention Center, East Meeting Rooms, Rooms B1 and B2

Presiding Officers: Jerry L. Rountree and Y. M. Saif

- 8:20 (199) Observations of a poultry practitioner of avian influenza H5 N2 Pennsylvania style
Wilson L. Miller
- 8:40 (200) The history of avian influenza in the Minnesota poultry industry
David A. Halvorson, Benjamin S. Pomeroy, Charles J. Kelleher, and J. A. Newman
- 9:00 (201) Evaluation of killed avian influenza virus vaccine in turkeys
V. Sivanandan, A. Abraham, C. Penaredondo, and J. A. Newman
- 9:20 (202) Evaluation of inactivated influenza in breeder hens and market turkeys
J. A. Newman, D. Karunakaran, D. A. Halvorson, and A. Abraham
- 9:40 Break
- 10:00 (203) Efficacy of avian influenza oil-emulsion vaccines in chickens of different ages
Henry D. Stone
- 10:20 (204) Further studies of factors influencing virulence of avian influenza virus for chickens
Max Brugh
- 10:40 (205) Molecular changes in H5 N2 avian influenza virus associated with acquisition of virulence
Yoshihiro Kawaoka, Clayton W. Naeye, and Robert G. Webster
- 11:00 (206) Further characterization of the biological properties of selected influenza—a virus isolates from waterfowl and turkeys
Charles J. Kelleher and David A. Halvorson
- 11:20 (207) Summary and discussion of the avian influenza problem
Robert J. Eckroade

Cosponsored by the American Association of Avian Pathologists

Thursday, July 25, 1:00 PM

Las Vegas Convention Center, East Meeting Rooms, Rooms B1 and B2

Presiding Officers: W. T. Springer and L. Dwight Schwartz

- 1:00 (208) Experimental autoimmune glomerulonephritis in chickens: Influence of antigens and adoptive transfer in a syngeneic strains
Manik Chandra, T. Tyson, B. Sturgill, and W. K. Bolton
- 1:20 (209) Effect of avian PMV-3 on egg production in chickens
Amer N. Silim and G. Bernier
- 1:40 (210) Control and reduction of *Salmonella hadar* infection in turkey breeding flocks in Minnesota
Benjamin S. Pomeroy, K. V. Nagaraja, L. T. Ausherman, K. Sutch, and C. D. Murphy
- 2:00 (211) Control of *Salmonella arizonae* infection in turkey breeder flocks by immunization
K. V. Nagaraja, M. C. Kumar, J. A. Newman, and B. S. Pomeroy
- 2:20 Break
- 2:40 (212) Vaccination for control of *Escherichia coli* complicated respiratory disease
John K. Rosenberger, Sandra S. Cloud, and Patricia A. Fries
- 3:00 (213) Gross and light microscopic intestinal lesions in reovirus-inoculated turkey poults
Mark A. Goodwin, Bedros N. Nersessian, and Oscar J. Fletcher
- 3:20 (214) The effects of avian reovirus on the immune system of chickens
R. D. Montgomery, P. Villegas, S. H. Kleven, and D. L. Dawe
- 3:40 (215) Further evaluation of commercial reovirus vaccination programs in broiler breeders for the prevention of viral tenosynovitis and "malabsorption"
Joseph J. Giambone and Ronald Clay

Cosponsored by the American Association of Avian Pathologists

Scientific Program

Poster Presentations

Las Vegas Convention Center, East Meeting Rooms, Room B3
Tuesday, July 23 through Thursday, July 25
8:00 AM-5:00 PM

Attendants will be present daily from 8:00 AM to 8:30 AM and on Wednesday from 10:00 AM to 12:00 PM

- (216) Persistence of the S6 strain of *Mycoplasma gallisepticum* in, and excretion from, individual chickens
Duncan A. McMartin
- (217) F-strain vaccination: Protection against infection
Stanley H. Kleven and Timothy S. Cummings
- (218) Marek's disease lymphoblastoid cells of inbred chicken origin provide clues regarding mechanism of vaccine-induced tumor identity
Louis W. Schierman, C. Kent Tseng, and Oscar J. Fletcher
- (219) Use of cloned DNA of herpesvirus of turkeys to evaluate the role of the virus in atherogenesis
John P. Donahoe, Michael L. Mucenski, and Mark T. Muller
- (220) Embryo vaccination with infectious bursal disease alone or in combination with the Marek's disease vaccine
Jagdev M. Sharma
- (221) Induced immunologic tolerance to the endogenous ALV, RAV-O, alters responses to exogenous ALV infection
Lyman B. Crittenden and Michael Halpern
- (222) Influence of avian leukosis virus (ALV) maternal antibody on the response of chickens to infection with ALV at hatching
Aly M. Padly
- (223) Newcastle disease virus HI titers in broilers after vaccination with high and low titer vaccines
C. L. Hofacre, P. Villegas, and R. K. Page
- (224) Comparison of the phagocytic activity of turkey leukocytes from turkeys infected with *Alcaligenes faecalis* and uninfected turkeys
D. G. Simmonds, F. M. McCorkle, L. P. Rose, and F. W. Edens
- (225) Role of temperature on the growth of *Bordetella avium* in turkeys and in vitro
Lawrence H. Arp and Steven McDonald
- (226) Lesion development in focal ulcerative dermatitis of turkeys
Eric Gonder and John Barnes
- (227) Probability of survival based on ELISA titer following challenge with the X-73 strain of *Pasteurella multocida* in vaccinated chickens
D. J. Briggs, J. K. Skeeles, and C. E. Whitfill
- (228) A systematic approach to poultry flock profiling using ELISA
Hilton J. Klein, Andrew J. O'Beirne, William L. Boteler, and Jonathan B. Knowles
- (229) Characterization of virulence factors of *Escherichia coli* isolated from turkeys with colibacillosis
Marcus M. Jensen, Scott N. Beatse, and Edwin F. Jackson
- (230) Biological diversity among serotype 2 Marek's disease viruses
R. L. Witter, L. F. Lee, and J. M. Sharma
- (231) Immunogenicity of *Escherichia coli* (serotype O1) pili vaccine in chickens
B. Panigrahy and J. E. Gyimah
- (232) Use of hybridoma antibodies in the study of refractile body organelles of avian coccidia
H. D. Danforth and S. J. McAndrew
- (233) Market share of anticoccidial drugs in chickens
W. Malcom Reid and Larry R. McDougald
- (234) Identifying species of coccidia affecting turkeys
Earl N. Moore
- (235) Association of avian reovirus M and S genes with viral pathogenicity
Thomas L. Schnitzer, D. D. Huang, M. A. Nugent, P. Fodor, and J. K. Rosenberger
- (236) The epizootiology of influenza
Charles J. Kelleher, David A. Halvorson, and Dennis A. Senne
- (237) Protective efficacy of Marek's disease virus strain CVI-988 clone "C"
G. F. de Boer, J. M. A. Pol, J. E. Groenendal, and H. M. Boerrigter
- (238) Development of a new serologic test for detection of avian influenza virus antibodies in turkeys
Albert Abraham, V. Sivanandan, and J. A. Newman
- (239) Production of monoclonal antibodies to hemagglutinin of avian influenza virus
Josephine Lagata, A. Abraham, and V. Sivanandan, and J. A. Newman
- (240) Experimental pulmonary inflammation in broilers and turkeys
H. John Barnes and Neil C. Olson
- (241) Use of problem-knowledge couplers in avian medicine
Oscar J. Fletcher
- (242) An investigation of the prevalence of embryo malformations in unhatched eggs from commercial broiler breeders
David H. Ley, Richard Dixon, and H. John Barnes
- (243) Prevalence and pathology of selected diseases of quail
Simon M. Shane, Donna H. Gifford, and K. Yogasundram
- (244) Isolation and identification of avian rotaviruses from turkeys in cell cultures
S. Y. Kang, K. V. Nagaraja, and J. A. Newman
- (245) Importing birds—US Department of Agriculture's Program for pet and commercial birds
Samuel S. Richeson

Scientific Program

Animal Technician Symposium

Tuesday, July 23, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room P1
Presiding Officer: Phillip D. Watson

Clinical pathology and pharmacology for technicians and how it relates to urinary tract problems

- 8:30 (246) Evaluation of urinary tract disease: Role of the animal health technician
Alan H. Rebar
- 10:00 (247) Scrapings, sediments, and smears: Knowledge that technicians need to have
Alan H. Rebar

Tuesday, July 23, 1:30 PM

Las Vegas Convention Center, East Meeting Rooms, Room P1
Presiding Officer: Phillip D. Watson

Clinical pathology and pharmacology for technicians and how it relates to urinary tract problems

- 1:30 (248) Therapeutic agents used in the management of renal failure
William L. Jenkins

- 2:30 (249) Clinically important adverse drug reactions
William L. Jenkins
- 4:00 (250) Recent developments in veterinary pharmacotherapeutics
William L. Jenkins

Wednesday, July 24, 8:30 AM

Las Vegas Convention Center, East Meeting Rooms, Room P1
Presiding Officer: Joe Gloyd

Nutrition

- 8:30 (251) Preventive health care in dietary management
John L. Mara
- (252) Clinical aspects of dietary management
John L. Mara

Wednesday, July 24, 2:30 PM

Las Vegas Convention Center, East Meeting Rooms, Room P1
Presiding Officer: Joe Gloyd

Animal behavior

- 2:30 (253) Small animal behavior: Assessment, therapy, and case reports
John E. Stump
- 5:00 (254) Pit bulls and animal technicians
Donald H. Clifford and Mary Pat Boatfield

Please Don't Smoke in Scientific Sessions

We hope you'll remember that smoking is banned. The nonsmoking members have taken a stand. In scientific sessions, we ask that you refrain, But in all other places, no one can complain.

Once again this year smoking will be banned in all rooms where the official scientific sessions and seminars are being held. This recommendation by the Committee on Scientific Program was first imposed in 1973 for the health, safety, and comfort of everyone attending the section programs. Thank you.

Educational Exhibits

North Exhibit Hall, Las Vegas Convention Center
Exhibits will be open Tuesday, July 23 through Thursday, July 25
9:00 AM to 4:00 PM

Developing Programs for Healthier Animals

United States Animal Health Association

The history, purpose, and scope of the USAHA, and how the organization develops programs used throughout the nation to control and eradicate communicable or infectious diseases of animals are described.

Diversion Control Program of the Drug Enforcement Administration

*Delbert D. Konnor, Pharm MS
Drug Enforcement Administration*

Various aspects of DEA's Diversion Program are shown. Representatives of DEA will be present to discuss problems concerning the use and prescription of controlled substances by veterinarians.

US Army Veterinary Corps

US Army Medical Department

Information about the Health Professions Scholarship Program for veterinary students, Internship/Residency/Fellowship opportunities for veterinarians, and the abundance of placement opportunities for veterinarians in the US Army Veterinary Corps is presented.

Activities of the Registry of Veterinary Pathology

*George D. Imes, Jr., DVM, MS
Armed Forces Institute of Pathology*

This exhibit depicts the educational and consultative functions of the Registry of Veterinary Pathology at the Armed Forces Institute of Pathology in Washington, DC.

Military Veterinary Medicine

*CPT (P) Lynn J. Anderson, DVM
US Army Veterinary Corps, US Army Health Service Command*

The US Army Veterinary Corps provides veterinary service to the Army, Navy, Air Force, and Marines. It is concerned with medical research and development, food hygiene, animal disease prevention, and care of military working dogs.

Libraries Support Veterinarians in Three Dimensions: Past, Present and Future

*Jesse Ostroff, MS, MSLS
Veterinary Section, Medical Library Association,
National Agricultural Library*

This exhibit will demonstrate the capabilities of modern veterinary libraries to access world literature. Individuals will have an opportunity to conduct searches of automated databases on subjects of their choice.

National Mastitis Council

Board of Directors

The National Mastitis Council is a nonprofit organization that coordinates research and educational interests in the field of mastitis control. This exhibit explains what the National Mastitis Council does.

Entering Our Second Century of Animal Health

*Animal and Plant Health Inspection Service,
US Department of Agriculture*

In 1985 the Animal and Plant Health Inspection Service of the US Department of Agriculture entered its second century of work to improve the health and productivity of American livestock and poultry.

SNOVET

*Walter E. Weirich, DVM, PhD, Purdue University
AVMA Committee on Standard Nomenclature and Coding*

The purpose of this exhibit is to acquaint the profession with SNOVET as the systematized nomenclature and coding system for veterinary medicine.

Food Animal Residue Avoidance Databank (FARAD)

*Stephen F. Sundlof, DVM, PhD; Arthur L. Craigmill, PhD; and
J. Edmond Riviere, DVM, PhD
USDA Extension Service
University of Florida, College of Veterinary Medicine
University of California, Davis
North Carolina State University, School of Veterinary Medicine*

To assist in the mitigation of residue problems in products from food animals, the USDA Extension Service has established the Food Animal Residue Avoidance Databank (FARAD). Trained personnel at Regional Access Centers will respond to each request for information.

Professional Animal Disposal Advisory Council

Wendell C. Morse, DVM, Executive Director

The Professional Animal Disposal Advisory Council (PADAC) is dedicated to education, service, and concern for proper deceased animal disposal techniques. Members of PADAC are pet cemeterians who provide animal disposal services to veterinarians.

American Board of Veterinary Practitioners

This exhibit will explain the objectives, qualifications, and application procedure for the American Board of Veterinary Practitioners. A diplomate of the board will be available to explain the application procedure and to answer practitioners' questions.

The Biomedical Information Management System

*T. Habtemariam, DVM, PhD
Tuskegee Institute, School of Veterinary Medicine*

Display features an innovative program addressing the management of information in biomedical science. Computer programs will be demonstrated using remote access to databases at Tuskegee. Systems include clinical, administrative, business, and educational information.

Association for Women Veterinarians

*Judith H. Spurling, DVM, President, and
Kathleen Smiler, DVM, President-Elect*

This exhibit displays materials concerning the history and activities of women in veterinary medicine, and recognition of special accomplishments by women, including information on the Outstanding Woman Veterinarian of the Year.

The Food Safety and Inspection Veterinarian—Protecting the Food Chain in the 80's

*US Department of Agriculture,
Food Safety and Inspection Service*

The changing role of the veterinarian in the food inspection process is depicted. Food safety and inspection veterinarians apply their professional skills to the pressing problems of safeguarding the meat and poultry food chain.

Morris Animal Foundation

Morris Animal Foundation was founded in 1948 by a veterinarian, Dr. Mark L. Morris, Sr. Owners, educators, scientists, and practitioners all work together to improve the health of companion animals.

60th ANNIVERSARY

Anchor now offers
sutures, cassettes,
and high quality
eyed needles
at great savings!

For quick response, call toll-free 1-800-323-5134
(Illinois, Alaska, Hawaii, call collect 312 543-9124)

We hope to see you at Booth 515



anchor

Anchor Products Company
52 Official Road, Addison, Illinois 60101

Autotutorial Program

Tuesday, July 23—Thursday, July 25,—8 AM-6 PM
Friday, July 26—8 AM to NOON

Sponsored by AVMA's Division of Scientific Activities, the Continuing Education Advisory Committee, and the Association of American Veterinary Medical Colleges (AAVMC)
Asterisks designate Autotutorial Excellence Recognition Awards from the Student AVMA from 1974-1985

Slide/Tape Programs

Food Animal Medicine

1. Goat techniques (25 minutes)
C. S. F. Williams, BVSc, Michigan State University
2. The goat (25 minutes)
C. S. F. Williams, BVSc, Michigan State University
3. Goat diseases (25 minutes)
C. S. F. Williams, BVSc, Michigan State University
4. Parturition in the goat (25 minutes)
C. S. F. Williams, BVSc, Michigan State University
5. Ventilation of swine confinement housing (30 minutes)
K. Hoblet, DVM, and J. Gordon, DVM, The Ohio State University
6. *Central nervous system diseases of swine (15 minutes)
Billy C. Ward, DVM, Mississippi State University (produced at Washington State University)
7. Embryo transfer in cattle (surgical and nonsurgical) (30 minutes)
William Hueston, DVM, The Ohio State University
8. Careers in avian medicine (25 minutes)
William T. Springer, DVM, American Association of Avian Pathologists

*Student AVMA Autotutorial Excellence Award.

AVMA Veterinary Audiovisual Certification Program

The AVMA Council on Education approved a program to certify the content accuracy and media quality of audiovisual programs produced for veterinary medical education. The AAVMC has endorsed the concept and is supporting the program. A workable sharing system for quality audiovisual programs for the continuum of veterinary medical education depends upon 3 factors: (1) an incentive, recognition, and reward system to encourage faculty to produce the programs, (2) a mechanism for determination of program quality, and (3) ways to publicize the availability of those quality programs. This AVMA project strives to address all 3 factors. Seven of the programs available for viewing at the Autotutorial Program in Las Vegas have completed successfully the certification process. They are identified as:—AVMA certified—

9. Bovine lymphoma (25 minutes)
Robert Jacobs, DVM, The Ohio State University
10. An introduction to catfish culture (30 minutes)
P. R. Bowser, PhD, Mississippi State University—AVMA certified—

Small Animal Medicine and Surgery

12. *Infectious respiratory diseases of dogs (25 minutes)
Billy C. Ward, DVM, Mississippi State University
13. *Ethylene glycol toxicity (12 minutes)
W. A. Crowell, DVM, and J. A. Barsanti, DVM, University of Georgia—AVMA certified—
14. *Canine distemper (20 minutes)
J. R. Gorham, DVM, Washington State University, and B. C. Ward, DVM, Mississippi State University
15. Autoimmune diseases of the dog associated with the presence of antinuclear antibodies (20 minutes)
Edward Breitscherdt, DVM, North Carolina State University, and Ota Barta, MVD, Louisiana State University
16. The etiology and pathogenesis of alopecia (25 minutes)
J. D. Conroy, DVM, Mississippi State University (produced at Washington State University)—AVMA certified—
17. The dog's iridocorneal angle (25 minutes)
Milton Wyman, DVM, The Ohio State University
18. *Corneal healing (20 minutes)
Milton Wyman, DVM, The Ohio State University
19. Intra-ocular prosthesis for the dog (12 minutes)
A. H. Brightman, University of Illinois
20. *Canine renal amyloidosis (25 minutes)
J. A. Barsanti, DVM, and W. A. Crowell, DVM, University of Georgia
21. *A clinical approach to canine malignant lymphoma (25 minutes)
R. C. Richardson, DVM, and A. H. Rebar, DVM, University of Illinois
22. *Management of dermal tension in skin surgery (25 minutes)
Steven F. Swaim, DVM, Auburn University
23. Aggression in animals (14 minutes)
Judith Guatney, DVM, and Bonnie Beaver, DVM, Texas A&M University—AVMA certified—

Student AVMA Autotutorial Excellence Awards

The Autotutorial Excellence (ATE) awards program is a project of the SAVMA Autotutorial Advisory Board. Videotape and slide/tape programs are judged in separate categories. The 1985 awards were made at the 1985 SAVMA Educational Symposium last spring. Winning programs are identified with an asterisk.

