# 7 October 1970

- Solding to 7557 At 5-Aprill-old, female, miniature schnauzer puppy recently parameted from a pet shop was presented in apparent good health us a verticious failure and the December. The owner presented a contribute stating the dog had been vaccinated by the pet shop on 19 december. On 6 January the pup was returned to the veterinary clinic ethics manage this cough, sheeping and very listless. PCV was 24 and Cold. Such and wide, was considered normal. The animal was found to be nearly parasitized, primarily with bookworms. Despite extensive treatment, on 14 January the animal was very depressed, chorea developed had the fing pipe.
- 50 Care 11 17541 Carl 2 weeks old. Bought at 10 days of age and has
- 505 the French Heatern United States.
- 506 Car. 19 7845 A firm, multilobular mass removed from the skin of a

ROBERT L. EASON

Maj., USAF, VC

Veterinary Pathology Division

### Results of Wednesday Slide Conference 7 October 1970

Case I - 7657 - 1. Inclusions, cytoplasmic, and intranuclear, numerous cells of the lung, stomach, panereas, and lymph nodes, compatible with those produced by the virus of distemper.

Soc. Inclusions, intranuclear, epithelial cells of the lung and

 Inclusions, intranuclear, epithelial cells of the lung and stomach caused by an adenovirus. These inclusions were at first considered to be those of Herpes can but on electron microscopy the adenoviruses were clearly seen.

 Pneumonia, interstitial and acute necrotizing, focal, severe, lung, ctiology adenovirus and probably virus of distemper.

Case II - 17801 - The two-week-old calf had papular stomatitis. There was
marked intracytoplasmic vesiculation of the cells in the malpighian cell
layer of the tongue mucosa. Typical eosinophilic intranuclear inclusions
were seen in many of these cells.

Ref.: Griesemer and Cole: Bovine Papular Stomatis. Am. J. Vet. Res., 22: 473-482, 1961.

Case III - 18400 - The wild turkey poult had histomoniasis. Histomonas were found in the cecum, liver, spleen. The section was that of spleen which had an RE cell hyperplasia or proliferative splenitis and numerous protozoa could be seen throughout the organ.

Ref.: Biester. H. E. and Schwarte, L. H.: Diseases of Poultry. 5th.

Case IV - The pedunculated multilobular mass was removed from the extended ear canal of the cat. The mass was a cystadenoma of ceruminous gland origin. Considerable chronic inflammatory changes were present.

# Addition to Results of 7 October 1970 Conference

Corrections	to	Results	of	7	October	1970:
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Case I - 7657

2- Inclusions, intranuclear, epithelial cells, of the <u>lung</u> caused by an adenovirus.

Case II - 17801 - (3rd sentence)

Typical cosinophilic intracytoplasmic inclusions were seen in many of these cells.

Case IV -

.....the external ear canal .....



# Wednesday Slide Conference 14 October 1970

- Case I P 141 This section is from a six month old Hereford heifer that died in a Colorado feedlot. Four others died, out of a group of 80 shipped in three weeks previously. All five showed signs of blindness and depression. Several others with less severe signs, apparently recovered spontaneously. On examination, this animal's temperature was normal. It was sick for about a week.
- 508 Case II 70-262-F6 Tissue from a febrile rhesus monkey. Give a morphologic diagnosis and a consideration of etiology.
  - 507 Case III 70-2527 12-year-old Boxer male. Veterinarian observed multiple nodules in testes while removing mast cell tumor from scrotum. Castration performed and testicles submitted for pathology.
  - Case IV A male Sprague-Dawley rat was necropsied at 5 months of age as one of a group of rats included in a preclinical toxicologic study of 3 months' duration. This rat had been given the lowest dose of a test compound per os and was the only one of 120 rats treated with the compound to have this lesion. At the time of necropsy the rat had no clinical signs of illness, was eating well, and weighed 380 Gm. Clinico-pathologic analyses of a blood sample obtained shortly before necropsy indicated that the BUN was normal, but increase in the WBC, Hb, PCV, and reticulocyte values were found.
    - Case V 69-510 Tissue from a humanely killed Western Diamondback Rattlesnake. Other findings were granulomatous hepatitis and peritonitis caused by Aspergillus sp. and gram positive cocci; amyloidosis; and goitre.

### Results of Wednesday Slide Conference 14 October 1970

- Case 1 P 141 The brain tissue was taken from a severe case of bovine policencephalomalacia with thalamic involvement. Histologically neuronal necrosis, malacia, and hemorrhages were seen in the contributor's section.
  - Ref.: Jensen, R. et al: Policencephalomalacia of Cattle and Sheep. JAVMA 129: 311-321, 1956.

