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JAALAS Literature Review
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In response to tail snips or ear punching, weanling mice of the strain B6,129S6-Stab 5 were found to -

- A. Vocalize more in the ultrasonic versus audible range
- B. Produce audible noise more than sham controls
- C. Exhibit more painful responses to ear punching
- D. All of the above

Ultrasonic sound is defined as sound greater than frequency?

- A. 85 decibels
- B. 85 kHz
- C. 20 decibels
- D. 20 kHz

In a study to evaluate the anesthetic effects of ketamine/xylazine combinations in Balb/cAnNCr1Cr mice, the forelimb pedal reflex

- A. Disappeared after the hindlimb reflex during induction
- B. Was lost prior to the tactile stimulus response
- C. Was directly related to indirect blood pressure measurements.
- D. Was not as good a predictor of anesthetic depth as the hindlimb

Which of the following drugs when added to a standard ketamine/xylazine mixture resulted in adequate anesthetic levels in mice?

- A. buprenorphine
- B. carprofen
- C. acepromazine
- D. None of the additions led to improvement of anesthetic depth.

In a study designed to evaluate two Pasteurella vaccine routes in rabbits, PTE (potassium thiocyanate extract) was used to -

- A. Extract insoluble cellular components
- B. Extract viral capsid proteins associated with virulence
- C. Extract soluble cellular components thought to be responsible for bacterial virulence
- D. Improve culture media collected on post mortem samples

The next slide depicts the use of what diagnostic tool?

- A. Echocardiography M-mode
- B. Cardiac ultrasonography 2-dimensional study
- C. MRI – T2 study
- D. Electroencephalogram

MNV

- Enveloped or **Non-enveloped**
- **RNA** or DNA
- Member of which viral family? **Calici**
- Related to which group of human viruses in the same family **Norwalk**

With respect to serological evaluation of rodent pathogens, MFI stands for?

- A. Multiplexed fluorescent inhibition assay
- B. Multiple fixed indirect assay
- C. Multiplexed fluorescent immunoassay
- D. Multiple fluorescent immunoassay

Desired behavior is elicited by avoidance of a negative stimuli is called?

- Negative reinforcement

The associated picture depicts what training method?

- A. Operant conditioning
- B. Positive reinforcement
- C. Desensitization
- D. All of the above

IATA

- International Air Transport Association

In *Gopherus agassizii*, upper respiratory tract disease is associated with what pathogen?

- A. *Mycoplasma agassizii*
- B. *Mycobacterium agassizii*
- C. *Aeromonas hydrophila*
- D. *Mycoplasma tuberculli*

For lung tumor studies in mice, which modality offers the best resolution?

- A. uCT
- B. uMR
- C. uCT with
- D. uMR

Which combination improved image quality when imaging K-ras lung tumor mice?

- A. uCT/breath – hold
- B. uCT/ delay trigger
- C. uMR/ free breathing
- D. None of the above

Research model for *Anaplasma phagocytophilum*

- A. *Odocoileus cervid*
- B. *Lama glama*
- C. *Odocoileus virginianus*
- D. *Lama pacos*

Nonnutritive suckling in cervids can result in

- A. Preputial swelling
- B. Urethral rupture
- C. Abortion
- D. Preputial Obstruction

Macques housed outdoors in the southeastern US may at increased risk of infection by what organism that consistently demonstrates eosinophilic pleocytosis in CSF?

- A. *Baylisascaris*
- B. *Ehrlichia*
- C. Herpes B
- D. All of the above

Aotus nancymae presents with dyscoria what do you want to screen for?

- A. Shigella
- B. Herpes simplex
- C. Herpes B
- D. Herpes zoster

In a study to evaluate Indomethacin and Buprenorphine in a surgical mouse model, what practice skewed baseline feed and water intake?

- A. Changes in light cycle
- B. Housing males in females in the same room
- C. Providing new feed in hopper
- D. Performing cage change

In mice what nonspecific affects have been attributed to buprenorphine?

- A. Increased locomotor activity
- B. Decreased water intake
- C. Decreased food intake
- D. All of the above

The use of ketoprofen in rats undergoing ovariectomy was associated with,

- A. Gastric ulcers influenced by dose
- B. Gastric ulcers influenced by specific vendor
- C. Gastric ulcers influenced by specific barrier room
- D. No abnormalities in treated animals

SHR designation in rats stands for?

- A. Salt hypertensive
- B. Spontaneously hypertensive
- C. Slow heart rate
- D. Spontaneous heart response

Dim light and long night (8:16) impacts SHR rats how compared to standard (12:12)?

- A. Both males and females show a decreased in heart rate.
- B. Males and females respond the same way to husbandry activities
- C. Males and females respond equally to experimental procedures
- D. There were no measured impact.

When corrected for numbers weaned, growth rate for mouse pups

- A. Was greater in litters that were culled early to meet 'Guide' density standards
- B. Was less in litters that were not culled at birth
- C. Was not different between culled and not culled litter size
- D. Was less in litters that were culled early to meet 'Guide' density standards

In a study of cage density in mice, Balb/C and C57BL/6 were chosen because?

- A. Represent opposite extremes in stress behavior
- B. Coat color differences
- C. Susceptibility to dermatitis
- D. Large litter sizes

T-cell subtypes can be identified by -

- A. Flow cytometric analysis
- B. Cell surface markers
- C. Using conjugated antibodies
- D. Combination of all of the above

Compared to a housing density of 2, Balb/c mice housed at a density of 10 per cage demonstrated...