The primary goal of the ATE program is to encourage and recognize the development of quality autotutorial programs for veterinary medical education. Increased exchange of learning resources among colleges is another priority. A total of 48 authors have been recognized to date, plus one veterinary student and one private practitioner.

The SAVMA Advisory Board sets its own evaluative standards and judging criteria. Veterinary faculty have accepted the student assessments as a fair turnaround, as most of the programs were developed for student audiences.

Dr. E. R. Ames, of the AVMA staff, works with the SAVMA Advisory Board.

Slide/Tape Programs

Feline Topics

- FELINE INFECTIOUS DISEASES
Fredric W. Scott, DVM, Cornell University
25. Feline infectious peritonitis (12 minutes)
 26. Feline panleukopenia: Etiology, epidemiology, and pathogenesis (20 minutes)
 27. Feline panleukopenia: Diagnosis, pathology (24 minutes)
 28. Feline panleukopenia: Treatment, prevention (23 minutes)
 29. Feline viral rhinotracheitis (22 minutes)
 30. Feline caliciviral disease (29 minutes)
 31. Feline respiratory disease complex (27 minutes)

Equine Topics

32. *Techniques of parenteral medication in the horse (25 minutes)
K. F. Bowman, DVM, University of Pennsylvania (produced at Auburn University)
34. *Physical examination of the stallion (16 minutes)
M. F. Vaden, DVM, and J. T. Vaughan, DVM, Auburn University
35. Contagious equine metritis (10 minutes)
Douglas Gregg, DVM
36. *Surgical diseases of the equine foot (14 minutes)
K. F. Bowman, DVM, University of Pennsylvania, and J. T. Vaughan, DVM, Auburn University (produced at Auburn University)
37. Cardiovascular examination of the horse (22 minutes)
K. F. Bowman, DVM, University of Pennsylvania (produced at Auburn University)
38. Inferior check desmotomy (12 minutes)
D. R. Harrington, DVM, Auburn University
39. Caudal subarachnoid anesthesia in the conscious horse (30 minutes)
William Muir, DVM, and Roman Skarda, DVM, The Ohio State University

Parasitology

41. *Ways parasites harm their hosts (25 minutes)
B. L. Blagburn, PhD and Charles Hendrix, DVM, Auburn University
42. Economic importance of parasites in feedlot cattle (25 minutes)
Edward R. Ames, DVM, AVMA (produced at University of Missouri)
43. *Parasitological potpourri (25 minutes)
B. L. Blagburn, PhD, and Charles Bendix, DVM, Auburn University
44. Canine heartworm disease (17 minutes)
Robert M. Corwin, DVM, University of Missouri (produced at Michigan State University)

Public Health and Preventive Medicine

45. Student stress and the veterinary program (59 minutes)
Office of Student Services, University of California, Davis
46. Pet facilitated psychotherapy for children (22 minutes)
Dr. Bonnie Beaver, Texas A&M University
47. *Psittacosis—ornithosis—chlamydiosis "parrot fever" (15 minutes)[†]
Michael M. Pullen, DVM, and Benjamin S. Pomeroy, DVM, University of Minnesota
48. Toxoplasmosis: Epidemiology and public health implications (20 minutes)[†]
William F. McCulloch, Texas A&M University, and Edward R. Ames, DVM, AVMA (produced at University of Missouri)
49. Leptospirosis: Epidemiology and control (20 minutes)
P. R. Schnurrenberger, DVM, Auburn University
50. Serologic epidemiology (11 minutes)[†]
Paul R. Schnurrenberger, DVM, Auburn University, and William T. Hubbert, USDA/APHIS
51. *Anthrax in humans and animals (25 minutes)
J. O. Musaa, DVM, M. M. Pullen, DVM, R. A. Robinson, DVM, and R. K. Anderson, DVM, University of Minnesota
52. Heavy metal toxicity and tissue residues from environmental contamination (26 minutes)
C. Richard Dorn, DVM, The Ohio State University (produced with Food Safety and Inspection Service, USDA)
53. Toxoplasmosis (20 minutes)[†]
Billy C. Ward, DVM, Mississippi State University

RURAL HEALTH SERIES

- Kelley J. Donham, DVM, and Cornelia Mutel, MS, University of Iowa
54. Zoonotic diseases: An overview (25 minutes)
 55. Sheep zoonoses (34 minutes)
 56. Poultry zoonoses (28 minutes)
 57. Zoonoses of the agricultural environment (29 minutes)
 58. Beef zoonoses (32 minutes)
 59. Dairy zoonoses (30 minutes)
 60. Swine zoonoses (24 minutes)

[†]Veterinary Preventive Medicine Autotutorial Award.

American College of Veterinary Preventive Medicine Autotutorial Award

The American College of Veterinary Preventive Medicine (ACVPM) will present the 1985 ACVPM Award for excellence of presentation in a slide/tape or videotape program at the 1985 AVMA Autotutorial Program in Las Vegas. All programs considered must be available for listing in the AVMA Veterinary Audiovisual Catalog, and will therefore be available for rental and/or sale. The ACVPM judging team will consider content accuracy, media quality, clarity, and effectiveness of presentation of programs related to principles of public health preventive medicine for students and practitioners. A cash award and certificate will be presented by the president of ACVPM. An announcement will be made in the News section of JAVMA and in the ACVPM newsletter. Previous winners are identified by † symbol.

Slide/Tape Programs

Pathology, Clinical Pathology, and Immunology

61. *Fluorescent antibody test (25 minutes)
T. T. Kramer, DVM, Iowa State University (produced at Auburn University)
62. Avian necropsy protocol and technique (20 minutes)
D. E. Davis, DVM, produced at Mississippi State University—AVMA certified—
63. *The pathogenesis of hepatic fatty change (25 minutes)
Gary R. Johnson, DVM, Procter and Gamble, Cincinnati, Ohio—AVMA certified—
64. Small animal necropsy dissection for animal health technicians (20 minutes)
J. D. Conroy, DVM, and B. C. Ward, DVM, Mississippi State University
65. Physiology, measurement, and interpretation of canine proteinuria (25 minutes)
Gregory F. Grauer, DVM, University of Wisconsin
66. Urinalysis techniques—Module I: Gross examination and specific gravity tests (20 minutes)
Helen Davidson, MT, Michigan State University
67. Complete blood count—Module II: Counting red blood cells and white blood cells and preparing blood smears (25 minutes)
Helen Davidson, MT, Michigan State University
68. Complete blood count—Module I: Measuring total plasma protein, packed cell volume, and hemoglobin (20 minutes)
Helen Davidson, MT, Michigan State University
69. Urinalysis technique—Module II: Chemical tests (25 minutes)
Helen Davidson, MT, Michigan State University

Laboratory Animal Medicine

70. Practical Methodology: The rat (13 minutes)
Karen I. Timm-Wood, DVM, Sharon Jahn, BS, AHT, University of California, Davis

71. Practical Methodology: The mouse (9 minutes)
Karen I. Timm-Wood, DVM, Sharon Jahn, BS, AHT, University of California, Davis
72. Practical methodology: The Guinea pig (7 minutes)
Karen I. Timm-Wood, DVM, Sharon Jahn, BS, AHT, University of California, Davis
73. Practical Methodology: The hamster (6 minutes)
Karen I. Timm-Wood, DVM, Sharon Jahn, BS, AHT, University of California, Davis
74. Practical Methodology: The rabbit (13 minutes)
Karen I. Timm-Wood, DVM, Sharon Jahn, BS, AHT, University of California, Davis
75. *Parasitic diseases of the rabbit (25 minutes)
R. E. Platt, DVM, Iowa State University
76. *Amphibian medicine and husbandry (17 minutes)
Daniel H. Ringler, DVM, The University of Michigan

Animal Technology

77. The Veterinary Technician: New members of the veterinary medicine team (20 minutes)
North American Veterinary Technicians Association (produced at Purdue University)

Overseas Service Opportunities for Veterinarians

78. Christian Veterinary Mission (18 minutes)
World Concern, Seattle, Wash. A. L. Dorminy, DVM, coordinator
79. Christian Veterinary Mission—Santa Cruz, Bolivia, (12 minutes)
Ken Weinland, DVM, Christian Veterinary Mission—World Concern
80. Christian Veterinary Mission—Cayes, Haiti (12 minutes)
Maureen Birmingham, DVM, Christian Veterinary Mission—World Concern

Videotape Programs

Most veterinary schools are now using television as an instructional resource. A sampling of programs now in use are available for your evaluation in Las Vegas. The Continuing Education Advisory Committee encourages increased sharing of these programs among veterinary schools and recommends videotape as a program planning, continuing education resource for development by state and local associations. The AVMA is willing to offer suggestions on how to proceed.

Videotapes may be checked out by veterinarians for small group viewing (up to 8 per program), on a first-come, first-served basis, to be studied in 1 of the 12 video centers.

A small array of 1/2-inch VHS videotapes will also be available for evaluation.

Equine Practice and Surgery

100. Routine dental care of the equine (33 minutes)
Larry Booth, DVM, Michigan State University
101. *Examination of the equine upper respiratory system (parts I and II) (40 minutes)
Edward Scott, DVM, Michigan State University
102. *Surgical and glyceryl guaiacolate restraint (12 minutes)
R. B. Heath, DVM, Colorado State University
103. *Equine tending procedure for dorsal recumbency (10 minutes)
Thomas Riebold, DVM, Oregon State University (produced at Michigan State University)
104. *Diseases of the guttural pouch (20 minutes)
D. G. Bennett, DVM, Colorado State University
105. Equine infectious anemia—the infection and the disease (22 minutes)
C. J. Isell, DVM, and L. D. Foil, Louisiana State University
106. Examination of the equine eye (30 minutes)
Stephen Bistner, DVM, University of Minnesota
107. Procedures for evaluation of equine colics (18 minutes)
B. J. Gordon, DVM, Kansas State University
108. *Anatomy of horses: Equine abdomen, Part I (25 minutes)
James E. Smallwood, DVM, North Carolina State University
109. Dental care of the horse (19 minutes)
D. G. Bennett, DVM, Colorado State University
110. Nasal discharge in the horse (34 minutes)
D. G. Bennett, DVM, Colorado State University
111. Neurological case reports in veterinary medicine—Part V. Cervical spinal cord disease in the horse (11 minutes)
G. D. Partlow, PhD, University of Guelph and A. de Lahunta, DVM, Cornell University
112. Loading horses into trailers (35 minutes)
Richard Dunn, PhD, and Barbara O'Kelly, Michigan State University

Locomotion, Lameness, Orthopedic Surgery

113. Locomotion of the horse (25 minutes)
Marc H. Ratzlaff, DVM, Washington State University (produced at Michigan State University)
114. Diagnostic tests for lameness (45 minutes)
Albert A. Gabel, DVM, The Ohio State University
115. Navicular disease in horses (28 minutes)
O. R. Adams, DVM, Colorado State University
116. Corrective shoeing for navicular disease (20 minutes)
O. R. Adams, DVM, Colorado State University
117. *Stringhalt surgery (22 minutes)
Ken Gallagher, DVM, Michigan State University
118. *Angular limb deformities in foals (18 minutes)
A. S. Turner, BVSc, Colorado State University
119. *Equine radiography: Examination of the fetlock and proximal sesamoids (15 minutes)
Joe P. Morgan, DVM, University of California, Davis
120. Equine radiography: Examination of the stifle (13 minutes)
Joe P. Morgan, DVM, University of California, Davis
121. *Field anesthesia in horses (25 minutes)
C. J. McGrath, DVM, M. R. Raffae, DVM, and A. Larson, DVM, University of Minnesota

Equine Theriogenology

122. Examination of a stallion for fertility (29 minutes)
John P. Hughes, DVM, University of California
123. *Teasing, breeding, and semen collection in the stallion (25 minutes)
Theriogenology Section, University of Minnesota
124. *Pregnancy examination of the mare (13 minutes)
Theriogenology Section, University of Minnesota
125. Rectal palpation in the equine (22 minutes)
George W. Hoffman, DVM, Winston-Salem, NC. T. Douglas Byars, DVM, and Dan Beisel, University of Georgia
126. *Induction of parturition in the mare (24 minutes)
D. G. Bennett, DVM, Colorado State University
127. Teasing mares—behavioral response to a stallion (22 minutes)
John P. Hughes, DVM, University of California, Davis

Food Animal Practice

Bovine Medicine and Surgery

130. Omentopexy for correction of displaced left abomasum (40 minutes)
Kent Ames, DVM, Michigan State University

*Student AVMA Autotutorial Excellence Award.

Videotape Programs

131. Replacement of bovine uterine prolapse (25 minutes)
S. M. Hopkins, DVM, and R. L. Riese, DVM, Iowa State University
- 131a. Field necropsies in food animals (28 minutes)
Dan Morton, DVM, The Ohio State University
132. Modern bovine practice in the Midwest (29 minutes)
J. L. Noordsy, DVM, Kansas State University
133. Bovine cesarean section (25 minutes)
Kent Ames, DVM, Michigan State University
134. Preconditioning in a herd health program (19 minutes)
John B. Herrick, DVM, Iowa State University
135. *Calf scours—Fluid and electrolyte imbalances and therapy (15 minutes)
Robert Phillips, DVM, Charles McKinney, and Tommy C. Holecheck, Colorado State University
136. Calf killer (25 minutes)
O. M. Radostits, DVM, R. S. Butler, DVM, and Paul R. Greenough, DVM, Michigan State University
137. Rumensin: Benefits in cattle and toxiosis in the horse (25 minutes)
W. E. Lloyd, DVM, Iowa State University
138. Hyperthermic therapy of bovine ocular squamous cell tumors (22 minutes)
Robert A. Kainer, DVM, Colorado State University
139. Anorexia and cachexia in the cow (19 minutes)
D. D. Bennett, DVM, Colorado State University
140. Inhalation anesthesia of the bovine (12 minutes)
Ian Anderson, DVM, Mississippi State University (produced at Oklahoma State University)
141. Ruminant digestion (15 minutes)
John S. Baker, DVM, Purdue University
142. A partnership in health: The dairy herd health program (25 minutes)
John B. Herrick, DVM, Iowa State University
143. Blue tongue (9 minutes)
USDA, California Department of Agriculture

Bovine Theriogenology

144. *Fertility evaluation of bulls' semen collection and physical examination—I—(15 minutes)
R. H. BonDurant, DVM, University of California, Davis
145. Fertility evaluation of bulls—II—Assessment of semen quality and diagnosis of venereal diseases (19 minutes)
R. H. BonDurant, DVM, University of California, Davis
146. Physical diagnosis in bovine female reproduction (30 minutes)
R. H. BonDurant, DVM, University of California, Davis
147. Bovine embryo transfer: Nonsurgical collection and surgical and nonsurgical transfer (20 minutes)
R. H. BonDurant, DVM, University of California, Davis

148. *Kimberling-Rupp spay technique (26 minutes)
Cleon V. Kimberling, DVM, and Gary Rupp, DVM, Colorado State University
149. Spaying and beef production (32 minutes)
Cleon V. Kimberling, DVM, Colorado State University
- GENITAL EXAMINATION OF THE COW
Theriogenology Section, University of Minnesota
150. Part I—Retraction technique (12 minutes)
151. *Part II—Examination of the tract (14 minutes)
152. Part III—Pregnancy examination by rectal palpation (14 minutes)
153. Bovine embryo transfer technique for the veterinary practitioner (47 minutes)
S. M. Hopkins, DVM, Iowa State University
154. Ostertagiasis (30 minutes)
American Hoechst Corporation

Sheep and Goats

155. Guss on goats (28 minutes)
C. S. F. Williams, BVSc, Michigan State University
156. The commercial goat dairy: In operation (25 minutes)
C. S. F. Williams, BVSc, Michigan State University
157. Sheep and goat hoof trimming (16 minutes)
C. S. F. Williams, BVSc, Michigan State University

Poultry

158. Postmortem techniques for poultry (22 minutes)
H. J. Barnes, Iowa State University
159. Exotic Newcastle (VVND) and fowl plague (12 minutes)
Plum Island Animal Disease Center, USDA/APHIS

Swine

160. Vasectomy of the boar (13 minutes)
Bruce L. Hull, DVM, The Ohio State University
161. Pseudorabies (Aujeszky's disease) prevention and control procedures (39 minutes)
J. D. McKean, DVM, Iowa State University
162. Diagnosis of swine dysentery (24 minutes)
D. L. Harris, DVM, and R. D. Glock, DVM, Iowa State University
163. *Water deprivation—sodium ion toxicity—salt poisoning in swine (14 minutes)
W. B. Buck, DVM, University of Illinois (produced at Iowa State University)
164. SPF cesarean section of sows (25 minutes)
Louis G. Stratton, DVM, Oklahoma State University
165. Pregnancy diagnostic methods in the sow and ewe (20 minutes)
L. E. Evans, DVM, and T. L. Clark, DVM, Iowa State University
166. *Managing difficult farrowing (27 minutes)
L. J. Runnels, DVM, Purdue University

Videotape Programs

Exotic Diseases

Produced by Plum Island Animal Disease Center, USDA, APHIS

167. *Foot and mouth disease: The clinical aspects (14 minutes)
168. African swine fever—hog cholera: A comparison (13 minutes)
169. African horse sickness: The clinical aspects (14 minutes)
170. Rinderpest—The clinical aspects (11 minutes)
171. Contagious bovine pleuropneumonia—The clinical aspects (8 minutes)
172. Malignant catarrhal fever—The clinical aspects (10 minutes)
173. Sheep and goat pox (10 minutes)

Small Animal Medicine

174. *What's your diagnosis: Case No. 1 (32 minutes)
Fred O. Roedel, DVM, Purdue University
175. *What's your diagnosis: Case No. 2 (canine) (20 minutes)
Fred O. Roedel, DVM, Purdue University
176. Cardiopulmonary resuscitation (38 minutes)
Steve C. Haskins, University of California, Davis—AVMA certified—
177. Intradermal skin testing (29 minutes)
D. K. Chester, DVM, Texas A&M University—AVMA certified—
178. Emergency treatment of acute pesticide toxicosis in the dog and cat (22 minutes)
W. E. Lloyd, DVM, Shenandoah, Iowa (produced at Iowa State University)
179. Rhinoscopy of dogs (25 minutes)
Gary W. Thayer, DVM, and P. Thomas Purinton, DVM, University of Georgia
180. Diagnosis of canine hip dysplasia in the juvenile and adult dog (38 minutes)
J. P. Morgan, DVM, University of California, Davis
181. Techniques for creatinine clearance (8 minutes)
Lane Clarke, DVM, R. A. Argenzio, PhD, Don Anderson, Mary Grizzle, and Jim Liacos, North Carolina State University
182. Veterinary echocardiography (5 minutes)
Charla Jones, DVM, North Carolina State University
183. Opening a new window. The application of real-time ultrasonography to small animal medicine (42 minutes)
Robert R. Badertscher II, DVM, and Samuel Giannavola, RBP, University of Illinois
184. Transrectal ultrasound techniques in animal reproduction: The new frontier (45 minutes)
R. R. Badertscher II, DVM, T. F. Lock, DVM, S. Giannavola, RBP, University of Illinois
185. Understanding premature closure of the distal ulnar growth plate (14 minutes)
Joseph P. Weigel, DVM, University of Tennessee