Little, P. B. and Sorensen, D. K.: Bovine Policencephalomalacia, Infections Embolic Meningoenceaphalitis, and Acute Lead Poisoning in Feedlot Cattle. JAVMA 155: 1892, 1969.

- Case II 70-262-F6 The lung of the Macaca mulatta had a lobar promotion from which a pure restate of the locations pneumoniae was obtained. Histologically a diffuse interstitial pneumonia in resolution was seen. Several participants of the conference considered the etiology to be Pneumocystis whereas others noted amphoteric intranuclear inclusions in bronchial epithelial cells. The contributor compared the lesions to experimental cases of an infectious pneumonia of 15 days duration. GMS stains for Pneumocystis were negative.
  - Ref.: Spencer, H.: Pathology of the Lung. 2nd Ed., Oxford Pergammon Press, 1967.
- Case III 70-2327 Both testicles of the boxer had multiple tumors which the contributor described as interstitial adenomas. Grossly, hemorrhages were seen on the cut surface. No metastases were evident in other tissues.

  Half of the participants regarded the neoplasm as an interstitial cell' tunor whereas the other half considered it to be mixed i.e. sertoli cell and interstitial cell tumors.
  - Ref.: Moulton, J. E.: Tumors in Domestic Animals. Univ. Cal. Press, p. 157-159, 1961.

Case IV - Male Rat - The Male Sprague-Dawley rat had a Nephroblastoma.

Ref.: Hottendorf, G. H.: Spontaneous Nephroblastomas in Laboratory Rats. JAVMA 153: 826-829, 1968.

Case V - 69-510 - The male rattlesnake kidney had sexual granules in the "distal segment" which is a normal finding in sexually active individuals of that species and several other reptiles.

SII Ref.: Burtner, H. J.: Histochemistry of the "Sexual Segment"
Granules of the Male Rattlesnake Kidney. J. Morph. 116: 189-196

R. L. EASON Veterinary Pathology Division



### Histories for Wednesday Slide Conference 21 October 1970

- Case I 7175B Nine-week-old Yorkshire pig inoculated intraperitoneally with suspension of organisms. Sacrificed at 14 days postinoculation.
- Case II 64AE3 Sections are from a blind yearling male elk captured in Sitgreanes National Forest, Arizona, in July. Numerous small depressions were seen in the surface of the right cerebral hemisphere.
  - Case III 371-70 Neoplasm removed from between semimembranous and semitendonous muscles of a 7-year-old Great Dane. Similar neoplasm was 7 removed from same area one year ago.
  - Case IV 69-140 Fifteen-year-old saddle horse. Two months after delivering a normal foal this mare experienced rapid weight loss and was noted to have bilateral thyroid enlargement. The foals thyroid was not enlarged.

    The mares condition did not improve during the next four months and she was destroyed. (I section of right thyroid and I of left).

Major, USAF, VC Veterinary Pathology Division

### Results of Wednesday Slide Conference 21 October 1970

 7175-B - The 9-week-old Yorkshire pig was inoculated intraperitoneally with a suspension of Mycoplasma hyorhinis and killed 14 days postinoculation. The response was typical in the section taken from the stifle joint. Grossly, the synovial membrane was reddened, edematous, and velvety in appearance. Microscopically, a mild to moderate synovial membrane hyperplasia and infiltration of mononuclear inflammatory cells into subjacent lamina propria (especially joining capillaries) were seen. The lamina propria was edematous and the capillaries were moderately congested. Hypertrophy of multipotential cells (Stellate fibroblastic cells) of the lamina propria was also observed. An occasional neutrophil was seen admixed with the mononuclear infiltrate which was mainly lymphocytes and plasma cells.

Ref.: Roberts, E. D., Switzer, W. P. and Ramsey, F. K.: The Pathology of Mycoplasma hyorhinis Arthritis Produced Experimentally in

Swine. Am. J. Vet. Res., 24: 19-31, 1963.

The group had no trouble with this case except one participant (the one presenting the case) who deducted the tissue to be peritoneum.

II. 64AE3 - The section from a blind yearling male elk captured in the Sitgraves National Forest, Arizona, in July, was of the right cerebral hemisphere. A cross section of the nematode. Elaeophora schneideri (adolescent 5th. stage) was seen in an artery. various stages of encephatomatacia were : 13 seen in the cortex. The vascular changes seen were those of endothelial proliferation in the vessel containing the nematode.

Ref.: Adcock, J. L. and Hibler, C. P.: Vascular and Neuroophthalmic Pathology of Elaeophorosis in Elk. Path. vet., 6: 185-213, 1969.