- A. Had higher corticosterone levels
- B. More helper T cells
- C. Had more entries into the open field area
- D. More weight gain

SD rats on alcohol consumption studies...

- A. Consumed more alcohol when enrichment was provided
- B. Consumed no more or no less alcohol when enrichment was provided.
- C. Consumed less alcohol when enrichment was provided
- D. Consumed more alcohol if enrichment was absent.

In a study using SD rats to evaluate cage density and enrichment the researchers found that.....

- A. Male rats were more social
- B. Females interacted with manipulada more than males
- C. Isolated and impoverished rats ate less
- D. Enriched environments had a greater impact on body weight than cage density

What was the explanation for leukopenia in group housed NZW rabbits vs single housed rabbits?

- A. Blood collection
- B. Acute capture stress
- C. Increased exercise
- D. Presence of manipulada

Which of the following are true statements regarding rabbit allergens?

- A. They illicit an IgE response
- B. The major allergens are Ory c 1 and 2
- C. They can be detected by assaying for RSP
- D. All of the above

When comparing airborne contaminants between animal rooms, which measure is used?

- A. Experimental mass balance
- B. Emission rate
- C. Normalized emission factor
- D. Effective air change rate

ACGIH

American Conference of Governmental Industrial Hygienists

In a comparison of lateral saphenous vein blood collection from female ICR mice compared to modified tail clip

- A. Behavioral responses were significantly different based on method
- B. WBC differences between methods was due primarily to lymphocyte count
- C. Procedure time was statistically different for the two methods
- D. Cortisol levels were significantly different between methods

In a study of spatial learning in mice undergoing isoflurane anesthesia,

- A. There was no difference in behavioral testing at 1% vs 2 % isoflurane
- B. Deep anesthesia group performed much worse than controls
- C. Data was not consistent with human studies
- D. Mice showed impaired T-maze performance after light anesthesia

Most common mouse fur mite?

Myocoptes musculus

With respect to CO₂ and NH₃, what observations can be made between disposable and reusable IVC mouse cages?

- A. Ammonia levels did not exceed human threshold of detection
- B. CO₂ levels were significantly different in disposable cages
- C. Mice did not react to high ammonia levels
- D. Unoccupied control cages developed high CO₂ levels over the sampling period.

RLU is the term used in association with ATP testing. What does RLU stand for?

- A. Responsive Light Units as a measure of living organisms
- B. Reactive Light Units as a measure of living or dead bacteria
- C. Relative Light Units as a measure of viral and bacterial ATP
- D. Reactive Light Units as a measure of viral ATP

With regard to biofilm accumulation in IVC racks,

- A. The aerobic oral flora of mice is a major constituent of manifold biofilm
- B. Biofilm accumulation reaches steady state after 3 months
- C. Sanitation of manifold lines is not effective in reducing CFUs
- D. Biofilm is greater at the manifold shelf than the elbows

R2A and SM agars are used in water testing because..

- A. They are nutrient poor
- B. They are inexpensive
- C. They provide quick results
- D. They support anaerobes

With regard to tail biopsies in mice..

- A. The relative yield of DNA is greatest in 5mm biopsy segments
- B. Tail segments in excess of 10 cm are necessary for accurate DNA recovery
- C. Age is not a significant factor in DNA recovery from tail biopsies
- D. Strain of mouse has no significance in vertebrae maturation

Cross fostering mouse pups at less than 24 hours of age and wetting them with chlorine dioxide was effective not effective at eliminating what agent?

- A. Helicobacter
- B. MNV
- C. MHV
- D. Syphacia

The lab animal clinician should consider what disease in macaques infected with SIV given the potential for immune complexes?

- A. Hepatitis
- B. B-virus
- C. Glomerulonephritis
- D. Protein losing enteropathy

Olive baboon

Papio cynocephalus anubis

A fecal exam on a baboon (see pic)

- A. *Trichuris trichiura*
- B. *Trichuris vulpis*
- C. *Eucoleus boehmi*
- D. *Eucoleus aerophila*

Site of large volume blood collection in *Cavia porcellus*

- A. Jugular vein
- B. Central auricular artery
- C. Cranial vena cava
- D. Lateral saphenous

AAFCO

- Association of American Feed Content Officials

D-value is important in the sterilization of diets because...

- A. It represents the log reduction in bacterial death
- B. It represents the vitamin D levels in a particular diet
- C. It represents the amount of energy to kill 90% of microbes in food
- D. It represents the dietary equivalent between diets

What is the effect of irradiating cat diets?

- A. Increases the onset of oxidative rancidity
- B. Leads to high peroxide formation
- C. Decrease of vitamin A levels below the minimum
- D. All of the above

Investigators that wish to use Class B dogs should be counseled on which of these risks?

- A. Background diseases may confound research
- B. A high percentage of dogs may have antibodies to zoonotic tick borne diseases
- C. Dogs may not have normal blood protein levels
- D. All of the above

In a study of maternal behavior of *Macaca fascicularis*, the investigators found...

- A. The ability to see other monkeys improved mothering ability
- B. The improvement ratio was greatest at the second parity.
- C. A strong correlation between mothers and daughters existed for individual adequacy.
- D. Male infants received better maternal care from dams

Propofol use in *Xenopus laevis*

- A. Is a safe anesthetic agent in frogs
- B. Causes respiratory depression
- C. Has a narrow therapeutic and toxic window when frogs are immersed
- D. The wiping response was depressed

What is the tissue and what is the stain highlighting?

- 47:5 (Fig 7b)
- A. Lung / hemosiderin in alveolar macrophages
- B. Liver / glycogen
- C. Liver /
- D. Lung / Pneumocystis