186. Alimentation techniques: Technique of catheter enterostomy, nasogastric intubation in the companion animal and pharyngostomy tube (8 minutes)
Stephen W. Crane, DVM, North Carolina State University
- 186a. Procedure for the lymphocyte stimulation test (7 minutes)
Susan L. Tonkonogy, PhD, North Carolina State University

Small Animal Neurology

187. Neurologic cases for learning and practice (19 minutes)
Mary Herron, DVM, Texas A&M University—AVMA certified—
- NEUROLOGY OF THE CANINE
William R. Fenner, DVM, The Ohio State University
188. Spinal cord tumors (23 minutes)
189. Managing the seizing patient (27 minutes)
190. Cerebellar disease (37 minutes)
- 190a. Neurological examination of the dog (50 minutes)
NEUROLOGICAL CASE REPORTS, DOGS AND CATS
G. D. Partlow, PhD, University of Guelph and Alexander de Lahunta, DVM, Cornell University
191. Part 1—Neuromuscular disease in the dog (12 minutes)
192. Part 2—Cervical spinal cord disease in the dog (12 minutes)
193. Part 3—Cerebellar disease in the cat (15 minutes)
194. Part 4—Vestibular disease in the cat (9 minutes)

Small Animal Anesthesiology

195. Small animal anesthetic induction technique (20 minutes)
D. W. DeYoung, Iowa State University
196. Anesthetic management of the dog (48 minutes)
C. E. Short, DVM, Cornell University

Small Animal Surgery

197. Castration of the dog and cat (19 minutes)
Robert L. Leighton, VMD, University of California, Davis
198. Descending the ferret (20 minutes)
James E. Creed, DVM, Oklahoma State University (produced at Colorado State University)
199. *Cesarean birth (20 minutes)
Robert L. Leighton, VMD, University of California, Davis
200. Surgical treatment of gastric dilation, torsion, and volvulus (25 minutes)
W. D. DeHoff, DVM, and R. Green, The Ohio State University
201. Gastric dilatation-rotation in the dog (30 minutes)
S. J. Birchard, DVM, Animal Medical Center (produced at Purdue University)
202. Surgical exploration of the canine abdomen (22 minutes)
Stephen W. Crane, DVM, University of Florida
203. Canine anal sacculotomy (32 minutes)
D. F. Merkley, DVM, Iowa State University

Videotape Programs

204. Canine cystotomy (14 minutes)
Donald Howard, DVM, North Carolina State University (produced at Michigan State University)
 205. Canine tracheostomy (19 minutes)
D. F. Merkley, DVM, Iowa State University
 206. Laryngotomy for ventriculocordectomy (24 minutes)
D. F. Merkley, DVM, Iowa State University
 207. Canine thoracic esophagostomy (30 minutes)
D. F. Merkley, DVM, Iowa State University
 208. Lateral ear resection in the dog (19 minutes)
Robert L. Leighton, VMD, University of California, Davis
 209. *Canine cesarean (33 minutes)
D. F. Merkley, DVM, Iowa State University
 210. Superficial keratectomy (11 minutes)
Milton Wyman, DVM, The Ohio State University
 211. Modified celsus procedures for entropion (17 minutes)
Milton Wyman, DVM, The Ohio State University
 212. Selected surgical procedures within the canine neck (39 minutes)
R. L. Leighton, VMD, University of California, Davis
 213. Surgical ties (15 minutes)
Charles W. Betts, DVM, North Carolina State University
 214. Ovariohysterectomy in the mature bitch (38 minutes)
D. T. Crowe, Jr., DVM, Kansas State University
 215. Castration and declawing procedures in the cat (16 minutes)
D. T. Crowe, Jr., DVM, Kansas State University
 216. Perineal urethrostomy in the male cat (35 minutes)
D. T. Crowe, Jr., DVM, Kansas State University
 217. Exploratory celiotomy: Surgical procedure and review of anatomy (43 minutes)
I. Gourley, DVM and C. Lohse, DVM, University of California, Davis
 218. Thoracotomy for pyloromyotomy in the dog: Surgical procedure and review of anatomy (30 minutes)
C. Gregory, DVM, and C. Lohse, DVM, University of California, Davis
 219. Gastrotomy and enterotomy in the dog: Surgical procedure and review of anatomy (34 minutes)
J. Pascoe, BVSc, C. Lohse, DVM, V. Pedroia, DVM, University of California, Davis
 220. Small bowel resection and anastomosis in the dog (31 minutes)
John Pascoe, BVSc, University of California, Davis
 221. Mandibular and sublingual salivary gland excision: Surgical procedure and review of anatomy (29 minutes)
I. Gourley, DVM, and C. Lohse, DVM, University of California, Davis
 222. Nephrotomy and cystotomy in the dog: Surgical procedure and review of anatomy (20 minutes)
C. Gregory, DVM, and C. Lohse, DVM, University of California, Davis
 223. Surgical anatomy of superficial vessels and endotracheal intubation (13 minutes)
C. Lohse, DVM, and V. Pedroia, DVM, University of California, Davis
 224. Surgery preparation: Instrument pack (21 minutes)
S. Pauli, AHT, University of California, Davis
 225. Surgical preparation and draping of the canine abdomen (8 minutes)
Steve Pauli, AHT, University of California, Davis
 226. Surgery preparation: Scrubbing, gowning and gloving (16 minutes)
C. Michas, MD, and S. Pauli, AHT, University of California, Davis
 227. Cisternal and lumbar puncture for spinal fluid analysis and myelography in the dog (32 minutes)
C. Bailey, DVM, and J. Morgan, DVM, University of California, Davis
 228. Dewclaw and tail amputation (9 minutes)
J. L. Hess, DVM, Iowa State University
 229. Thoracotomy for lung lobe excision in the dog: Surgical procedure and review of anatomy (17 minutes)
C. Gregory, DVM, and C. Lohse, DVM, University of California, Davis
 230. Diagnostic paracentesis and surgery for abdominal injury in the dog—Part I (42 minutes)
D. T. Crowe, Jr., DVM, and D. E. Bjorling, DVM, MS, University of Georgia
 231. Diagnostic paracentesis and surgery for abdominal injury in the dog—Part II (27 minutes)
D. T. Crowe, Jr., DVM, and D. E. Bjorling, DVM, MS, University of Georgia
- Canine Orthopedics**
232. Approach to the stifle joint through a lateral incision (20 minutes)
C. L. Runyon, DVM, Iowa State University
 233. Cervical intervertebral disk fenestration in the dog (30 minutes)
Dennis T. Crowe, Jr., DVM, University of Georgia (produced at Kansas State University)
 234. Approach to the hip joint by tenotomy of the gluteal muscles (37 minutes)
C. L. Runyon, DVM, Iowa State University
 235. Femoral fracture repair/IM pin and wire (35 minutes)
Erik Egger, DVM, Colorado State University
 236. Caudolateral approach to shoulder/ocd (14 minutes)
Erik Egger, DVM, Colorado State University
 237. Femoral head resection and gluteal transposition (12 minutes)
Erik Egger, DVM, Colorado State University
 238. Surgical management of medial patella luxation (29 minutes)
Erik Egger, DVM, Colorado State University

Videotape Programs

239. Collection of cancellous and corlco-cancellous (21 minutes)
Erik Egger, DVM, Colorado State University
- 239a. *Canine locomotion: Normal gaits and lameness (30 minutes)
G. Sumner-Smith, DVM, University of Guelph

Laboratory Animal Medicine

(from the University of Florida)

240. Herpesvirus diseases of primates (41 minutes)
A. F. Moreland, DVM, and R. D. Hunt, DVM
241. Mousepox (29 minutes)
A. F. Moreland, DVM, and A. E. New, DVM
242. Campylobacteriosis in laboratory animals (29 minutes)
A. F. Moreland, DVM, and J. G. Fox, DVM
243. Disease and management of geriatric rodents (34 minutes)
A. F. Moreland, DVM, and J. E. Wagner, DVM
244. Sendai virus infection in laboratory rodents (27 minutes)
A. E. Moreland, DVM, and Gerald Van Hoosier, DVM, University of Florida and University of Washington
245. Mouse hepatitis virus (25 minutes)
A. E. Moreland, DVM, and J. R. Lindsey, DVM
246. Murine respiratory mycoplasmosis (24 minutes)
A. E. Moreland, DVM, and J. R. Lindsey, DVM
247. Salmonellosis in rodents and lagomorphs (36 minutes)
A. F. Moreland, DVM, and J. E. Wagner, DVM
248. Rabbit pasteurellosis (30 minutes)
A. F. Moreland, DVM, Steven P. Pakes, DVM
249. Encephalitozoonosis of rabbits (35 minutes)
A. F. Moreland, DVM, Steven P. Pakes, DVM
250. Microscopic anatomy of laboratory animal digestive tracts (41 minutes)
H. S. Bal, DVM, Iowa State University
251. Inspection of animal facilities (39 minutes)
G. A. Hoffman, DVM, Iowa State University

Restraint and Handling

Murray E. Fowler, DVM, University of California

252. Restraint and handling of the cat (15 minutes)
 253. *Restraint and handling of the dog (19 minutes)
 254. Restraint and handling of the bird—general introduction (12 minutes)
- The Llama**
255. Care and handling of the llama (25 minutes)
Murray Fowler, DVM, University of California, Davis
 256. Llama management and medicine (19 minutes)
L. Johnson, DVM, Colorado State University

Rabies

257. Think rabies first! (10 minutes)
Donald C. Blenden, DVM, University of Missouri
258. Rabies! (15 minutes)
AVMA Division of Public Information

Pets, Owners, The Veterinarian, and Society

259. The zoo veterinarian (23 minutes)
AVMA Public Information Division
260. Tomorrow's veterinarian (20 minutes)
AVMA Public Information Division
261. Today's veterinarian (23 minutes)
AVMA Public Information Division
262. Animals can bite (13 minutes, color)
AVMA, John Hart Films
263. The deadly sting (7 minutes)
AVMA Public Information Division
264. A horse of her own (15 minutes)
AVMA Public Information Division

Animal Welfare

265. Life force: Animal welfare (20 minutes)
Verda Williams, Iowa State University
266. Veal farming is special (12 minutes)
American Farm Bureau Federation
267. Animal welfare, the farmer's story (26 minutes)
American Farm Bureau Federation
268. Animal rights: Factory farming (15 minutes)
Roger Caras, 20/20, ABC News
269. Animal rights: Pound seizure (5 minutes)
Roger Caras, ABC Network News
270. Use of animals for research (14 minutes)
Roger Caras, ABC Nightline
271. Feline leukemia and biomedical research (9 minutes)
Two on Two, WBBM-TV, Chicago
272. Speaking of Harvey (9 minutes)
Pyramid Films
273. Animals in research: A complex issue (7 minutes)
S. K. Fisk, DVM, Southern Illinois University School of Medicine
274. Research animals: A realistic view (17 minutes)
S. K. Fisk, DVM, Southern Illinois University School of Medicine
275. Will I be all right, doctor? (25 minutes)
Foundation for Biomedical Research

Videotape Programs

VHS (home video 1/2") Theater

Many veterinarians own or are considering the purchase of VHS videotape playback/recording equipment as part of a home entertainment center. The same equipment can be used for veterinary continuing education purposes. The programs listed below are examples available from the AVMA audiovisual library.

- 276. Normal swallowing in the dog
- 277. Swallowing disorders in the dog
- 278. Herd health program in a dairy herd (28 minutes)
- 279. Dental tartar removal in the dog
- 280. Tooth extraction in the dog
- 281. Corrective shoeing-conformation considerations
- 282. Review of the gastro-intestinal tract of horses
- 283. Succinylcholine restraint in the horse
- 284. Dewclaw and tail amputation in the puppy



Providing all the
equipment you need
for the care and
breeding of large
animals.

See us at Booth #537



lane manufacturing inc

5560 E. Pacific Place
Denver, Colorado 80222
(303) 758-5370

Independent Study Videotapes

VHS will be available for small group viewing at times most convenient to the veterinarian. Equipment will be available for this purpose. An advance-time reservation system will be in effect. What we're trying here will be "viewer's choice" from the entire array of programs at the convention. The titles and elapsed time of programs in use will be displayed.

Thirteen videotape playback units and monitors will be available during the convention on a first-come, first-served basis.

The videotapes are to be reserved at the Videotape Library. Any videotape listed in this booklet is available for independent study upon request, assuming playback equipment is available. Waits up to 30 minutes may be necessary.

Computer Corner

- 285. Beginning computer: An introduction to terminology and equipment (40 minutes)—a slide/tape program

William D. Fortney, DVM, Kansas State University

- 286. *What's your diagnosis?—computer-assisted instruction (30 minutes)

Fred Roedel, DVM, Purdue University

- 287. Computer-aided diagnostics

Philip Busby, DVM, Mississippi State University

Demonstrations and small group discussions July 24 and 25 (Wednesday and Thursday) 1 PM to 5 PM

*A system linking a microcomputer and videotape playback equipment. Winner of a 1985 Student AVMA Autotutorial Excellence Award.

Autotutorial Program Personnel—Thank You!

The able, helpful individuals who keep the ATP running smoothly are: Steve Pendry, Director of Biomedical Communications, Iowa State University; Art Shmarak, Manager Health Science Television, University of California, Davis; Andy Dzuibinsky, Technical Coordinator, Purdue University; Al Kilminster, Senior Photographer, Colorado State University; and Dean Biechler, Medical Illustrator, Iowa State University.

Thanks to all of you for your contributions to the 1985 meeting and to your institutions that made your participation possible.

Bud Ames

Edward R. Ames, DVM
Coordinator for the ATP

Other Groups and Activities

Friday, July 19

- 9:00 AM American Board of Veterinary Practitioners—Regents Business Meeting—Las Vegas Hilton, Club Salon
- 7:00 PM American Board of Veterinary Practitioners—Regents Dinner—Las Vegas Hilton, Continental Salon

Saturday, July 20

- 8:00 AM American Board of Veterinary Practitioners—Certifying Exam Core—Las Vegas Hilton, Pavilion 6
- 8:00 AM American Board of Veterinary Practitioners Committee Room—Las Vegas Hilton, Conference Room 3
- 8:00 AM American College of Veterinary Preventive Medicine—Oral Examination—Las Vegas Hilton, Board Room
- 8:00 AM Professional Examination Services—NBEC Item Development Workshop—Las Vegas Hilton, Grand Salon
- 9:00 AM American Board of Veterinary Practitioners—Item Development Workshop—Las Vegas Hilton, Conference Room 14
- 1:00 PM American Board of Veterinary Practitioners—Certifying Exam, Practical SA #1—Las Vegas Hilton, Ballroom D
- 1:00 PM American Board of Veterinary Practitioners—Certifying Exam, Practical SA #2—Las Vegas Hilton, Ballroom E
- 1:00 AM American Board of Veterinary Practitioners—Certifying Exam, Practical SA #3—Las Vegas Hilton, Ballroom F
- 1:00 AM American Board of Veterinary Practitioners—Certifying Exam, Practical FA—Las Vegas Hilton, Ballroom G
- 1:00 AM American Board of Veterinary Practitioners—Certifying Exam, Practical EQ—Las Vegas Hilton, Pavilion 6
- 6:00 AM American Board of Veterinary Practitioners—Diplomates Cocktails and Dinner—Las Vegas Hilton, Club/Continental Salons

Sunday, July 21

- 8:00 AM American Board of Veterinary Practitioners—Certifying Exam, Specialty—Las Vegas Hilton, Pavilion 6
- 8:00 AM American College of Veterinary Preventive Medicine—Oral Examination—Las Vegas Hilton, Board Room
- 8:00 AM American College of Veterinary Preventive Medicine—Written Examination—Las Vegas Hilton, Conference Rooms 7 and 8
- 8:00 AM Professional Examination Services—NBEC Item Development Workshop—Las Vegas Hilton, Grand Salon
- 8:00 AM American Association of Equine Practitioners—Las Vegas Hilton, Royal Salon

- 8:00 AM American Board of Veterinary Practitioners Committee Room—Las Vegas Hilton, Conference Room 3
- 9:00 AM Breakfast for Dr. Richard Fink—Las Vegas Hilton, Ballrooms F and G
- 9:00 AM American Board of Veterinary Practitioners—Item Development Workshop—Las Vegas Hilton, Conference Room 14
- 1:00 PM American Board of Veterinary Practitioners—Candidates Wine and Cheese Reception—Las Vegas Hilton, Ballroom E
- 2:00 AM American Association of Veterinary Laboratory Diagnosticians—Long-Range Planning—Las Vegas Hilton, Conference Room 7
- 3:00 AM American Board of Veterinary Practitioners—Annual Business Meeting—Las Vegas Hilton, Ballroom D
- 7:30 AM Christian Veterinary Mission—Las Vegas Hilton, Conference Room 11

Monday, July 22

- 7:00 AM American Board of Veterinary Practitioners—Regents Meeting—Las Vegas Hilton, Conference Room 13
- 8:00 AM American Association of Veterinary Laboratory Diagnosticians—Lab Accreditation Board—Las Vegas Hilton, Board Room
- 8:00 AM Past Presidents' Breakfast—Las Vegas Hilton, Royal Salon
- 8:00 AM American Veterinary Neurology Association—Scientific Meeting—Las Vegas Hilton, Conference Room 10
- 8:00 AM Christian Veterinary Mission—Las Vegas Convention Center, Room 2
- 8:00 AM American Association of Veterinary Clinicians—Las Vegas Hilton, Ballroom E
- 8:00 AM American Board of Veterinary Toxicology—Examination—Las Vegas Hilton, Conference Room 11
- 8:00 AM American Board of Veterinary Toxicology—Examination, Grading—Las Vegas Hilton, Conference Room 12
- 8:00 AM American Association of Veterinary Parasitologists—Scientific Presentation and Poster Presentation—Las Vegas Convention Center, Room 4
- 8:00 AM American College of Veterinary Preventive Medicine—Board of Officers and Councilors Meeting—Las Vegas Hilton, Conference Room 14
- 8:00 AM American College of Laboratory Animal Medicine—Certifying Exam—Las Vegas Convention Center, East Meeting Rooms, Room E3
- 8:00 AM American Association of Avian Pathologists—AAAP Board Meeting—Las Vegas Hilton, Club Salon
- 8:00 AM American College of Veterinary Anesthesiologists—Executive Board Meeting—Las Vegas Hilton, Conference Room 1
- 8:00 AM State Associations Secretaries Conference Breakfast, Las Vegas Hilton, Conference Room 2
- 8:30 AM American Society of Veterinary Ophthalmology—Lectures and Seminars—Las Vegas Convention Center, Room 3
- 9:00 AM American Veterinary Society of Animal Behavior—Las Vegas Hilton, Embassy Salon
- 9:00 AM Veterinary Racing Chemists—Convention Center, Room C, East Meeting Rooms