III. 371-70 - The neoplasm removed from between the semimembranous and semitendinosus muscles was a hemangioper cytoma.

Ref .: Yost, D. H. and Jones, T. C .: Hemangiopericytoms in the Dog. Am. J. Vet. Res., 159-163, Jan. 1958.

Mills, J.H.L. and Nielsen, S. W.: Canine Hemangiopericytomas - A Survey of 200 Tumors. J. Sm. Anim. Pract., 8: 599-604, 1967.

IV. 69-140 - The mare had bilateral non-functional follicular adenomas of the thyroid. Serum thyrozine and inorganic iodide levels were found to be normal. The right thyroid lobe measure 6.5x6.5x4.0 cm and weighed 109 gms. Cut section of this lobe disclosed a central core of homogenous firm white tissue surrounded by a thin (1 mm thick) shell of brown tissue grossly resembling thyroid. The left thyroid lobe measured 4.5x3.0x2.0 cm and weighed 13.5 gms. Incision of this lobe revealed two firm white spherical masses occupying 1/3 of the lobe. The remainder of this lobe appeared to be normal thyroid tissue. Radioiodine uptake studies showed that the tissue resembling normal thyroid concentrated iodide while tissue comprising the masses did not.

Ref.: Sommers, S. C.: Thyroid Gland. In Bloodworth, J.M.B. Edited: Endocrine Pathology, Williams and Wilkins, Baltimore, Md., 156, 1968.

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### Wednesday Slide Conference 28 October 1970

- Gase I 69243-1 Specimen from a goat submitted to pathology laboratory for diagnosis.
- Case II 70-18243 & 70-18374 Tissue from moribund rabbits with severe diarrhea. 18243 (Brown Agguti) is a naturally occurring case whereas 18374 (NZW) was experimentally produced by feeding intestinal contents from the naturally occurring case.
- Case III 3292 Tissue from an adult New Zealand white rabbit with an experimentally induced disease.
- Case IV G-7-70 Tissue from rabbit used on an experimental drug study.

ROBERT L. EASON Major, USAF, VC Veterinary Pathology Division

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### Results of Wednesday Slide Conference 28 October 1970

- Case I 69243-1 The section of skin from the goat had <u>Demodex caprae</u>.

  The mites were in a large epidermal cyst which also contained desquamated epithelial cells.
  - Case II 70-18243 & 70-18374 The rabbits had Tyzzer's disease. Considerable submucosal edema was seen in the section of intestine of the naturally occurring case. The liver of the experimental case had multifocal areas of necrosis.

    Bacillus piliformis organisms could be seen at the periphery of the necrotic areas. Most sections of the intestine had the Tyzzer's organisms in the cells of the crypts. A 2x2 Kodachrome of a Warthin-Starry stain of the liver section (enclosed) stained the organisms well.
  - Ref.: Allen, M. A., Ganaway, J. R., Moore, T. D., and Kinard, R. F.: Tyzzer's Disease Syndrome in Laboratory Rabbits. Am. J. Path., 46: 859-882, 1965.
  - Case III 3292 The adult New Zealand white rabbit had been injected intratesticurally six weeks prior with a suspension of Treponema cuniculi (strain H). The section of the testicle had a very severe granulomatous orchitis which was present to a lesser degree in the uninoculated testis as well. Similar inflammatory changes and organisms were found in the regional lymph nodes. The majority of the participants in the conference made a diagnosis of malignant lymphoma.

    The mulviquest called it a granulomatous orchitis.
    - Ref.: Smith, J. L. and Pesetsky, B. R.: The Current Status of <u>Treponema</u>
      cuniculi. Review of the Literature. Brit. J. of Venereal Dis., 43:
      117-127, 1967.
  - Case IV The kidney section from the rabbit of an experimental drug study had Nosema cuniculi in association with multifocal areas of chronic interstitial nephritis. The organisms were most readily found in the epithelial cells of the collecting tubules. Nosema cuniculi is most often found in the brain and kidney of the rabbit and must be differentiated from Toxoplasma gondii.



### Histories for Wednesday Slide Conference + November 1970

- 1. 68-301 An adult red-faced macaque (Macaca speciosa) lived in an outdoor cage for 11½ months prior to death. During the last 2 days of life, he had a series of convulsions. Gross necropsy findings were not remarkable.
- II. A 4-month-old puppy which had periods of head shaking and vomition 5.21 before death.
- III. 4463-70 This section is from a guppy (Lebistes reticulatus). There had been an increase in mortality with periodic deaths in the tank.
- IV. 1124-69 Section is from one of several tropical fish in a tank. Most members of the tank were swimming abnormally and had white focal pinpoint skin lesions. At necropsy, under a dissecting microscope, white pinpoint foci were seen in most of the organs.
- V. FMG-1 An incidental finding at necropsy in a miniature pig.

