

### **JAVMA News**

A new program will allow veterinarians to survey their staff and clients to find ways to improve client perceptions of preventive care and increase business for the practice.

Another program is intended to help veterinary practices accommodate cats' needs, which can also increase repeat business. *See PAGE 480*

### **Letters to the Editor**

*See PAGE 513*

### **What Is Your Diagnosis?**

*See PAGE 521*

### **What Is Your Neurologic Diagnosis?**

*See PAGE 525*

### **Pathology in Practice**

*See PAGE 529*

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#### COMMENTARY

### **How schools of veterinary medicine should respond to predicted trends in the veterinary workforce**

Veterinary medical education requires a balancing act between providing for projected workforce needs and producing graduates who are nimble enough to respond to society's requirements at the moment. *See PAGE 517*

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#### COMMENTARY

### **What does it mean to be humane?**

The extent to which we are humane can only be measured by our actions. We should take the initiative to put ourselves in others' shoes, paws, hooves, or claws so we can help them as we would want to be helped. *See PAGE 518*

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#### TIMELY TOPICS IN NUTRITION

### **Evaluation of recipes for home-prepared diets for dogs and cats with chronic kidney disease**

A review of recipes for 67 home-prepared diets promoted for use in dogs and cats with chronic kidney disease revealed many problems with nutritional adequacy. *See PAGE 532*

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#### REFERENCE POINT

### **Proposal for a chain of survival for small animal patients undergoing cardiopulmonary resuscitation**

Twenty years ago, the American Heart Association introduced the so-called chain of survival as a metaphor for the importance of approaching cardiopulmonary resuscitation in a timely, sequential, and comprehensive manner. *See PAGE 540*

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### **Associations between CSF biomarkers and outcome in dogs with acute intervertebral disk herniation**

Results of a new study suggest that in dogs with acute thoracolumbar intervertebral disk herniation, CSF creatine kinase activity and myelin basic protein concentration, along with initial modified Frankel score of neurologic function, can be used to predict long-term ambulatory outcome. The study involved 54 dogs with acute thoracolumbar IVDH and 16 clinically normal dogs; variables examined included CSF myelin basic protein, lactate, calcium, glucose, and total protein concentrations; nucleated cell count; and creatine kinase and aspartate aminotransferase activities. Long-term functional recovery was > 98%, regardless of initial Frankel score, when CSF creatine kinase activity was  $\leq 38$  U/L and myelin basic protein concentration was  $\leq 3$  ng/mL. *See PAGE 555*

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### **Premedication with topical 1% prednisolone acetate in dogs undergoing phacoemulsification**

Although cataract extraction is a common ophthalmologic procedure in dogs, there is no consensus on the most appropriate preoperative corticosteroid treatment regimen. Results of a randomized controlled trial involving 21 dogs with immature cataracts that underwent phacoemulsification suggest that topical treatment with prednisolone acetate for a full week prior to surgery did not decrease postoperative inflammation, compared with topical treatment beginning the evening prior to surgery, and was associated with a greater incidence of postoperative ocular hypertension. There was no difference in the extent of blood-aqueous barrier disruption between the treatment groups 2 and 9 days after surgery. *See PAGE 563*

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### **Associations among weight loss, stress, and upper respiratory tract infection in shelter cats**

Understanding the important role that stress plays in the life of shelter cats is critical for maintaining healthy shelter cat populations, as evidenced by results of a new study involving 60 adult cats admitted to an animal shelter. In the study, cats with high stress scores during the first week in the shelter were 5.6 times as likely to develop upper respiratory tract infection as were cats with low stress scores. Although food intake and stress scores were negatively correlated and 49 of the 60 (82%) cats lost weight during at least 1 week while in the shelter, cats that lost weight during the first week were not more likely to develop upper respiratory tract infection than were cats that did not lose weight. *See PAGE 570*

### Functionality of implanted microchips following magnetic resonance imaging

Given that microchips are being used more commonly for permanent identification of animals and that magnetic resonance imaging is being used more commonly for diagnostic imaging, it is important to examine whether MRI interferes with the functionality of microchips. In a study involving 53 dogs and cats in which a microchip had been implanted and that were scheduled to undergo MRI for various medical conditions, the microchip number was accurately read in all 53 patients following the MRI procedure, suggesting that MRI did not interfere with the functionality of these microchips. Findings suggest that practitioners can safely recommend MRI for patients in which a microchip has been implanted. *See PAGE 577*

### Meningitis and meningoencephalomyelitis in horses

A review of medical records for 28 horses with a definitive diagnosis of meningitis or meningoencephalomyelitis suggested that these were uncommon disorders in horses. Twenty-two horses had infectious meningitis or meningoencephalomyelitis (19 with bacterial, 2 with parasitic, and 1 with fungal disease) and 2 had noninfectious meningitis or meningoencephalomyelitis. The remaining 4 were suspected to have infectious disease on the basis of results of cytologic examination of CSF samples. Trauma of the head and vertebral column with disruption of the blood-brain barrier and local ascending or hematogenous spread were the most common routes of infection. The mortality rate was 96.4% (27/28). *See PAGE 580*

### Outbreak of equine piroplasmiasis in Florida

In 2008, a tentative diagnosis of equine piroplasmiasis was made in a 7-year-old Quarter Horse gelding on the basis of examination of a blood smear. The case was reported to the Florida State Veterinarian, and infection with *Babesia equi* was confirmed. In the subsequent investigation, testing of 210 horses on 25 premises for *B. equi* and *Babesia caballi* infection identified 20 *B. equi*-infected horses on 7 premises; no horses tested positive for *B. caballi*. Seven horses had clinical find-

ings consistent with equine piroplasmiasis. Results of the epidemiological investigation suggested that *B. equi* was spread by use of shared needles and possibly blood transfusions. All horses that tested positive were involved in nonsanctioned Quarter Horse racing. *See PAGE 588*

### Evaluation of analyzers for measurement of blood glucose concentration in juvenile white-tailed deer

A prospective study was performed to evaluate agreement between blood glucose concentrations measured in 14 healthy juvenile white-tailed deer by use of 2 point-of-care blood glucose meters and a portable chemistry analyzer and serum glucose concentrations obtained by use of a standard laboratory chemistry analyzer. Agreement between the 2 meters and the laboratory analyzer was poor; mean values for bias were 2.9 mg/dL (95% limits of agreement [LOA], -70.2 to 76.0 mg/dL) and -30.8 mg/dL (95% LOA, -111.6 to 49.9 mg/dL). Agreement between the 2 meters was also poor (bias, 31.0 mg/dL; 95% LOA, -47.2 to 109.2 mg/dL). Agreement between the portable analyzer and the laboratory analyzer was good (bias, -1.6 mg/dL; 95% LOA, -15.3 to 12.1 mg/dL). *See PAGE 596*

### Characteristics of commercially manufactured and compounded protamine zinc insulin

Results of a new study highlight concerns about the use of compounded protamine zinc insulin products in animals. In the study, 112 vials of PZI (16 vials of a commercially manufactured product and 8 vials from each of 12 compounding pharmacies) were analyzed. All 16 vials of commercially manufactured PZI met United States Pharmacopeia specifications. However, only 1 of the 12 compounded PZI products met all USP specifications for all vials tested. Of the 96 vials of compounded PZI, 1 contained an endotoxin concentration > 32 endotoxin U/mL, 23 had concentrations of insulin in the supernatant > 1.0 U/mL, and 45 had pH values < 7.1 or > 7.4. Fifty-two vials did not meet specifications for zinc concentration, and 36 vials had total insulin concentrations < 90% of the labeled concentration. *See PAGE 600*