- 10:00 AM Association for Women Veterinarians Meetings, Seminars, Reception—Las Vegas Hilton, Ballroom F
- 12:30 PM American Association of Industrial Veterinarians—Board Meeting—Las Vegas Hilton, Conference Room 3
- 1:00 AM Association of American Veterinary Medical Colleges, AAVMC Minority Affairs Committee—Las Vegas Hilton, Grand Salon
- 1:00 AM American Association of Extension Veterinarians—Educational Program and Business Meeting—Las Vegas Convention Center, East Meeting Rooms, Room T2 and T4
- 1:00 AM American College of Laboratory Animal Medicine—Board of Directors Meeting—Las Vegas Hilton, Board Room
- 1:00 AM American Association of Veterinary Laboratory Diagnosticians Board of Governors Meeting—Las Vegas Convention Center, Room C
- 1:00 AM American Veterinary Exhibitors Association—Executive Committee Meeting—Las Vegas Convention Center, East Meeting Room F1
- 3:00 AM American College of Veterinary Preventive Medicine—Diplomates Meeting—Las Vegas Hilton, Ballroom G
- 3:00 AM American Association of Food Hygiene Veterinarians—Board Meeting (Outgoing), Convention Center, East Meeting Rooms, F2
- 3:00 AM Auxiliary to the AVMA, Student Auxiliary Get-Acquainted Wine and Cheese Party/Student Auxiliary Orientation and Male Spouses Party—Las Vegas Hilton, Conference Room 9
- 4:00 AM American Association of Food Hygiene Veterinarians—General Business Meeting—Convention Center, East Meeting Rooms, T1
- 4:00 AM American Association of Avian Pathologists—Poultry Health Advisory Committee—Las Vegas Hilton, Royal Salon
- 4:30 AM American College of Veterinary Preventive Medicine—Reception—Las Vegas Hilton, Ballroom G
- 5:00 AM American Association of Food Hygiene Veterinarians, Board Meeting (Incoming)—Convention Center, East Meeting Rooms, F2
- 5:00 AM American Academy of Veterinary Pharmacology and Therapeutics—Business Meeting—Las Vegas Hilton, Conference Room 13
- 5:00 AM National Society of Phi Zeta, Business Meeting—Las Vegas Hilton, Conference Room 2
- 6:00 AM American Academy of Veterinary Pharmacology and Therapeutics—Reception—Las Vegas Hilton, Conference Room 14
- 6:00 AM American Academy of Veterinary and Comparative Toxicology—Business Meeting—Las Vegas Hilton, Conference Room 3
- 6:00 AM SAVMA Workshop and Reception—Las Vegas Hilton, Ballroom D
- 7:00 AM Association of American Veterinary Medical Colleges—Executive Committee—Las Vegas Hilton, Conference Room 1
- 7:00 AM Association of American Veterinary Medical Colleges—Associate Dean—Academic—Las Vegas Hilton, Conference Room 8

Tuesday, July 23

- 7:00 AM American Society of Laboratory Animal Practitioners—Board of Directors—Las Vegas Hilton, Board Room
- 7:30 AM Association of Veterinary Medical Data Program Participants—Executive Board—Las Vegas Hilton, Conference Room 1
- 7:30 AM American Board of Veterinary Toxicology—Breakfast/Business Meeting—Las Vegas Hilton, Embassy Room
- 8:00 AM American College of Laboratory Animal Medicine—Exam Review—Las Vegas Convention Center, East Meeting Rooms, Room E3

- 8:00 AM American Association of Veterinary Parasitologists—Scientific Presentation and Posters—Las Vegas Convention Center, Room 4
- 8:30 AM American Association of Avian Pathologists—AAAP Symposium—Las Vegas Convention Center, East Meeting Rooms, Rooms B1 and B2
- 8:30 AM Society of Aquatic Veterinary Medicine—Las Vegas Convention Center, East Meeting Rooms, Room E2
- 8:30 AM American College of Veterinary Microbiologists—Board Meeting—Las Vegas Hilton, Conference Room 12
- 8:30 AM American Association of Industrial Veterinarians—Board Meeting—Las Vegas Hilton, Conference Room 3
- 9:00 AM Air Force Environmental Health Officers—Informational/Educational Meeting—Las Vegas Convention Center, Room P2
- 9:00 AM American Association of Swine Practitioners—Board of Directors—Las Vegas Hilton, Conference Room 2
- 9:00 AM American Veterinary Medical Records Association—Guest Speakers—Las Vegas Convention Center, East Meeting Rooms, Room K-2
- 9:00 AM Association of American Veterinary Medical Colleges—Admissions Officers—Las Vegas Convention Center, East Meeting Rooms, Room R1
- 10:00 AM US Public Health Service Veterinarians—Las Vegas Convention Center, Room J
- 10:00 AM Conference of Public Health Veterinarians—Annual Business Meeting—Las Vegas Convention Center, Room C
- 11:30 AM Merck & Company—Deans' Luncheon—Las Vegas Hilton, Continental & Club Salon
- 11:45 AM Norden Laboratories State Veterinary Association Presidents' Luncheon—Las Vegas Hilton, Grand Salon and Royal
- 12:00 noon US Army Veterinary Corps—Specialty Group Meeting and Luncheon—Las Vegas Hilton, Pavilion 6
- 12:00 noon American Association of Bovine Practitioners Board—Las Vegas Hilton, Conference Room 11
- 1:00 PM American Association of Veterinary State Boards—Las Vegas Convention Center, Room 3
- 1:00 AM Association of Teachers of Veterinary Public Health and Preventive Medicine—Business Meeting—Las Vegas Convention Center, Room C
- 1:00 AM Intermountain Veterinary Medical Association—Las Vegas Hilton, Conference Room 2
- 1:30 AM American Academy of Veterinary & Comparative Toxicology—Scientific Program—Las Vegas Convention Center, East Meeting Rooms, Room T1
- 2:00 AM American Society of Tropical Veterinary Medicine—Las Vegas Hilton, Conference Room 12
- 2:00 AM Association of American Veterinary Medical Colleges—Deans—Las Vegas Convention Center, East Meeting Rooms, Room T2 and T4
- 4:00 AM Veterinary Amateur Radio Operators (VARO)—Las Vegas Hilton, Board Room
- 5:00 AM National Association of Federal Veterinarians—General Membership—Las Vegas Convention Center, Room C
- 5:00 AM American Association of Avian Pathologists Toxic and Miscellaneous Infectious Diseases Committee—Las Vegas Convention Center, East Meeting Rooms, F-2
- 6:30 AM President's Reception—Las Vegas Hilton, Ballrooms A, B, C
- 6:30 AM American Association of Veterinary Technician Educators—A/T Reception, Las Vegas Hilton, Conference Rooms 13 and 14
- 7:00 AM American Association of Avian Pathologists—Avian Medicine Residency Program Seminar—Las Vegas Hilton, Conference Room 11
- 8:00 AM American Veterinary History Society Seminar—Business Meeting—Las Vegas Hilton, Conference Room 12

Wednesday, July 24

- 7:00 AM Ecumenical Fellowship Breakfast—Las Vegas Hilton, Ballroom E
- 7:00 Association of Veterinarian's Administration Veterinary Medical Officers—Business Meeting—Las Vegas Hilton, Conference Room 10
- 7:00 Association of American Veterinary Medical Colleges—AAVMA/AAVMC Joint Committee—Las Vegas Hilton, Conference Room 2
- 8:00 American Academy of Veterinary Nutrition—Breakfast, Business, and Scientific Session—Las Vegas Hilton, Conference Room 8
- 8:00 American Association of Bovine Practitioners—Business Committee—Las Vegas Hilton, Conference Room 12
- 8:00 American Association of Veterinary State Boards—Board Meeting—Las Vegas Convention Center, Room 3
- 8:00 Association of American Veterinary Medical Colleges—Educational Session—Las Vegas Convention Center, East Meeting Rooms, Room R1
- 8:00 Association of Veterinary Medical Data Program Participants—General Business Meeting—Las Vegas Convention Center, Room J
- 8:00 Association of Veterinary Medical Data Program Participants—General Business Meeting—Las Vegas Convention Center, Room J
- 8:00 AM to 12:00 noon Morris Animal Foundation Breakfast—Las Vegas Hilton, Conference Rooms 13 and 14
- 9:00 American Academy of Veterinary Nutrition—Breakfast, Business & Scientific Session—Las Vegas Hilton, Conference Room 8
- 9:00 American Veterinary Medical Record Association—Guest Speakers—Las Vegas Convention Center, East Meeting Rooms, Room K-2
- 10:00 American Association of Bovine Practitioners Board Meeting—Las Vegas Hilton, Conference Room 11
- 11:45 Flying Veterinarians Association—Luncheon—Las Vegas Hilton, Conference Room 9
- 1:00 PM Association of American Veterinary Medical Colleges—Business Session—Las Vegas Convention Center, East Meeting Rooms, Room R1 and R3
- 1:00 Veterinary School Development Officers—Las Vegas Convention Center, East Meeting Rooms, Room C
- 1:30 Drug Availability Committee—Las Vegas Hilton, Board Room
- 2:00 National Board Examination Committee—Las Vegas Hilton, Conference Room 7
- 3:30 American Association of Avian Pathologists—AAAP Business Meeting—Las Vegas Convention Center, East Meeting Rooms, Rooms B1 and B2
- 4:00 American Veterinary Exhibitors Association—Annual Membership Meeting—Las Vegas Convention Center, Room 16
- 4:30 American College of Laboratory Animal Medicine—Business Meeting—Las Vegas Convention Center, East Meeting Rooms, Room E3

5:00

American Society of Laboratory Animal Practitioners—General Membership—Las Vegas Convention Center, Room 3

Thursday, July 25

- 7:00 AM Association of American Veterinary Medical Colleges—Executive Committee—Las Vegas Hilton, Conference Room 2
- 7:00 American Association of Avian Pathologists—AAAP Board—Las Vegas Hilton, Conference Room 8
- 7:00 National Academies of Practice—Las Vegas Hilton, Conference Room 3
- 7:00 Committee for Scientific Program—Breakfast Meeting—Las Vegas Hilton, Conference Room 11
- 7:30 AVMA/AVEA Breakfast—Las Vegas Hilton, Conference Room 12
- 7:30 American College of Laboratory Animal Medicine—Board of Directors Meeting—Las Vegas Hilton, Board Room
- 8:00 AVMA Group Insurance Trust Meeting—Las Vegas Hilton, Conference Room 9
- 9:00 Veterinary Academy on Disaster Medicine—Scientific and Educational Discussion on Animal Disasters—Las Vegas Convention Center, East Meeting Rooms, Room J
- 9:00 Association of Veterinarians for Animal Rights—Las Vegas Hilton, Conference Room 7
- 9:00 American Veterinary Medical Record Association—Guest Speakers—Las Vegas Convention Center, East Meeting Rooms, Room K-2
- 11:30 American Veterinary Epidemiology Society—Lunch and Honors—Las Vegas Hilton, Club and Continental Salons
- 12:00 noon AVMA Group Insurance Trust Luncheon—Las Vegas Hilton, Conference Rooms 12, 13, 14
- 1:30 PM Council on Biologic and Therapeutic Agents—Las Vegas Hilton, Board Room
- 2:00 American Association of Wildlife Veterinarians—Business Meeting, Short Program—Las Vegas Convention Center, East Meeting Rooms, Room P1
- 6:30 American Association of Animal Welfare Veterinarians—Business and Presentations—Las Vegas Hilton, Conference Room 1

Friday, July 26

- 9:00 AM American Veterinary Medical Record Association—Business Meeting/Guest Speakers—Las Vegas Convention Center, East Meeting Rooms, Room K2

Programs of Other Groups

American Academy of Veterinary and Comparative Toxicology

Tuesday, July 23

Presiding Officer: Gary D. Osweiler

- 1:30 PM The numbers racket: Process, problems and solutions in forming a national poison center database, by a professional association
Joseph C. Veltri
- 2:00 Computerization of National Animal Poison Control Center case records for epidemiologic evaluation
W. B. Buck
- 2:30 The Food Animal Residue Avoidance Databank (FARAD): A computer databank of the pharmacokinetics of drugs, pesticides, and environmental contaminants in food animals
Stephen F. Sundlof
- 3:00 Application of Sno-Vet in toxicology data management
F. R. Robinson
- 3:30 Diagnostic toxicology data handling at National Veterinary Services Laboratories
P. F. Ross

American Association of Animal Welfare Veterinarians

Thursday, July 25

Presiding Officer: William J. Kelch

- 6:30 PM Outline of animal welfare issues
William J. Kelch
- 6:45 Animal welfare and wildlife veterinary medicine
David A. Jessup
- 7:35 Animal mutilation problems
Bernard R. Pinckney
- 8:05 Animal welfare and organized veterinary medicine
Norman E. Hutton
- 8:20 Veterinary forensic medicine in a humane shelter
Donald McWade
- 8:40 Business meeting

American Association of Avian Pathologists

Las Vegas Convention Center, East Meeting Rooms B1, B2

Tuesday, July 23

Presiding Officers: Drs. Jagdev Sharma and Michael Ruff

BIOTECHNOLOGY IN THE DIAGNOSIS AND CONTROL OF

DISEASES OF POULTRY

Moderator: Jagdev Sharma

- 8:20 AM Welcome
Jagdev Sharma
- 8:25 What is biotechnology?
Dick Goldsby

- 8:55 DNA and monoclonal antibodies as probes for the diagnosis and control of avian diseases
David Cavanagh
- 9:25 Question/answer period
- 9:40 Coffee break

Moderator: Michael Ruff

- 10:00 Latest developments in ELISA technology
Dave Snyder
- 10:20 Development and application of genetically engineered viral vaccines of poultry
Jack Carlson
- 10:40 Development of bacterial vaccines using recombinant DNA technology
Richard Isaacson
- 11:00 Use of hybridoma antibodies and recombinant DNA technology in protozoan vaccine development
Harry Danforth
- 11:20 Gene Insertion: Current progress and long-term goals
Lyman Crittenden
- 11:20 Future applications of biotechnology in poultry
Graham Purchase
- 11:40 Question/answer period
- 12:00 Adjournment

American Association of Extension Veterinarians

Las Vegas Convention Center, East Meeting Rooms T2 and T4

Monday, July 22

Presiding Officer: Clell V. Bagley

- 1:00 PM Welcome
Clell Bagley
- 1:10 Application of epidemiology in extension
Don Hansen
- 1:35 How to conduct a meaningful survey
John Kaneene
- 2:00 Coordination of regulatory and extension roles
Harry Goldstein
- 2:30 Break
- 2:45 Combining extension and research responsibilities
Joe Manspeaker
- 3:10 Drug use practices
Jim McKean
- 3:35 Mastitis control program
Bob Bushnell
- 4:00 Business meeting
Larry Hutchinson

American Association of Food Hygiene Veterinarians

Las Vegas Convention Center

Monday, July 22

- 3:00 PM Board meeting (Outgoing)—East meeting rooms, Room F2
- 4:00 General business meeting—East meeting rooms, Room T1
- 5:00 Board meeting (Incoming)—East meeting rooms, Room F2

American Association of Veterinary Anatomists

Department of Anatomy
School of Veterinary Medicine
University of California
Davis, Calif

Friday, July 19 and Saturday, July 20

SESSION 1

Friday, July 19

- 1:00 PM Opening remarks
N. J. Wilsman
- 1:15 The superior colliculus and the substantia nigra: their association in the cat
M. Behan
- 1:30 The brachial plexus in the vervet monkey, *Ceropithecus aethiops*
K. K. Booth
- 1:45 Motor nerve conduction velocities in the racing greyhound
H. N. Engel, L. L. Blythe
- 2:00 Significant changes with age in the eye of the dog
C. L. Holloway
- 2:15 Electrophysiological evidence of two penile mechanoreceptor populations in the cat and their behavioral implications
R. D. Johnson, R. L. Kitchell, and H. Gilan-pour
- 2:30 Cerebellar cortical efferents in the opossum
P. S. Klinkhachorn and S. Klinkhachorn
- 2:45 Lumbosacral plexus of the sheep
E. J. Kirk and R. L. Kitchell
- 3:00 Break and poster session

SESSION 2

Friday, July 19

- 3:15 PM Type 2 myofiber subtype specific antibodies in a dog with polymyositis
G. H. Cardinet, III, G. D. Shelton and S. E. Willis
- 3:30 Developmental study of myosin isoforms in canine temporalis and limb muscles
G. D. Shelton, G. H. Cardinet, III, and E. Bandman
- 3:45 Morphometric and radiographic evaluation of canine carpal disuse osteoporosis
W. J. Banks
- 4:00 Development of the *Os penis* in the dog
H. Evans
- 4:15 Locomotor forces of galloping horses; a preliminary report
M. H. Ratzlaff, J. M. Fame, J. T. Kimbrell and B. O. Grant
- 4:30 Ultrastructural study of experimentally induced equine laminitis
P. C. Mishra and W. O. Sack
- 4:45 The effects of three methods of insertion on the stability of external splintage pins in the bone
M. J. Shively
- 5:00 Canine skull morphometrics: linear and volumetric
G. P. Wilson
- 5:15 Some hints on making better 2x2 lecture slides
P. D. Garrett

SESSION 3

Saturday, July 20

- 8:00 AM The morphology of atrioventricular and semilunar valves of the mammalian heart
B. G. Anderson and W. D. Anderson
- 8:15 The aorta: origin, course and distribution in the dog
W. D. Anderson and B. G. Anderson
- 8:30 Morphometry of blood vessels in goats and synthetic arterial grafts
R. E. Cartee
- 8:45 Alcoholic cardiomyopathy in an avian model
C. M. Czarnecki
- 9:00 Aspects of the anatomy and blood supply of the brain of *Papio ursinus*, *Cercopithecus pygerythrus*, and *Galago senegalensis*
A. R. Lake
- 9:15 Formaldehyde vapor levels in a gross anatomy laboratory
P. R. Rumph
- 9:30 Use of monastral blue B as a vascular label in teaching and research
D. E. Sims
- 9:45 Ultrastructure of the alveolar opening in the cat
R. W. Henry
- 10:00 Break and poster session