ROBERT L. EASON Major, USAF, VC Veterinary Pathology Division

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### Results of Wednesday Slide Conference + November 1970

Los morbile intranuclear inclusions could be seen in hepatocytes and adrenal cortical cells. The monkey was one of several which had died in a zoo. The source of the lead was paint which had been applied to the outside of cages years previously.

Ref.: Sauer, R. M., Zook, B. C. and Garner, F. M.: Demyelinating Encephalomyelopathy Associated with Lead Poisoning in Nonhuman Primates. Science, Vol. 169, 11 Sept. 1970, 1091-1093.

Scase II . Immature and basophilically stippled erythrocytes can be seen in the blood smear. The animal did not show clinical anemia but the usual gastroenteritis was seen. He was treated successfully several times with calcium ethylene diaminetetraacetic acid but the owner finally decided to kill the dog rather than move his paint. A diagnosis of lead poisoning was made on the basis of clinical history and the hemogram.

Ref.: Zook, B. C. et al: Lead Poisoning in Dogs. JAVMA, Vol. 155, No. 8, 15 Oct. 1968, 1329-1342.

52 Shand 703 B (Acad fact)

Safe III - 4463-70 - Case IV - 1124-69 - The guppies had the same disease,

mycobacteriosis, due to Mycobacterium fortuitum. The lesions were focal
("isseminated granulomas containing many organisms. (An acid fast stain is

- i.: Nigrelli, R. F. and Vogel, H.: Spontaneous Tuberculosis in Fishes and in Other Cold-Blooded Vertebrates with Special Reference to Mycobacterium fortuitum Cruz from Fish and fluman Lesions. Zoologica, Vol. 48, 131-144.
  - Parisot, T. J.: Tuberculosis of Fish. I. A Review of the Literature with a Description of the Disease in Salmonid Fish. Bacteriological Review, Vol. 22, 240-245, 1958.
  - Vogel, H.: Mycobacteria from Cold-Blooded Animals. Am. Review of Tuberculosis and Pulmonary Diseases, Vol. 77, 823-838.
  - Adams, R. M. et al: Tropical Fish Aquariums. A Source of Mycobacterium marinum Infections Resembling Sporotrichosis. JAVMA, 211, 457-461, 1970.

Hazard from the Home Aquarium. Brit. Med. J., 438, 23 May 1970.

Case V - The tumor in the skin of the miniature pig was a melanoma. The group in our conference had mixed opinions whether the neoplasm should be considered malignant or benign.

Ref.: Flatt, R. E. et al: Pathogenesis of Benign Cutaneous Melanomas in Miniature Swine. JAVMA, Vol. 153, No. 7, 936-941, 1 Oct. 1968.



### Histories for Wednesday Slide Conference 18 November 1970

Case I - 253-70-33 - Tissue from a 9-year-old castrated cat. A history of coughing and cestodiasis 6 months previously. He had a sudden onset of anorexia with 1050-1060F temperature and died on the third day. Vomition was severe the day of death. The hemogram was:

Het. - 32 WBC - 4, 656 Hgb. - 11.6 Neut. - 68 Sed. rate - rapid Lymphs. - 29 RBC - 4,930,000 Monos. - 2 Eos. - 1

Case II - 69-2067 - Tissue from a 3½-month-old poodle dog with clinical signs of conjunctivitis, 104.5°F temperature, vomiting, and diarrhea. These signs were noted 6 days prior to death.

- Case III 414-70-203 A 15-month-old female miniature pig which received 250 and /min widling tissue dose of 1,023 rads of gamma radiation bilitimal, and died 3½ days later.
- 52 8 Case IV PH A blood smear from a beagle dog which was apparently normal clinically.
- Case V Tissue from an 8-year-old zebra that died of a severe bronchopneumonia. The animal had a severe infestation of intestinal parasites and was in poor condition at necropsy.

### Results of Wednesday Stide Conference 13 November 1970

Case I - 253-70-33 - The cat had <u>Toxaplasma mondil</u> and <u>Direfflaria ismitis</u>.

Two mature viable <u>D. immitis</u> males were in the right ventricle and putmonary arteries. One dead <u>D. immitis</u> was found in an artery in the lung. No microfilaria were found at any time. An endarteritis with either a villus intimal proliferation or a canalized thrombus (which are indistinguishable) in the pulmonary arteries was attributable to the <u>D. immitis</u>. The <u>T. gondii</u> organisms were found in the lungs, brain, pituitary, lymph nodes, liver, spleen, heart, urinary bladder, and small and large intestines. The lung lesions consisted of an acute interstitial pneumonia with focal areas of necrosis.