SESSION 4

Saturday, July 20

- 10:15 AM Inhibitory effect of interferon on bleomycin-induced pulmonary fibrosis in mice
D. M. Hyde and S. N. Giri
- 10:30 Automated quantitation of mucosubstance in the airway epithelium of rhesus monkeys
J. G. Heidsiek, D. M. Hyde, C. G. Plopper, and J. A. St. George
- 10:45 Correlative morphological study of cells recovered by bronchoalveolar lavage and airway biopsies in horses
S. Yamashiro
- 11:00 Comparative studies of the respiratory secretory apparatus in rabbits, rats, hamsters, sheep, rhesus monkey, and humans
J. A. St. George and C. G. Plopper
- 11:15 Scanning electron microscopy of centriacinar differentiation in the fetal rhesus monkey
N. K. Tyler and C. G. Plopper
- 11:30 Differentiation of the tracheobronchial secretory apparatus of the fetal rhesus monkey
C. G. Plopper, A. J. Weir, S. J. Nishio, D. L. Cranz, and J. A. St. George
- 11:45 Pulmonary effects of intermittent episodes of ozone in young monkeys
W. Tyler, N. Tyler, J. Last, T. Barstow, and M. Gillespie
- 12:00 Protofilaments of the respiratory cilium
N. J. Wilsman

SESSION 5

Saturday, July 20

- 1:00 PM Dendritic cells in canine epidermis: distribution and ultrastructure
P. F. More and A. T. Mariassy

- 1:15 Langerhans cells in domestic animals
J. F. Munnell
- 1:30 Secondary patellas in the rabbit
G. M. Constantinescu and R. C. McClure
- 1:45 Caudal cervical ganglia connections in the rabbit
R. C. McClure and G. M. Constantinescu
- 2:00 Rabbit renal morphology induced by uranyl nitrate 4.91-day recovery study following a low-dose treatment
A. Singh, A. P. Gilman and D. C. Villeneuve
- 2:15 Morphology of glycerol-treated testis
E. Heath
- 2:30 Effects of age and season on sperm abnormalities in Nubian goats
L. Hibbert and H. O. Goyal
- 2:45 Osteodystrophy in broiler chickens
J. Neubrey
- 3:00 In vitro culture of tenocytes
L. E. Stein

POSTERS

- Structure and organization of the subepithelial microvasculature in the canine nasal mucosa
D. R. Adams
- Plastination of biological teaching specimens
D. R. Adams, D. D. Draper, and J. S. Zawadowski
- Effects of aging on biliary motility and structure
K. L. Cox, A. T. W. Cheung, C. L. Lohse, C. K. Iwahashi-Hosoda, and E. M. Walsh
- Internal relationships of the opossum cerebellum
P. S. Klinkhachorn and P. Klinkhachorn
- Lectins as histochemical probes for carbohydrate detection
A. T. Mariassy

American Association of Veterinary Clinicians

Las Vegas Hilton, Ballroom E
Monday, July 22

- 8:00 AM Registration and coffee
- 8:30 Welcome and announcements
Jack Judy, President
- Survival surgery in the surgery teaching laboratory
Walter E. Weirich, Moderator
- 8:40 New Federal Guidelines on Animal Use/Care
Dean Franklin Loew
- 9:10 Discussion
- 9:25 Surgery teachers perspective
To be announced
- 9:55 Discussion
- 10:10 Break

- 10:30 A student perspective of survival surgery in the surgery teaching laboratory
Paul Perrier
- 11:00 Discussion
- 11:15 Humane Perspective of survival surgery in the surgery teaching laboratory
To be announced
- 11:45 Discussion
- 12:00 noon Lunch
- Are food animal curricula out of date?
Walter E. Weirich, Moderator
- 1:30 PM What are the attributes of a food animal practitioner?
Ben Harrington
- 2:00 Discussion
- 2:15 What's wrong with traditional food animal medicine curricula?
Michael Hill
- 2:45 Discussion
- 3:00 What can be done to interest the DVM student in food animal practice?
To be announced
- 3:30 Discussion
- 3:45 Break
- 4:00 Food animal curricula 1985: Where do we go from here?
Dean Robert Kahrs
- 4:20 Discussion
- 4:30 Business meeting
Jack Judy, Presiding Officer
- 5:00 Adjournment

American Association of Veterinary Parasitology

Las Vegas Convention Center, Room 4

Monday, July 22

- 7:00 AM Registration
- SESSION 1: EXPERIMENTAL AND CLINICAL STUDIES I
Moderators: J. F. Williams and P. H. Kleisus
- 8:00 Keynote Address—In vitro detection of anthelmintic activity—a review of established methods and discussion of a novel approach
J. L. Bennett
- 8:30 A new test for detecting anthelmintic resistant nematodes
D. J. Giordano, G. C. Coles, and J. P. Trischler
- 8:45 Anthelmintic resistant strain of *Haemonchus contortus* in the Louisiana State University Research Sheep Flock
J. E. Miller, F. G. Hembrly, D. Sims, and L. Stagg

- 9:00 Secretary/excretory chemotactic substances from *L. of Osteragia osteragi* account for eosinophil locomotion
P. Kleius, T. Haynes, D. Cross, and H. Ciordia
- 9:15 Cuticular ridge patterns separate *Haemonchus contortus* of sheep from *H. placei* of cattle
J. R. Lichtenfels, P. A. Pilirli, and L. F. LeJambre
- 9:30 Vacuuming horse pastures: a nonchemical approach to the control of horse parasites
R. P. Herd
- 9:45 Anthelmintic usage by New England sheep farmers
G. C. Coles
- 10:00 Coffee break

SESSION 2: DIROFILARIA

- Moderators: R. B. Grieve and J. W. McCall
- 10:30 Canine filariasis (*Dirofilaria immitis*, *D. repens*, and *Dipetalonema* spp) in Italy—historical and epidemiological perspectives
R. A. Roncalli
- 10:45 Development and survival of larval *Dirofilaria immitis* implanted in diffusion chambers in syngeneic normal and immunized mice
D. Abraham and R. B. Grieve
- 11:00 Evaluation and use of commercially available systems in the serodiagnosis of occult heartworm disease in dogs
T. W. Schillhorn van Veen
- 11:15 Confirmation of heartworm prophylaxis with single dose ivermectin at one month postinoculation by serology and late necropsy
M. T. Dzimiński, J. W. McCall, L. S. Blair, R. L. Seward, and R. E. Plue
- 11:30 Serological characterization of heartworm antibody response in ivermectin treated, laboratory raised Beagles exposed under field conditions
J. W. McCall, C. Bagshaw, J. Brown, and M. T. Dzimiński
- 11:45 *Dirofilaria* antigen preparation for the enzyme linked immunosorbent assay diagnosis of heartworm infection
B. S. Ebinne, B. J. Packer, R. M. Corwin, T. J. Green, and S. E. Pratt-Green
- 12:00 Lunch

SESSION 3: EPIDEMIOLOGY

- Moderators: C. H. Courtney and J. C. Williams
- 1:00 PM Epidemiology and control of gastrointestinal nematodes of cattle in Virginia
J. W. Hansen, B. D. Perry, and R. Freeman
- 1:15 An update on the hypobiotic changes in *Ostertagia ostertagi* during environmental adaptation in Louisiana
K. S. Marbury, J. C. Williams, and E. R. Willis
- 1:30 Trichinellosis in an agricultural ecosystem: transmission under natural and experimentally modified on-farm conditions
G. A. Shad, C. D. Duffy, D. A. Leiby, K. D. Murrell, and E. W. Zirkle
- 1:45 Epidemiological significance of intraspecific biological and biochemical variations in *Trichinella spiralis*
K. D. Murrell, T. A. Dick, F. Stringfellow, J. Dame, and G. A. Shad
- 2:00 Pattern of helminth egg counts in pastured horses over two grazing seasons
V. C. Gutierrez and T. J. Kennedy
- 2:15 Helminth populations in naturally parasitized grazing foals in Wisconsin and Alabama
R. M. McCormick and T. J. Kennedy

- 2:30 Periparturient rise in 3 strains of Florida native sheep and its relation to parasite resistance in lambs
C. H. Courtney
- 2:45 Population dynamics of trichostrongylid nematodes in pregnant and nonpregnant Florida native and Dorset/Rambouillet ewes
A. M. Zajac and R. P. Herd

POSTER SESSION (refreshments will be available)

- 3:00 Altered nematode prevalence following three consecutive years of Paratect bolus administration at the same pasture location
T. A. Yazwinski, B. L. Presson, H. Featherstone, T. J. Newby, and T. Greenway
- Drug resistance in flukes
G. C. Coles
- Dose-titration of fenbendazole in chickens
L. M. Pote and T. A. Yazwinski
- Parasitism in overwintering cattle in Missouri
R. M. Corwin, C. K. Wise, S. E. Pratt-Green, and B. Lucas
- Site specificity of avian *Cryptosporidium* sp.
D. S. Lindsay, B. L. Blagburn, and J. A. Ernest
- Resistance to *Ascaris suum* infection in pigs induced by postmigration larvae
T. B. Stewart and T. J. Rowell
- Evaluation of ivermectin as a microfilaricide in *Dirofilaria immitis* infected dogs
A. J. Paul, K. S. Todd, Jr., J. A. DiPietro, and J. J. Liu
- Levels of serum antibody against avian coccidia as measured by ELISA
M. D. Ruff and M. B. Chute
- Use of hybridoma antibodies in the study of host cell interaction with *Eimeria* sporozoites
H. D. Danforth and P. C. Augustine
- Nonpolar solute movement across isolated cuticle of *Ascaris suum*
R. H. Fetterer
- Combined effects of feeding stimulants and inhibitors on in vitro ingestion by *Trichostrongylus colubriformis*
L. W. Bone and K. P. Bottjer
- Combined effect of feeding stimulants or inhibitors and anthelmintics on in vitro ingestion by *Trichostrongylus colubriformis*
K. P. Bottjer and L. W. Bone
- Comparison of helminth larval counts from adult and immature horses over two grazing seasons
T. J. Kennedy and D. J. Bruer
- Experimental *Fascioloides magna* infection in calves
B. E. Stromberg, G. A. Conboy, D. W. Hayden, and J. C. Schlotthauer
- Influence of fenbendazole treatment on yearling steers with pretype II *Ostertagiasis*
G. L. Zimmerman, D. W. Weber, G. H. Myers, M. J. Nelson, C. R. B. Clark, and T. Brundage
- 4:00 PM SESSION 4: TREMATODES
Moderator: G. L. Zimmerman
- The guinea pig as a model for *Fascioloides magna* infection in sheep
G. A. Conboy, B. E. Stromberg, and D. W. Hayden
- Clorsulon efficacy against naturally occurring *Fasciola hepatica* in cattle as compared with albendazole
R. L. Kilgore, M. L. Williams, G. W. Benz, and S. J. Gross

- 4:30 Activity of SCH 32481 against gastrointestinal nematodes in yearling heifers and *Fasciola hepatica* in sheep
L. S. Richards, G. L. Zimmerman, D. W. Weber, S. D. Dauley, M. J. Nelson, and C. R. B. Clark
- 4:45 PM PRESIDENTIAL ADDRESS
Brainstorms on rainstorms and Louisiana snailforms—liver flukes in cattle
J. B. Malone, president AAVP
- 5:05 Business Meeting
- 6:00 Society Social Hour

Tuesday, July 23

SESSION 5: CHEMOTHERAPY

- Moderators: S. D. Foltz and G. H. Myers
- 8:00 AM Efficacy of SCH 32481 (Schering Corp) against inhibited larvae of *Ostertagia ostertagi*
J. C. Williams, J. W. Knox, K. S. Marbury, M. D. Kimball, E. R. Willis, T. G. Snider, and J. E. Miller
- 8:15 Efficacy of oxendazole as administered to cattle by intraruminal injection
B. L. Presson and T. A. Yazwinski
- 8:30 Late season nematode acquisition by calves previously treated with the Paratect bolus
T. A. Yazwinski, B. L. Presson, T. J. Newby, and H. E. Featherstone
- 8:45 The antitriglyce activity of a propylene glycol-glycerol formal based formation of ivermectin in horses
J. A. DiPietro, K. S. Todd, Jr., and V. Reuter
- 9:00 Comparative efficacies of VET 220 (Dienbendazole, prop. nom) and ivermectin against immature *Parascaris equorum* resulting from experimental infection of pony foals
T. R. Bello
- 9:15 Determination of rate and efficiency of gain of pigs following infection with *Ascaris suum* and anthelmintic treatment
J. F. Urban and N. C. Steele
- 9:30 Parasitism and production of once-daily suckling calves: effects of anthelmintic medication
H. Ciordia and J. A. Stuedemann
- 9:45 PRO-SPOT (fenthion) solution for control of fleas on dogs
R. G. Arther and D. D. Cox
- 10:00 Coffee break
- 10:30 Mitaban liquid concentrate: a tick and flea repellent and tick detachment drug
S. D. Foltz, K. A. Ash, G. A. Conder, and D. L. Rector
- 10:45 Residual efficacy of a new class of pyrethrin flea and tick control products
T. A. Miller
- SESSION 6: VETERINARY ENTOMOLOGY SYMPOSIUM
Moderator: J. A. Hawkins
- 11:00 AM The significance of ticks in cattle production in the United States
J. A. Hair
- 11:15 An update on horn fly pyrethroid resistance
D. C. Sheppard
- 11:30 Tick-borne spotted fever in the United States
B. R. Norment
- 12:00 Lunch
- SESSION 7: PROTOZOA
Moderators: C. R. Sterling and M. D. Ruff
- 1:00 PM Keynote Address—Immunity to *Toxoplasma gondii* and protective mechanisms
J. K. Frenkel

- 1:30 *Toxoplasma*-induced abortions in sheep in Maryland
J. P. Dubey, S. Miller, E. C. Powell, and W. R. Anderson
- 1:45 *Cryptosporidium* infections detected by direct immunofluorescence using a monoclonal antibody recognizing an oocyst determinant
M. J. Arrowood and C. R. Sterling
- 2:00 Host specificity of avian *Cryptosporidium* sp.
B. L. Blagburn, D. S. Lindsay, and J. A. Ernest
- 2:15 Measurement of antibody response to experimentally induced *Eimeria* *bovis* and *E. zuernii* infection in calves by enzyme-linked immunosorbent assay
H. Saatar Oz, B. E. Stromberg, W. J. Bernrick, and H. H. Oz
- 2:30 A quantitative study of coccidia of beef calves from the coastal plains area of Georgia
J. V. Ernst and T. B. Stewart
- 2:45 Iprnidazole in the treatment of bovine trichomoniasis, our experience
J. M. Cheney, L. Ball, R. G. Mortimer, and C. K. Kimberling
- 3:00 Coffee break

SESSION 8: EXPERIMENTAL AND CLINICAL STUDIES II

- Moderators: T. A. Yazwinski and H. Ciordia
- 3:15 PM Characterization of horn fly induced equine dermatitis and its potential relationship to onchocerciasis
L. D. Foil, T. R. Klei, R. F. Miller, C. S. Foil, and D. D. French
- 3:30 The antifecundity effect on *Trichinella spiralis* in immune pigs
H. P. Marti and K. D. Murrell
- 3:45 Immunization of swine against *Trichinella spiralis* using ES antigens
H. R. Gamble and K. D. Murrell
- 4:00 Quantification of cellular immune responses in *Ostertagia*-infected calves
L. C. Gasbarre
- 4:15 Potential antigens for serodiagnosis of bovine cysticercosis
E. Sollo and M. Rhoads
- 4:30 Detection and assessment of subclinical lung worm infection in calves by fecal analysis, hematological changes, biochemical profiling and scanning electron microscopy
F. M. Seeser and D. E. Worley

American Association of Veterinary State Boards

Las Vegas Convention Center, Room 3
Tuesday, July 23 and Wednesday, July 24

All licensing board members, administrators and interested persons are cordially invited to attend. There is no registration fee.

Tuesday, July 23

- 1:00 PM Meeting called to order and opening remarks by President Glen H. Nelson
- 1:15 Introduction of attendees
- 1:30 Minutes, correspondence, and treasurer's report
- 1:50 Executive Board report
- 2:00 Report on Educational Commission of Foreign Veterinary Graduates
Susan McDonough
- 2:10 Report on Animal Health Technicians
Joe S. Gloyd

- 2:20 Response from attendees to August 1984 AVMA memo "Legal principles and policies applicable to unethical conduct affecting the integrity of professional licensing and credentialing examinations"
- 2:30 Student Chapter Representative
- 2:45 Review of AVMA ad hoc committee report on impairment
- 3:00 Report on legislation and regulation pertaining to professional impairment
Roger Shipman, Esq
- 3:15 Report on National Board Examination (NBE) and Clinical Competency Test (CCT)—Use, Plans, and Problems from Professional Examination Service
Karim Hayez
- 4:15 Report on "Survey of Scoring Procedures for NBE and CCT"
Ben Harrington
- Wednesday, July 24
- 8:00 AM Meeting reconvenes
Glen H. Nelson
- 8:05 Discussion on impairment and other matters continues
- 8:30 Program—Panel seminar and discussion on Limited Licensure, Diplomate and Specialty Licensure
Jean Buist
- 10:00 Practical examination validation
Gary Hill
- 10:30 Old business
- 10:45 New business
- 11:15 Nomination, election and installation of officers
- 11:45 Adjournment

American Association of Wildlife Veterinarians

Las Vegas Convention Center, East Meeting Room P1
Thursday, July 25
Presiding Officer: David A. Jessup

- 2:00 PM Business meeting
- 3:00 Advances in chemical immobilization of North American wild ungulates
David A. Jessup
- 3:40 Pneumonia in Bighorn lambs of California's Santa Rosa Mountains
Charles Jenner
- 4:20 Bluetongue in California's wild ruminants
David A. Jessup

American Society of Veterinary Ophthalmology

Monday, July 22

- 8:30 AM Basic diagnostic techniques
Glenn Severin
- 9:30 Food animal ophthalmology
Milton Wyman
- 10:30 Coffee break
- 10:45 Equine ophthalmology
Ron Sigler
- 11:45 Questions and answers
- 12:00 noon Lunch
- 1:30 PM Feline ophthalmology
Art Quinn

- 2:30 Canine ophthalmology
Mark Nasisse
- 3:30 Coffee break
- 3:45 Ophthalmic surgery—methods, instruments, techniques, and tips
Bill Jackson
- 4:45 Questions and answers
Adjournment

American Veterinary History Society

Las Vegas Hilton, Room 12
Tuesday, July 23
Presiding Officer: Robert R. Shomer

- 8:00 PM President's address
- 8:15 Dr. K. F. Meyer and his impact on epidemiology
James H. Steele
- 8:35 Veterinary history exhibit, Montana Historical Museum, Helena
Glenn C. Halver
- 8:55 The horse and Crow Indian history and culture
Elizabeth A. Lawrence
- 9:15 Bovine tuberculosis in the United States: To 1917
Everett B. Miller
- 9:35 Business session

AVMA Auxiliary

Wednesday, July 24

- 2:00 PM You, your practice and color
Valerie Vale
Fee: \$5.00

AVMA Group Insurance Trust

Las Vegas Hilton
Thursday, July 25

- 8:00 AM Business meeting—Conference Room 9
- 12:00 noon Luncheon—Conference Rooms 12, 13, 14

American Veterinary Medical Record Association

Las Vegas Convention Center
Tuesday, July 23-Friday, July 26
Presiding Officer: Margaret Nederer
Tuesday, July 23

East Meeting Rooms, Room K1

- 9:00 AM-5:00 PM Computer applications in veterinary medical records (registration limited to 50)
Registration fee: \$20.00
- 9:00-10:30 AM The paperless medical record
John R. Krismer
- 10:45-12:00 noon Minutrieve: an automated document-handling system
Ed Fowler

- 1:30-3:00 PM Data collection, accounting, and document tracking utilizing bar-code readers and scanners
Mike Cizek
- 3:00-5:00 PM Ample time will be provided in the afternoon for "hands-on" demonstration of these systems

Wednesday, July 24

East Meeting Rooms, Room K2

- 9:00 AM-12 noon The VMDP year in review
Robert Lewis and Gene Slater
Use of data from VMDP
Howard Hayes
Presentation on implementation and evaluation of a pilot study utilizing SNOVET/SNVDO coding schemes
Walt Weirich and Karen Franks
Development and implementation of data retrieval system for new VMDP member institution
Jackie Allison
- 1:00 PM-5:00 PM The impact of third party payors on the Veterinary Medical Record Department
Veterinary pet insurance
Ron LaCharite
Implications for the Veterinary Medical Record Department: An open forum

Thursday, July 25

East Meeting Rooms, Room K2

- 9:00 AM-10:00 AM Data quality control for national databank
Howard Hayes
- 10:00 AM-12 noon Effective writing for the professional
Janice Reid
- 1:00-5:00 PM Dynamics of leadership styles and motivation of employees
Dan McAllister
- Friday, July 26
- East Meeting Rooms, Room K2
- 9:00 to 11:00 AM Time management for the busy professional
Mary I. Williams
- 1:00-3:00 PM Positioning for our changing role through our professional association—AVMRA business meeting
Margaret Neterer

American Veterinary Neurology Association

Las Vegas Hilton, Conference Room 10

Monday, July 22
Moderator: Steven B. Colter

- 8:30 AM The behavioral and neurological evaluation of brain irradiation in Beagles
B. V. Beaver, D. Hightower and C. L. Hall
- 9:30 Trigeminal evoked potentials in the dog: techniques and normal values
Ray Whalen
- 10:00 Break
- 10:30 Electrophysiologic and behavior studies of the saphenous nerve with morphometric studies of saphenous nerve biopsies
Ray Whalen
- 11:30 Lunch
- 1:00 PM Business meeting

- 1:30 Impedance audiometry and brain stem auditory evoked responses in differentiation of conductive and sensory-neuro hearing deficits
Donald C. Levesque
- 2:30 Motor nerve conduction velocity in racing Greyhounds
Linda L. Blythe
- 3:00 Break
- 3:15 Equine degenerative myelopathy in a family of Appaloosa horses
Linda L. Blythe
- 3:45 Patterns of cutaneous anesthesia associated with brachial plexus avulsion in the dog
Cleta Sue Bailey
- 4:45 Adjourn

American Veterinary Society of Animal Behavior

Embassy Salon, Hilton Hotel

Monday, July 22

Presiding Officer: Sharon Crowell-Davis

- 9:00 AM Analysis of 2,500 telephone calls about behavior problems of dogs and cats
Victoria L. Voith
- 9:30 Reactive distances of animals
George H. Waring
- 10:00 Break
- 10:30 A case of psychomotor epilepsy responsive to environmental stimuli
Sharon L. Crowell-Davis
- 11:00 Diazepam for the treatment of spraying in cats
Amy R. Marder
- 11:30-1:30 Lunch
- 1:30 Pet facilitated therapy-intervention strategies with individuals with mental retardation
Robert M. Andryscio
- 2:00 A comparison of music and pet recreational therapy in a nursing home
Victoria L. Voith
- 2:30 Break
- 3:00 Pet ownership in federally assisted rental housing for the elderly and handicapped
Albert O. Griffiths
- 4:00 Business meeting

Association for Women Veterinarians

Monday, July 22

Las Vegas Hilton, Ballroom F

- 10:00 AM AWV Executive Board meeting
- 1:30 PM How in Health Are You?—group participation workshop on interpersonal relationships between professional women, their spouses, and their environment
Rev. Dr. Robert P. Lawrence
- 4:00 AWV annual business meeting
- 5:30 AWV reception for members, prospective members, and spouses

This workshop is sponsored by: Coopers Animal Health, Inc., Fromm Laboratories, Gaines Professional Service, and Fort Dodge Laboratories. The reception is sponsored by Hoechst-Roussel Agri-vet Co.

Association of Veterinarians for Animal Rights

Thursday, July 25

Presiding Officer: Nedim C. Buyukmihci, Co-director

9:15 AM-	Inextricability of animal rights and veterinary medicine
12:00 noon	Tom Regan

Christian Veterinary Mission

Sunday, July 21

Las Vegas Hilton, Conference Room 11

7:30 PM	State representatives advisory board meeting
	Monday, July 22
	Convention Center, Room 2
8:00 AM	Coffee and rolls
8:30	Devotion Bob Otto
9:00	Introductions Leroy Dorminy
9:15	Fiscal year 1984-1985 Scott Rodin
	Projections 1985-1986 CVM Coordinator
10:00	Coffee break
10:15	Project reports around the world Ken Weinland-Bolivia Bob Brabrook-Navajo Nation
11:15	Holistic resource management Don Sylvester
12:00 noon	Lunch
1:30 PM	Where We've Been and Where We're Going Craig Shuck
2:00	Shuttle Maureen Birmingham, Dan Paulo, Tom Gillaspie, Warren Wilson, and Tom Loafman, Terry Abbott, Steve Litchfield
3:30	Coffee break
3:45	Panel discussion
4:30	Closing remarks

Flying Veterinarians Association

Las Vegas Hilton, Conference Room 9
Wednesday, July 24

11:45 AM	Luncheon
----------	----------

US Army Veterinary Corps

Tuesday, July 23

12:00 noon	Reception
1:00 PM	Luncheon
2:00	Current status and trends within the US Army Veterinary Corps Robert R. Jorgensen
2:30	Update on research and development activities Daniel L. Huxsoll
2:50	Update on veterinary activities at Health Services Command George Wyckoff
3:10	Update on veterinary corps personnel Wm. H. H. Clark
3:30	Adjournment

Veterinary Academy on Disaster Medicine: USA

Thursday, July 25

Las Vegas Convention Center, East Meeting Rooms, Room J
Presiding Officer: Robert R. Shomer

9:00 AM	Emergency preparedness in USDA H. A. McDaniel
9:30	The Fall County, Texas, Horse disaster Craig N. Carter
10:00	The National Animal Poison Control Center and the Proposed Poison Information Network Val B. Beasley
10:30	Chemical Disasters among Animals R. D. Linnabary
11:00	Business session

Program of the American Society of Parasitologists

MONDAY MORNING
5, AUGUST
11:00 A.M.
College of Veterinary Medicine, H-237

OPENING SECTION
and
WELCOME

Presiding: Harry Hoogstraal
Medical Zoology Department
NAMRU-3
Cairo, Egypt

Welcome to Georgia. FRED C. DAVISON, President, University of Georgia.

PAPER
NO.

- 1 Interrelationships Between a Cliff Swallow Population, Ectoparasites, and Infectious Agents. CLUFF E. HOPLA, George Lynn Cross Research Professor of Zoology, University of Oklahoma, Norman.

Announcements.

MONDAY AFTERNOON
5, AUGUST
1:30 P.M.
College of Veterinary Medicine, H-203

SECTION A
CHEMOTHERAPY & CONTROL
and
PHYSIOLOGY and BIOCHEMISTRY

Presiding: Larry S. Roberts
Texas Tech University
Lubbock

Manus J. Donahue
North Texas State University
Denton

TIME PAPER
NO.

- ✓ 1:30 2 The Efficacy of Ivermectin Against Nematodes of Fish. RICHARD A. HECKMANN, Department of Zoology, Brigham Young University, Provo, Utah.
- ✓ 1:45 3 Potentiation of Two Organophosphate Anthelmintics by a Macrotetralide Antibiotic. J.R. EGERTON* and C.H. EARY, Merck Institute for Therapeutic Research, Rahway, New Jersey.
- 2:00 4 Quinone-dependence of the *Hymenolepis diminuta* Mitochondrial Electron Transport Mechanism. YOUNGHEE KIM* and CARMEN F. FIORAVANTI. Department of Biological Sciences, Bowling Green State University, Bowling Green, Ohio.
- 2:15 5 Occurrence of Hydroxymethylglutaryl CoA (HMG-CoA) Reductase Activity in Adult *Hymenolepis diminuta*. CARMEN F. FIORAVANTI*, YOUNGHEE KIM, CURTIS L. BATTEN and JONNA R. WEAVER. Department of Biological Sciences, Bowling Green State University, Bowling Green, Ohio.
- 2:30 COFFEE BREAK

Program of the American Society of Parasitologists

TIME PAPER
NO.

- 2:45 6 *Schistosoma mansoni*: Linoleate Dose vs. Cercarial Penetration, Transformation and Eicosanoid Production. A.C. FUSCO*, B. SASFASKY and K.E. DELBROOK, University of Illinois College of Medicine at Rockford, Department of Biomedical Sciences, Rockford.
- 3:00 7 *Schistosoma mansoni*: Female-dependent Lipid Secretion in Males and Corresponding Changes in Lipase Activity. M.A. HASEEB*, SUNY, Downstate Medical Center, Brooklyn, B. FRIED, Lafayette College, Easton, Pennsylvania, and L.K. EVELAND, California State University, Long Beach.
- 3:15 8 In Vitro Estimation of the Rate of Hexose Phosphorylation in *Schistosoma mansoni*. EAIN M. CORNFORD. Department of Neurology, UCLA School of Medicine; and Southwest Regional VA Epilepsy Center, Veterans Administration Wadsworth Medical Center, Los Angeles.
- 3:30 9 *Schistosoma mansoni*: Isolation of a Female-specific cDNA Clone. L. BOBEK, H. VAN KEULEN, D. REKOSH and P.T. LOVERDE*, Departments of Microbiology and Biochemistry, State University of New York at Buffalo.
- 3:45 10 *Schistosoma mansoni*: Adult Worm Proteinase: Tissue Localization and Antibody Response. C.L. CHAPPELL*, Baylor College of Medicine, Houston, Texas, A.M. DEELDER, University of Leiden, The Netherlands, M.H. DRESDEN, Baylor College of Medicine, Houston, Texas.
- 4:00 11 Schistosomiasis: Effect of a Proline Analog on Granuloma Formation in Mice, PAUL M. ZOYHOFSKI*, PAMELA L. JONES and HADAR ISSEROFF. State University College at Buffalo, New York.

MONDAY AFTERNOON
5, AUGUST
1:15 P.M.
College of Veterinary Medicine, H-237

SECTION B
IMMUNOLOGY

Presiding: W.M. Kemp
Texas A&M University
College Station

and
B.L. Doughty
Texas A&M University
College Station

TIME PAPER
NO.

- 1:15 12 Antigen Specificities of Antibodies from Clinical Dracunculiasis Sera. MICHAEL M. KLIKS* and DANIEL C.F. CHAN, Cancer Research Center of Hawaii, Honolulu.
- 1:30 13 Anti-fecundity Effect on *Trichinella spiralis* in Immune Pigs. H.P. MARTI* and K.D. MURRELL, Animal Parasitology Institute, U.S. Department of Agriculture, Agricultural Research Service, Beltsville, Maryland.
- 1:45 14 *Trichinella spiralis*: Protein Variation and Antigen Conservation in Secretory Products from Different Isolates. H.R. GAMBLE* and K.D. MURRELL, Animal Parasitology Institute, U.S. Department of Agriculture, Agricultural Research Service, Beltsville, Maryland.
- 2:00 15 Translational Analysis of mRNA from Infective and Non-Infective *Trichinella spiralis* Muscle Larvae. DANTE S. ZARLENGA* and H.R. GAMBLE. Animal Parasitology Institute, U.S. Department of Agriculture, Agricultural Research Service, Beltsville, Maryland.

TIME	PAPER NO.	
2:15	16	Genes Within the Major Histocompatibility Complex Influence Immunity to <i>Nematospiroides dubius</i> Infections of Mice. D.L. WASSON*, F.J. ENRIQUEZ, P.C. SAYLES, B.O. BROOKS, and R.H. CYPESS. Department of Preventive Medicine, New York State College of Veterinary Medicine, Cornell University, Ithaca.
2:30	17	Characterization of the Splenic Lymphocyte Spontaneously Synthesizing DNA in Mice Infected with <i>Toxocara canis</i> . S.G. KAYES* and P.E. OMHOLT, University of South Alabama, Department of Anatomy, Mobile.
2:45		COFFEE BREAK
3:00	18	<i>Anisakis simplex</i> Excretory-Secretory Products: In Vitro Effects on Transformed Cell Growth and Cyclic AMP Levels. R.B. RAYBOURNE*, J.W. BIER and T.L. DEARDORFF, U.S. Food and Drug Administration, Washington, District of Columbia, and Dauphin Island, Alabama.
3:15	19	Use of Serologic Techniques in Diagnosis of Heartworm Disease. SANDRA TILLOTSON MULLINS, Oklahoma State University, Stillwater.
3:30	20	Antibody and Cellular Immune Responses to Microfilarial Antigens in Ferrets Experimentally Infected with <i>Brugia malayi</i> . S.A. HINES, J.P. THOMPSON, R.B. CRANDALL, C.A. CRANDALL, and T.J. DOYLE, IV. College of Medicine, University of Florida, Gainesville.
3:45	21	<i>Brugia pahangi</i> In Vitro Products: Characterization and Immune Response by Infected Dogs. KAREN SNOWDEN* and B. HAMMERBERG, North Carolina State University, Raleigh.
4:00	22	Humoral Immunity in Primary Echinococcosis of Dogs. O.O. BARRIGA*, Ohio State University, College of Veterinary Medicine, Department of Veterinary Pathobiology, Columbus; N.W. AL-KHALIDI, University of Mosul, College of Veterinary Medicine, Department of Microbiology, Mosul, Iraq.
4:15	23	Evaluation of Spleen Lymphocyte Responsiveness to a T Cell Mitogen During Early Infection With Larval <i>Taenia taeniaeformis</i> . T. LETONJA, C. HAMMERBERG, and G. SCHURIG. Virginia-Maryland Regional College of Veterinary Medicine, Virginia Tech, Blacksburg.
4:30	24	Enhancement of Macrophage-mediated Cytotoxicity against <i>Schistosoma mansoni</i> Schistosomules In Vitro with Dialyzable Leukocyte Extracts. JOHN H. WYCKOFF III, Department of Microbiology, College of Veterinary Medicine, University of Tennessee, Knoxville.
4:45	25	Analysis of the Oligosaccharide Structures of Glycoproteins from <i>Schistosoma mansoni</i> Adults. KWAME NYAME*, R.D. CUMMINGS and R.T. DAMIAN. University of Georgia, Department of Zoology.

MONDAY AFTERNOON
5, AUGUST
1:30 P.M.
College of Veterinary Medicine, 360

Presiding: A.K. Prestwood
University of Georgia and
Athens

SECTION C ECOLOGY

John M. Aho
Savannah River Ecology Lab.
Aiken, South Carolina

TIME	PAPER NO.	
1:30	26	Comparative Ecology of Helminth Assemblages in Sympatric Salamanders. T.M. GOATER* and G.W. ESCH, Department of Biology, Wake Forest University, Winston-Salem, North Carolina.
1:45	27	Cecal Nematode Interactions in Bobwhite Quail. JANICE MOORE*, Colorado State University, Fort Collins; DANIEL SIMBERLOFF, Florida State University, Tallahassee; and MICHAEL FREEHLING, Colorado State University, Fort Collins.
2:00	28	Distribution of Ligulid Tapeworms in China. XIANGHUA LIAO* and D.H. LIANG, Ichthyology Laboratory, Biology Department Zhongshan University, Guangzhou, People's Republic of China.
2:15	29	Parasites of Mottled Sculpins, <i>Cottus bairdi</i> , from the Ford River, Michigan. PATRICK M. MUZZALL*, Department of Natural Science, GARY E. WHELAN and WILLIAM W. TAYLOR, Department of Fisheries and Wildlife, Michigan State University, East Lansing.
2:30	30	The Impact of the Hemiurid Trematode, <i>Halipegus occidialis</i> , on the Fecundity of its Molluscan Host, <i>Helisoma anceps</i> : An Example of Parasitic Castration? AMY E. CREWS* and GERALD W. ESCH, Wake Forest University, Winston-Salem, North Carolina.
2:45		COFFEE BREAK
3:00	31	Spatial Distribution of <i>Crepidosomum cooperi</i> and the Burrowing Mayfly, <i>Hexagenia limbata</i> . D. MARCOGLIESE*, T. GOATER, A. CREWS, and G. ESCH. Department of Biology, Wake Forest University, Winston-Salem, North Carolina.
3:15	32	Host-Finding Behavior of the Cat Flea, <i>Ctenocephalides felis</i> . VICTORIA A. HERRINGTON and KENNETH S. SALADIN*, Georgia College, Milledgeville.

TUESDAY MORNING
6, AUGUST
8:30 A.M.
College of Veterinary Medicine, H-237

Presiding: Larry S. Roberts and Paul Homsher
Texas Tech University and Old Dominion University
Lubbock Norfolk, Virginia

Topic: HIGHLIGHTS IN RECENT RESEARCH ON TICKS AND TICKBORNE DISEASES.

PAPER NO.	
✓ 33	Introduction. LARRY S. ROBERTS, Texas Tech University, Lubbock.
✓ 34	Highlights of Contemporary Research on Human Disease Caused by Tickborne Viruses, Rickettsiae, Protozoa and Spirochetes. CONRAD E. YUNKER, USDA-ARS, Hemoparasite Laboratory, Pullman, Washington.
✓ 35	Highlights in Recent Research on Tickborne Diseases of Domestic Animals. G. VILLENBERG, University of Utrecht, Department of Tropical Veterinary Medicine and Protozoology, Utrecht, the Netherlands.

Headquarters: [unclear] (1980)
[unclear]

TIME	PAPER NO.	
10:00-10:15		COFFEE BREAK
✓ 36		Highlights of Contemporary Research on Host Immune Responses to Ticks. STEVEN J. BROWN, Department of Epidemiology and Public Health, Yale University, New Haven, Connecticut.
✓ 37		Hormonal Regulation of Mating Behavior in Ticks. DANIEL E. SONEHSHINE, Department of Biology, Old Dominion University, Norfolk, Virginia.
✓ 38		Summary. PAUL HOMSHER, Old Dominion University, Norfolk, Virginia.

TUESDAY AFTERNOON
6, AUGUST
1:30 P.M.
College of Veterinary Medicine, H-237

Presiding: John A. Oaks
University of Wisconsin

STOLL-STUNKARD
ENDOWMENT LECTURES

TIME	PAPER NO.	
✓ 39		The Dynamics of Human Host Parasite Associations. ROBERT M. MAY. Department of Biology, Princeton University, Princeton, New Jersey.

TUESDAY AFTERNOON
6, AUGUST
3:00 P.M.
College of Veterinary Medicine, H-203

Presiding: Mary H. Pritchard
University of Nebraska
Lincoln

SECTION A
DEVELOPMENT and LIFE CYCLES

Janine N. Caira
University of Nebraska
Lincoln

TIME	PAPER NO.	
3:00	40	In Vivo Production of Microfilariae by Single Pair Infections of <i>Loa loa</i> in the Experimental Primate Host. MARK L. EBERHARD*, Delta Regional Primate Research Center, Covington, Louisiana, and THOMAS C. ORIEL, Tulane Medical Center, New Orleans, Louisiana.
3:15	41	Biotic Potential of <i>Plagiorchiis elegans</i> (Digenea: Plagiorchiidae). A.M. GORMAN, University of Maine at Presque Isle.
3:30	42	In Vivo Excystation of <i>Echinostoma revolutum</i> . BERNARD FRIED* and KARA KLETKEWICZ, Lafayette College, Easton, Pennsylvania.
3:45	43	Integumentary Papillae and Histochemical Observation on Acetylcholinesterase Localization in Certain Larval Stages of <i>Parorchis acanthus</i> and <i>Cloacitrema michiganensis</i> . WILLIAM B. LEFLORE*, Spelman College, Atlanta, Georgia; HARRY BASS, Atlanta University, Atlanta, Georgia; and BERNARD FRIED, Lafayette College, Easton, Pennsylvania.

TIME	PAPER NO.	
4:00	44	Multiple Cat Litters Infected by Milk-Borne <i>Alaria marcianae</i> . WESLEY L. SHOOP*, Department of Biological Sciences, Murray State University, and KENNETH C. CORKUM, Department of Zoology and Physiology, Louisiana State University.

TUESDAY AFTERNOON
6, AUGUST
3:00 P.M.
College of Veterinary Medicine, H-237

Presiding: Gerald W. Esch
Wake Forest University
Winston-Salem, North Carolina

SECTION B
EPIDEMIOLOGY
and
SURVEYS
Albert O. Bush
Brandon University
Brandon, Manitoba
Canada

TIME	PAPER NO.	
3:00	45	Prevalence of <i>Dirofilaria immitis</i> and Antibodies to <i>Toxoplasma gondii</i> in Stray Cats from Knox County, Tennessee. SHARON PATTON*, S.L. STRAWBRIDGE, M.D. McCracken, S.R. RANDOLPH and T. ROBERSON, Department of Pathobiology, College of Veterinary Medicine, University of Tennessee, Knoxville.
3:15	46	<i>Syngamus ierei</i> Infections of Cats in the Metropolitan Area of San Juan, Puerto Rico. J.M. SEGARRA* and W. KOZEK, University of Puerto Rico School of Medicine, San Juan.
3:30	47	A 3-year Surveillance for Intestinal Helminths in Sheep Dogs in Central Utah. FERRON L. ANDERSEN*, Brigham Young University, Provo, Utah; LAURITZ A. JENSEN, University of Health Sciences, Kansas City, Missouri; and H. DENNIS McCURDY, Bayvet Division, Miles Laboratory Inc., Shawnee, Kansas.
3:45	48	Helminths of the Cave Salamander from Western Kentucky. MARC D. CASTLE*, B.M. CHRISTENSEN, Department of Veterinary Science, University of Wisconsin-Madison, Madison; and D. STROHLEIN, School of Veterinary Medicine, Department of Parasitology, University of Georgia, Athens.
4:00	49	Ecological Aspects of Snake Hemogregarine Infections from Two Habitats in Southeastern Louisiana. AMY LOWICHIK* and ROBERT G. YAEGER, Department of Parasitology, Tulane University, New Orleans, Louisiana.
4:15	50	Taxonomy and Community Structure of the Helminths of the Long-Billed Curlew (<i>Numenius americanus</i>). C.P. GOATER* and A.O. BUSH. Brandon University, Brandon, Manitoba.
4:30	50A	Helminth Parasites of Centrarchids from Lake Nipissing, Ontario. DESMOND D. ANTHONY, Nipissing University College, North Bay, Ontario, Canada.

TUESDAY AFTERNOON
6, AUGUST
3:00 P.M.
College of Veterinary Medicine, 360

Presiding: J.K. Frenkel
University of Kansas
Kansas City

SECTION C
PATHOLOGY

TIME	PAPER NO.	
3:00	✓ 51	A Cytolytic Pore-forming Protein is Associated with the Plasma Membrane of <i>Naegleria fowleri</i> . D.M. LOWREY. Department of Microbiology/Immunology, New York Medical College, Valhalla.
3:15	✓ 52	Experimental Pipe Stem Fibrosis in Hamsters due to Infection with Egyptian Strain of <i>Schistosoma haematobium</i> . SAMIR N. MINA,* SANAA N. ANTONIOS and AHMED A. GALAL, Faculty of Medicine, Tanta University, Tanta, Egypt.
3:30	✓ 53	Pulmonary Aspergillosis: A Complication of Mixed Schistosome Infection in Hamster. SANAA N. ANTONIOS*, AHMED A. GALAL and ZEINAB K. EL-GINDY, Faculty of Medicine, Tanta University, Tanta, Egypt.
3:45	✓ 54	Invasive Anisakiasis: First Case Report from Hawaii. THOMAS L. DEARDORFF*, Fishery Research Branch, USFDA, Dauphin Island, Alabama; TAKAKAZU FUKUMURA, T. Fukumura Clinic, Honolulu, Hawaii; and RICHARD B. RAYBOURNE, Division of Microbiology, U.S. Food and Drug Administration, Washington, D.C.

TUESDAY EVENING

6, AUGUST

8:00 P.M.

College of Veterinary Medicine, H-237

SYMPOSIUM: EVIDENCE
FOR PARASITIC HYPOBIOSISComposed by American Society of Parasitologists and American Association
of Veterinary Parasitologists.Presiding: Edward L. Roberson
University of Georgia
Athens

PAPER NO.	
✓ 55	Evidence for Hypobiosis in Parasites of Small Animals. M.D. LITTLE, School of Public Health and Tropical Medicine, Tulane University, New Orleans, Louisiana.
✓ 56	Evidence for Hypobiosis in Parasites of Large Animals. N.F. BAKER*, University of California, Davis.
✓ 57	Evidence for Hypobiosis in Parasites of Humans. GERHARD A. SCHAD, School of Veterinary Medicine, University of Pennsylvania, Philadelphia.

Panel Discussion

10:00 P.M. WINE/CHEESE SOCIAL
Compliments of American Association of Veterinary
Parasitologists

WEDNESDAY MORNING

7, AUGUST

8:45 A.M.

College of Veterinary Medicine, H-203

SECTION A
DEVELOPMENT and LIFE CYCLESPresiding: Donald W. Duszynski and David W. Reduker
University of New Mexico Montana State University
Albuquerque Bozeman

TIME	PAPER NO.	
8:45	58	<i>Alloclero hylae</i> an Endoparasite Worm (Naididae, Oligochaeta, Annelida) from a Colombian Poison Dart Frog <i>Dendrobates histrionicus</i> : Ureteral and Cloacal Habitat and Visceral Migration. J.K. FRENKEL* and W.J. HARMAN. Department of Pathology, University of Kansas School of Medicine, Kansas City, and Department of Zoology, Louisiana State University, Baton Rouge.
9:00	59	Exit of <i>Ichthyophthirius multifiliis</i> from Catfish Epithelium. MARGARET S. EWING*, Department of Zoology, KATHERINE M. KOCHAN, Department of Veterinary Pathology, and S.A. EWING Department of Veterinary Parasitology, Oklahoma State University, Stillwater.
9:15	60	The Sporulation Time of <i>Isospora suis</i> Oocysts. JOHN V. ERNST*. U.S. Department of Agriculture, Agricultural Research Service, Animal Parasitology Institute, Beltsville, Maryland.
9:30	61	Endogenous Development of <i>Sarcocystis rauschorum</i> (Protozoa: Sarcocystidae) in Varying Lemmings <i>Dicrostonyx richardsoni</i> : Light Microscopy. RICHARD J. CAWTHORN*, University of Saskatchewan, Saskatoon, Saskatchewan (present address: University of Prince Edward Island, Charlottetown, P.E.I.) and RONALD J. BROOKS, University of Guelph, Ontario.
9:45	62	Characterization of an Avian <i>Cryptosporidium</i> Isolate in Chickens. DAVID S. LINDSAY, BYRON L. BLAGBURN, CHRISTINE A. SUNDERMANN and FREDERIC J. HOERR. Department of Pathology and Parasitology and General Biology, Auburn University, and Alabama Department of Agriculture and Industries.

WEDNESDAY MORNING

7, AUGUST

8:45 A.M.

College of Veterinary Medicine, H-237

SECTION B
INVERTEBRATE PARASITE
RELATIONSHIPSPresiding: Bruce M. Christensen and E.S. Loker
University of Wisconsin Madison Virginia Commonwealth University
Richmond

TIME	PAPER NO.	
8:45	63	Leucocytosis and Precipitate Formation in Hemolymph of <i>Biomphalaria glabrata</i> Infected with <i>Echinostoma paraensei</i> . E.S. LOKER, Virginia Commonwealth University, Richmond, Virginia.
9:00	64	<i>Biomphalaria glabrata</i> : Effect of Urethane of Hemocyte Morphology and Function, and on Susceptibility to <i>Schistosoma mansoni</i> . WILLARD O. GRANATH, JR. University of Montana, Missoula, and TIMOTHY P. YOSHINO, University of Oklahoma, Norman.
9:15	65	Carophyllidean Cestode-Aquatic Oligochaete Interactions. C. COURTNEY and B.M. CHRISTENSEN, Department of Veterinary Science, University of Wisconsin-Madison, Madison.
9:30	66	Effect of Host Age and Prior Infection of the Immune Response of Mosquitoes to Microfilariae. B.M. CHRISTENSEN and M.M. LAFOND, Department of Veterinary Science, University of Wisconsin-Madison, Madison.

TIME	PAPER NO.	
9:45	67	Ultrastructural and Electrostatic Changes on <i>Brugia pahangi</i> Microfilariae After <i>Aedes aegypti</i> Midgut Penetration. K.F. FORTON*, B.M. CHRISTENSEN and D.R. SUTHERLAND, Department of Veterinary Science, University of Wisconsin-Madison, Madison.

WEDNESDAY MORNING
7, AUGUST
8:30 A.M.
College of Veterinary Medicine, 360

Presiding: John E. Ubelaker
Southern Methodist University and
Dallas, Texas

SECTION C
MORPHOLOGY and FINE STRUCTURE

Bruce Conn
Wilmington College
Wilmington, Ohio

TIME	PAPER NO.	
8:30	68	Organization of Sporulated Oocysts of Two Species of the Piscine <i>Coccidium Calyptospora</i> . JOHN W. FOURNIE*, WILLIAM E. HAWKINS and ROBIN M. OVERSTREET, Gulf Coast Research Laboratory, Ocean Springs, Mississippi.
8:45	69	Morphology and Ecology of <i>Multicalyx cristata</i> (Aspidocotylea), a Gall Bladder Parasite of Elasmobranchs. DENNIS A. THONEY* and E.M. BURRESON, Virginia Institute of Marine Science, School of Marine Science, College of William and Mary, Columbus.
9:00	70	Morphology Variation in <i>Hymenolepis diminuta</i> . PETER W. PAPPAS, Department of Zoology, Ohio State University, Columbus.
9:15	71	Tegumental Free-Surface Glycocalyx Characterized by Lectin Binding to <i>Hymenolepis diminuta</i> . JOHN A. OAKS and MICHAEL B. HILDRETH, Department of Structural and Functional Sciences, University of Wisconsin, Madison.
9:30	72	Distribution of Glucoconjugates in the <i>Taenia taeniaformis</i> <i>Strobilocercus</i> Studied with Labeled Lectins. MICHAEL B. HILDRETH* and JOHN A. OAKS, Department of Structural and Functional Sciences, University of Wisconsin, Madison.
9:45	73	Comparative Uterine Ultrastructure of <i>Camallanus oxycephalus</i> (Nematoda: Camallanidae) and Three Species of Philometrids (Nematoda: Philometridae) from Bluegill and Largemouth Bass, Centrarchidae. M. DAVID CROSBY* and WILMER A. ROGERS, Department of Fisheries and Allied Aquacultures, Auburn University, Auburn, Alabama.

WEDNESDAY MORNING
7, AUGUST
10:30 A.M.
College of Veterinary Medicine, H-237

PRESENTATION OF THE
HENRY BALDWIN WARD MEDAL

WEDNESDAY MORNING
7, AUGUST
11:00 A.M.
College of Veterinary Medicine, H-237

Presiding: Harry Hoogstraal
Medical Zoology Department
NAMRU-3
Cairo, Egypt

ANNUAL BUSINESS MEETING
ALL MEMBERS ARE ENCOURAGED
TO ATTEND

WEDNESDAY AFTERNOON
7, AUGUST
1:30 P.M.
College of Veterinary Medicine, H-237

Presiding: Donald Heyneman
University of California
San Francisco

PRESIDENTIAL ADDRESS

PAPER
NO.

✓ 74

The American Society of Parasitologists: Its Historic Role and Modern Opportunities. HARRY HOOGSTRAAL, Medical Zoology Department, NAMRU-3, Cairo, Egypt.

WEDNESDAY AFTERNOON
7, AUGUST
2:00 P.M.
College of Veterinary Medicine, H-237

Sponsored by The University of Georgia

Presiding: P.L. Long
University of Georgia
Athens

PAPER
NO.

✓ 75

How to be a Successful Parasite. R.J. TERRY, Professor of Parasitology, Brunel University, London, England.

WEDNESDAY MORNING
7, AUGUST
8:00-9:00 A.M.
College of Veterinary Medicine, Library

POSTER SESSION SET UP

WEDNESDAY AFTERNOON
7, AUGUST
3:00-5:00 P.M.

POSTER SESSION

PAPER
NO.

76

Enhanced Resistance to Malaria in Thalassaemic Mice. D.F. LAPP*, J.M. CHRISTIE and J.B. WHITNEY III, Department of Cell and Molecular Biology, Medical College of Georgia, Augusta.

PAPER
NO.

- 77 ✓ *Babesia bovis* Diagnosis Using Plasmids Containing Repetitive DNA. G.L. McLAUGHLIN*, T.D. EDLIND, G.G. WAGNER and G.M. IHLER, Department of Medical Biochemistry and Genetics and Department of Veterinary Microbiology and Parasitology, Texas A&M University, College Station.
- 78 *Schistosoma japonicum*: Cytochemical and Biochemical Studies on a Pepstatin-Sensitive Enzyme. B.J. BOGITSH* and K.F. KIRSCHNER, Vanderbilt University, Nashville, Tennessee.
- 79 Presomal and Bodywall Lacunar System of Acanthocephalan Modeled by Means of Corrosion Cast Method. DONALD M. MILLER and TOMMY T. DUNAGAN, Department of Physiology, School of Medicine, Southern Illinois University, Carbondale.
- 80 Nonpolar Solute Movement Across the Isolated Cuticle of *Ascaris suum*. R.H. FETTERER, Animal Parasitology Institute, U.S. Department of Agriculture, Agricultural Research Service, Beltsville, Maryland.
- 81 Detection of Anisakine Nematode Excretory-Secretory Products In Vivo. J.M. BIER* and R.B. RAYBOURNE, U.S. Food and Drug Administration, Washington, District of Columbia.
- 82 Growth of Pleomorphic *Trypanosoma brucei rhodesiense* in Irradiated Inbred Mice. J.R. SEED and J. SECHLSKI*, University of North Carolina at Chapel Hill, Chapel Hill.
- 83 *Trypanosoma cruzi* Specific Antibody Response in Immunized C3H(He) Mice During Infection. E.A. MASTERS, W.S. CHEN and E.C. ROWLAND*, The University of Akron, Ohio.
- 84 Production and Characterization of Clones of the Brazil Strain of *Trypanosoma cruzi*. D.J. MURFIN, L. CHOROMANSKI and R.E. KUHN*, Wake Forest University, Winston-Salem, North Carolina.
- 85 The Appearance of Anti-Leishmanial Antibodies in Several Mouse Strains During the Course of Infection with *Leishmania donovani*. RUTH GELLER*, ROBERT M. CRAWFORD, JOSEPH WILLIAMS, RUFUS GORE, LYNN DECKER, WAYNE T. HOCKMEYER and JOHN G. OLENICK, Department of Applied Biochemistry, Division of Biochemistry and Department of Immunology, Division of Communicable Diseases and Immunology, Walter Reed Army Institute of Research, Washington, DC.
- 86 A Membrane Fraction from *Trypanosoma rhodesiense*: Localization by Immunogold Electron Microscopy and Potential for Nonvariant Protection. JOHN G. OLENICK*, ROBERT K. NAUMAN, JOHN McLAUGHLIN, LYNN DECKER and RUTH GELLER, Department of Applied Biochemistry, Walter Reed Army Institute of Research, Washington, DC.; Department of Microbiology, University of Maryland Dental School, Baltimore; and Department of Microbiology and Immunology, University of Miami Medical Center, Miami, Florida.
- 87 Ultrastructural Changes in the Oocyst Wall During Excystation of *Cryptosporidium parvum*. JOHN A. BLIXT*, DAVID W. REDUKER and C.A. SPEER, Veterinary Research Laboratory, Montana State University, Bozeman.
- 88 Morphology of the Clamps and Genital Atrium of *Lintaxia cokeri* (Monogenea: Heteraxinidae). JOHN C. MERGO JR. and JOHN L. CRITES, Zoology Department, Ohio State University, Columbus.

PAPER
NO.

- 89 Scanning Electron Microscopy of the Scolex and Neck of the Cestode *Cathetococephalus thatcheri*. FRED H. WHITTAKER*, University of Louisville, Kentucky and ROBERT P. APKARIAN, Graduate School SEM Facility, University of Louisville, Kentucky.
- 90 Fine Structure of the Tegument and Parenchyma of *Mesocostoides lineatus* (Cestoda: Cyclophyllidae). DAVID BRUCE CONN, Department of Biology, Wilmington College, Wilmington, Ohio.
- 91 Microthrix Architecture as Revealed by High Resolution and Stereo Electron Microscopy. JON M. HOLY* and JOHN A. OAKS, Department of Anatomy and Structural and Functional Sciences, University of Wisconsin, Madison.
- 92 Apical Sense Organs in *Moniliformis moniliformis* (Acanthocephala) as Viewed with Scanning Electron Microscopy. T.T. DUNAGAN and D.M. MILLER, Southern Illinois University, Carbondale.
- 93 ✓ Cuticular Changes in Developmental Stages of *Dirofilaria immitis* in the Dog. J.R. LICHTENFELS*, P.A. PILITT and W.P. WERGIN, Agricultural Research Service, U.S. Department of Agriculture, Beltsville, Maryland.
- 94 ✓ Anticoccidian Drug for Prevention and Treatment of Coccidiosis in Chickens. W. MALCOLM REID and LARRY R. McDOUGALD, Department of Poultry Science, University of Georgia, Athens.
- 95 Coprodiagnosis of *Giardia lamblia*: Isolation and Characterization of a Major Stool Antigen. JOHN D. ROSOFF* and HENRY H. STIBBS, University of Washington, Seattle.
- 96 Effect of a Simian *Trichomonas* sp. on Cell Culture Monolayer. D.E. CULBERSON*, F.F. PINDAK and W.A. GARDNER, JR., University of South Alabama, Department of Pathology, Mobile.
- 97 Estrogens Alter Resistance to *Toxoplasma gondii* Infection in Mice. OSCAR J. PUNG* and MICHAEL T. LÜSTER, National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina.
- 98 Cultivation of *Haemonchus contortus* (Nematoda: Trichostrongylidae) to Sexually Mature Adults. F. STRINGFELLOW, Biosystematic Parasitology Laboratory, Animal Parasitology Institute, Agricultural Research Service, U.S. Department of Agriculture, Beltsville, Maryland.
- 99 Survival of *Ascaris suum* Ova in Anaerobically Digested Sludge Amended Agricultural Soil in Brown County, Ohio. FRANK W. SCHAEFER, III*, JOHN S. NICHOLS, RUTH LATTIMORE and JUDY A. STÖBER, Health Effects Research Laboratory, U.S. Environmental Protection Agency, Cincinnati, Ohio.
- 100 ✓ Immunofluorescent Detection of *Cryptosporidium* Oocysts in Fecal Smears and in River Water. HENRY H. STIBBS* and JERRY ONGERTH, University of Washington, Seattle.
- 100A Larval *Anisakis simplex* (Nematoda: Ascaroidea) in Atlantic Cod, *Gadus morhua*, in the N-W-Atlantic (Labrador-Newfoundland Area). R.A. KAHN, Department of Biology and Marine Sciences Research Laboratory, Memorial University of Newfoundland, St. John's, Canada.

PAPER
NO.

- 101 Parasitic Helminths of Cats from the Metropolitan and Neighboring Areas of San Juan, Puerto Rico. W.J. KOZEK, J.M. SEGARRA, J.M. DOMINGUEZ, M. PIERANTONI and M. GOVEA-ARCE, Department of Microbiology and Medical Zoology, Medical Sciences Campus, University of Puerto Rico, San Juan; Centro de Control y Adopcion de Animales, Municipio de San Juan, Puerto Rico; and Department of Microbiology and Medical Zoology, Medical Sciences Campus, University of Puerto Rico, San Juan.
- ✓ 102 Computer-assisted Instruction in Veterinary Parasitology. ANNIE K. PRESTWOOD, Department of Parasitology, College of Veterinary Medicine, University of Georgia.

WEDNESDAY EVENING
7, AUGUST
7:00 P.M.
Georgia Center

BANQUET

Presiding: James H. Steele
University of Texas
Houston

Awarding of K.F. Meyer Gold Headed Cane and American Veterinary Epidemiology Society Diploma to: Harry Hoogstraal.

THURSDAY MORNING
8, AUGUST
8:00 A.M.
Georgia Center

BREAKFAST: SOUTHEASTERN
SOCIETY OF PARASITOLOGISTS

THURSDAY MORNING
8, AUGUST
8:30 A.M.
College of Veterinary Medicine, H-203

SECTION A
PHYSIOLOGY & BIOCHEMISTRY
and
IN VITRO CULTIVATION

Presiding: Peter W. Pappas
Ohio State University and
Columbus

H. Ray Gamble
U.S. Department of Agriculture
Beltsville, Maryland

TIME
PAPER
NO.

- 8:30 103 Glucose-Transport by *Eimeria tenella* Sporozoites. C.K. SMITH II* and D.E. LEE, Lilly Research Laboratories, Eli Lilly and Company, Greenfield, Indiana.
- 8:45 104 Potential Environmental Mediators of DNA Synthesis in *Trypanosoma brucei gambiense*. J.R. SEED* and J. SECHELSKI, University of North Carolina at Chapel Hill, Chapel Hill.
- 9:00 105 Characterization of Surface Glycoproteins of *Trypanosoma brucei* spp. THOMAS O. FROMMEL*, STEPHEN C. MERRIT, University of North Carolina, Chapel Hill, and ANDREW E. BALBER, Duke University, Durham, North Carolina.

TIME
PAPER
NO.

- 9:15 106 Biochemical and Immunochemical Markers of Infective and Noninfective Forms of *Trypanosoma cruzi*. GUILLERMO A. COMACH*, RAFAEL RANGEL-ALDAO, VICTOR DELGADO, OSCAR ALLENDE, EDMUNDO CAYAMA and ROSA HUBSCH, Centro de Investigaciones Biomedicas (BIOMED), Universidad de Carabobo, Maracay, and ROMANO PIRAS, MARIA PIRAS, DIANA HENRIQUEZ and STEFANIA NEGRI, Centro Medico-Docente La Trinidad, Caracas, Venezuela.
- 9:30 107 Metabolic Adaptations of *Leishmania donovani* Amastigotes to Acid pH: A Possible Mechanism for Survival In Vivo. THERESA A. GLASER, JOHN C. MEADE and ANTONY J. MUKKADA*, University of Cincinnati, Ohio.
- 9:45 108 ✓ Plasma Cortisol Responses to Exogenous Corticotropin (ACTH) in Goats with Gastrointestinal Nematode Infections. J.C. FRANSEN, U.S. Department of Agriculture Regional Parasite Research Laboratory, Agricultural Research Service, Auburn, Alabama.
- 10:00 COFFEE BREAK
- 10:15 109 ✓ *Bacillus thuringiensis*: Effect of Strains and Toxins on Nematodes. K.P. BOTTJER*, L.W. BONE and S.S. GILL, U.S. Department of Agriculture, Agricultural Research Service, Regional Parasite Research Laboratory, Auburn, Alabama, and Division of Toxicology and Physiology, Department of Entomology, University of California, Riverside.
- 10:30 110 ✓ *Bacillus thuringiensis israelensis*: Activity of Crystal Toxin on Eggs of the Nematode *Trichostrongylus colubriformis*. L.W. BONE*, K.P. BOTTJER and S.S. GILL, U.S. Department of Agriculture, Agricultural Research Service, Regional Parasite Research Laboratory, Auburn, Alabama, and Division of Toxicology and Physiology, Department of Entomology, University of California, Riverside.
- 10:45 111 In Situ Muscle Response and Myosin Light Chain Phosphorylation in *Ascaris suum*. R.E. MARTIN and M.J. DONAHUE*, Department of Biological Sciences, North Texas State University, Denton.
- 11:00 112 Concentrations of Ecysteroids and Their Conjugates During Embryonation of Eggs of *Ascaris suum*. MICHAEL W. FLEMMING, Animal Parasitology Institute, U.S. Department of Agriculture, Agricultural Research Service, Beltsville, Maryland.
- 11:30 113 Effect of Insulin and Pancreatic Polypeptide on In Vitro Development of *Eimeria tenella*. DENNIS E. KYLE* and LARRY R. MCDOUGALD, Department of Poultry Science, University of Georgia.
- 11:45 114 In Vitro and In Vivo Development of the Tetracotyles of *Cotylurus flabelliformis*. ALLEN D. JOHNSON* and RYAN MAGNUS, Department of Biology, University of South Dakota, Vermillion.

THURSDAY MORNING

8, AUGUST

9:00 A.M.

College of Veterinary Medicine, H-237

SECTION B

IMMUNOLOGY

Presiding: Patricia C. Augustine

U.S. Department of Agriculture and
Beltsville, Maryland

Harry Danforth

U. S. Department of Agriculture
Beltsville, Maryland

TIME	PAPER NO.	
9:00	115	Development and Evaluation of Monoclonal Antibodies to <i>Acanthamoeba castellanii</i> (CDC:0981:2). ELIZABETH A. FRANKO* and G.S. VISVESVARA, Centers for Disease Control, Division of Parasitic Diseases, Atlanta, Georgia and The University of North Carolina, School of Public Health, Department of Parasitology and Laboratory Practice, Chapel Hill.
9:15	116	<i>Giardia muris</i> : Effects of Cyclosporin A on the Course of Infection and Immune Responses of Mice. M. BELOSEVIC and G.M. FAUBERT, Institute of Parasitology, McGill University, Montreal, Quebec.
9:30	117	<i>Tritrichomonas foetus</i> : Monoclonal Antibodies with Effector Functions. D.E. BURGESS, Veterinary Research Laboratory, Montana State University, Bozeman.
9:45	118	Analysis of Antigens from Subcellular Fractions of <i>Trichomonas vaginalis</i> . HENRY M. MATHEWS* and DELYNN M. MOSS, Centers for Disease Control, Division of Parasitic Diseases, Atlanta, Georgia.
10:00		COFFEE BREAK
10:15	119	Comparison of In Vivo and In Vitro Promastigotes of <i>Leishmania donovani</i> Using Monoclonal Antibodies and Immunofluorescent Assay. E.D. ROWTON, P.V. PERKINS, K.M. ESSER and D.R. ROBERTS. Walter Reed Army Institute of Research, Washington, D.C.
10:30	120	Immunological Characterization of Surface Coat Isolated from Plasma of Rats Infected with <i>Trypanosoma brucei rhodesiense</i> . PETER DIFFLEY, Department of Biology, University of Notre Dame.
10:45	121	Induction of Suppressor Cell Activity by Plasma of Rats Infected with <i>Trypanosoma brucei rhodesiense</i> . H.W. COX, Department of Parasitology, School of Public Health, University of North Carolina, Chapel Hill.
11:00	122	Activation of the Alternative Pathway of Human Complement by Intact Bloodstream Forms of <i>Trypanosoma brucei gambiense</i> . DANA V. DEVINE* and ANDREW E. BALBER, Duke University, Durham, North Carolina.
11:15	123	Mechanisms of Control of Parasitaemia in <i>Trypanosoma congolense</i> -infected Eland (<i>Taurotragus oryx</i>). H.H. MAHAMAT*, A.J. MUSOKE, V.M. NANTULYA, and F.R. RUPANGIRWA, International Laboratory for Research on Animal Disease (ILRAD), Nairobi, Kenya.
11:30	124	Passive Transfer of Immune Sera Protects Resistant C57B1/6 Mice but not Susceptible C3H Mice Against Infection with the Brazil Strain of <i>Trypanosoma cruzi</i> . D.J. MURFIN*, L. CHOROMANSKI and R.E. KUHN, Wake Forest University, Winston-Salem, North Carolina.

TIME PAPER NO.

11:45	✓ 125	Multiple Injections of Heterologous Erythrocytes Overcomes Immunosuppression in Experimental Chagas Disease. L. CHOROMANSKI* and R.E. KUHN, Wake Forest University, Winston-Salem, North Carolina.
-------	-------	--

THURSDAY MORNING

8, AUGUST

8:30 A.M.

College of Veterinary Medicine, 360

SECTION C

SYMPOSIUM: PARASITES

OF FISH

Presiding: Richard Heckmann
Brigham Young University
Provo, Utah

TIME PAPER NO.

8:30	126	Some New Fish Parasites -- <i>Sanguinicola</i> , a Dilepidid, <i>Ichthyophonus</i> , and <i>Glugea</i> . GLENN L. HOFFMAN*, U.S. Fish and Wildlife Service, Stuttgart, Arkansas, BERNARD FRIED, Lafayette College, Easton, Pennsylvania, and CAROL MORRISON, Halifax Fisheries Research Laboratory, Halifax, Nova Scotia, Canada.
8:50	127	The Biology, Taxonomy, Associated Pathology and Control of PKX, the Causative Agent of Proliferative Kidney Disease (PKD) in Salmonid Fishes. MICHAEL L. KENT* and RONALD P. HEDRICK, University of California, Davis.
9:10	128	Eimeriina in Fishes. ROBIN M. OVERSTREET*, JOHN W. FOURNIE, and WILLIAM E. HAWKINS, Gulf Coast Research Laboratory, Ocean Springs, Mississippi.
9:30	129	Cross-reactive Antigens of <i>Ichthyophthirius multifiliis</i> and <i>Tetrahymena pyriformis</i> . H.W. DICKERSON*, D.L. EVANS, D.L. DAWE, and J.B. GRATZKE, College of Veterinary Medicine, University of Georgia, Athens.
9:50		COFFEE BREAK
10:10	130	Comparative Biology of Nematodes, Suborder Camallanina, Parasites of Fishes. JOHN L. CRITES, Department of Zoology, Ohio State University, Columbus.
10:30	131	A Decade of Progress in Fish Parasite Research in Canada, 1979-1984. DESMOND D. ANTHONY, Nipissing University College, North Bay, Ontario, Canada.
10:50	132	Helminth Parasites of Commercially Important Warmwater Fishes. WILMER A. ROGERS, Department of Fisheries and Allied Aquacultures, Auburn University, Alabama.
11:10	133	Parasites of <i>Lepomis macrochirus</i> from Missouri and Kansas, with Special Reference to the Pathogenesis and Chemotherapy of <i>Posthodiplostomum minimum</i> . LAURITZ A. JENSEN, Department of Microbiology, University of Health Sciences, Kansas City, Missouri.
11:30	134	Marine Fish Parasites as Biological Tags. MIKE MOSER, Marine Studies, University of California, Santa Cruz.

THURSDAY AFTERNOON

8, AUGUST

1:30 P.M.

College of Veterinary Medicine, H-203

Presiding: J. Ralph Lichtenfels
Agricultural Research Service and
Beltsville, Maryland

SECTION A
SYSTEMATICS

Ellis C. Greiner
University of Florida
Gainesville

TIME	PAPER NO.	
1:30	135	Phylogenetic Relationships at the Generic Level in the Gorgoderidae Looss, 1899 (Digenea: Plagiorchiiformes). D.R. BROOKS and C.A. MACDONALD*. University of British Columbia, Vancouver.
1:45	136	Taxonomic Status of Some Campulids (Trematoda) from Marine Mammals. A.M. ADAMS* and R.L. RAUSCH, Department of Pathobiology, University of Washington, Seattle.
2:00	137	Scanning Electron Microscopy of Larvae and Adults of Six Papillose Alloecreadiids. J.N. CAIRA, The Harold W. Manter Laboratory, University of Nebraska State Museum, Lincoln.
2:15	138	Evolutionary History of Some Plagiorchid (Digenea: Plagiorchiiformes) Intestinal Parasites of Anurans in North, Central, and South America. R.T. O'GRADY, Department of Zoology, University of British Columbia, Vancouver, Canada.
2:30	139	Review of the Evidence Pertaining to the Phylogeny of the Cercomeria (Platyhelminthes). DANIEL R. BROOKS, University of British Columbia, Vancouver, Canada.
2:45		COFFEE BREAK
3:00	140	Phylogenetic Analyses of the Gyrocotylidae and Amphilinidae (Platyhelminthes: Cercomeria). SUSAN M. BANDONI, University of British Columbia, Vancouver.
3:15	141	Taiwan Aboriginal Taeniasis -- Intermediate Form? MING M. WONG*, University of California, Davis; C.C. CHEN, National Defense Medical College; W.C. CHUNG, Taipei Medical College; and P.C. FAN, National Yang Ming Medical College, Taipei, Republic of China.
3:30	142	Two New Helminths Species from <i>Erimyzon sucetta</i> (Lacepede) in Wisconsin. OMAR M. AMIN, University of Wisconsin-Parkside, Kenosha.

THURSDAY AFTERNOON

8, AUGUST

1:30 P.M.

College of Veterinary Medicine H-237

Presiding: Raymond T. Damian
University of Georgia
Athens

SECTION B
IMMUNOLOGY

Rick L. Tarleton
University of Georgia
Athens

TIME	PAPER NO.	
1:30	143	Immunity to <i>Eimeria tenella</i> (Coccidia) Determined by Immunizing Dose and Host Line. R.A. CLARE*, R.G. STROUT and R.L. TAYLOR JR., Department of Animal and Nutritional Sciences, University of New Hampshire, Durham.
1:45	144	Polypeptide Profile and Antigens of Sporozoites and Merozoites of <i>Eimeria bovis</i> . DAVID W. REDUKER* and C.A. SPEER, Veterinary Research Laboratory, Montana State University, Bozeman.
2:00	145	B Cell Responses in the Gut and Mesenteric Lymph Nodes to Infection with <i>Eimeria falciformis</i> . P.V. NASH*, G.M. CALLIS and C.A. SPEER, Veterinary Research Laboratory, Montana State University, Bozeman.
2:15	146	Study of the Developmental Fate of Refractile Body Organelles in Avian Coccidia by Use of Hybridoma Antibodies. H.D. DANFORTH* and P.C. AUGUSTINE, U.S. Department of Agriculture, Agricultural Research Service, Animal Parasitology Institute, Beltsville, Maryland.
2:30	147	Hybridoma Antibodies Reveal Differences in Antigenic Composition of Coccidial Refractile Bodies. P.C. AUGUSTINE* and H.D. DANFORTH, U.S. Department of Agriculture, Agricultural Research Service, Animal Parasitology Institute, Beltsville, Maryland.
2:45		COFFEE BREAK
3:00	148	T Cell Factors Inhibit In Vitro Development of <i>Eimeria bovis</i> Sporozoites in Bovine Monocytes. C.A. SPEER*, B.M. WHITMIRE, D.W. REDUKER and D.E. BURGESS, Veterinary Research Laboratory, University of Montana, Bozeman.
3:15	149	Natural Killing (NK) and Macrophage Activation Induced by Toxoplasma Antigens. HUW P.A. HUGHES, U.S. Department of Agriculture, Agricultural Research Service, Animal Parasitology Institute, Beltsville, Maryland.
3:30	150	Erythropoietin and Bone Marrow Stem Cell Responses to Murine Malaria. PAUL H. SILVERMAN*, JOHN C. SCHOOLEY and L.J. MAHLMANN, Lawrence Berkeley Laboratory, University of California, Berkeley.
3:45	151	Culture Produced Plasmodium inui Compared to P. malariae as Antigen in the Indirect Fluorescent Antibody (IFA) Test. ALEXANDER J. SULZER*, J.M. ROBERTS and A.M. BARBER, Malaria Branch, Center for Infectious Diseases, Center for Disease Control, Atlanta, Georgia.