Ref.: Dubey, J.P., Miller, N.L., and Frenkel, J.K.: Characterization of the New Fecal Form of <u>Toxoplasma gondii</u>. J. Parasit., Vol. 56, No. 3, June 1970, 447-456.

Dubey, J.P., Miller, N.L., and Frenkel, J.K.: The <u>Toxoplasma</u> gondii Oocyst From Cat Feces. J. Exp. Med., Vol. 132, No. 4, Oct. 1, 1970, 636-662.

Griffiths, N.J. et al.: Feline Dirofilariasis. JAVMA 140: p. 61, 1 Jan. 1962.

Tornes, W.A. and Sambol, R.M.: Heartworm Infection in a Cat. Allied Veterinarian 30: 4, 150-152, September-October 1959.

Case II - 69-2067 - The poodle puppy had Toxoplasmosis and distemper.

: towers interstitial present of the first logically. The Toxoplasmosis gondii organisms were found in the alveolar macrophages. The eosinophilic inclusions of the distemper virus were found in the bronchial epithelium.

Ref.: Capen, C.C. and Cole, C.R.: Pulmonary Lesions in Dogs with Experimental and Naturally Occurring Toxoplasmosis. Path. vet., 3: 40-63, 1966.

Frenkel, J.K., Dubey, J.P. and Miller, N.L.: <u>Toxoplasma gondii</u> in Cats: Fecal Stages Identified as Coccidian Oocysts. Science 167: 893-896, 1970.

- 527 Case III 414-70-203 The miniature pig tissue was a uterus with endometritis. The radiation had destroyed the inflammatory cells. The section was mistaken by some of the participants for intestine.
- Case IV PH The blood smear had erythrocytes containing <u>Babesia gibsoni</u> which generally were in a small rounded signet ring shape and were easily differentiated from <u>Babesia canis</u> on the basis of size and shape.

  Ref.: Moronpot, R.R. and Guindy, E.: Preliminary Study of B. gibsoni,
  Patton in Wild Carnivores and Domesticated Dogs in Egypt. Am. J.

  Vet. Res., 31:4, 797-799, April 1970.
- Case V 18683 The zebra had an enlarged pituitary grossly which measured 2.5 cm by 3.0 cm. The section was neoplastic and was an adenoma of the

pars intermedia.
Ref.: Jubb, K.V.F. and Fennedy, P.C.: Pathology of Demostic Animals.
Vol. 1, 2nd ed. Academic Press, 1970, p. 435.



### Histories Wednesday Stide Conference 2 december 1970

Case I - 70X209T12 - Tissues from a cat with white nodules in both kidneys and liver. The lungs were uniformly meaty in appearance and did not collapse completely.

Case II - 68R35T14 - Tissues from a 69-day-old cat inoculated subcutaneously 6 days previously with 2 ml of a saline suspension of the kidney from the case above.

Cime III - S 162 - Six-year-old female black French poodle dog. The animal was presented with polypnea, serous masal discharge and anorexia. Lung sounds "were slightly increased". The following clinical data were obtained:

Total WBC - 24,000/cu. mm

Segs - 70% Lymphs - 15% Eos - 9% Monos - 6%

An upper respiratory infection was diagnosed and the animal was treated and released. Two days later the animal was returned showing dehydration, pale mucous membranes and a slight amount of blood in the masal discharge faceral thoracic radiographs revealed "diffuse shadows in the lung riese. The animal was treated and sent home and died the next day. At necropsy white nodules were present in the lungs and heart. Adrenals were "enlarged". A 1 cm. diameter mass was observed adjacent to the left 4th mammary gland.

5 case IV - 70-2461 - Tissue surgically removed from the abdominal skin area of a 7-year-old female standard poodle dog.

old female mouse.

R. L. EASON, Maj., USAF, VC Veterinary Pathology Division

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### Results of Wednesday Slide Conference 2 December 1970

Case I - 76N209T12 - The kidney of this cat had lesions attributable to the virus of feline infectious peritonitis.

Ref.: Wolfe, L.G., and Giesemer, R.A.: Feline Infectious Peritonitis.
Path. vet. 3: 255-270, 1966.

Ward, B.C., and Pedersen, N.: Infectious Peritonitis in Cats. JAVMA, 154: 26-35, 1969.

Ward, J.M.: A Study of Etiology and Pathogenesis of Feline Infectious Peritonitis. Ph.D. thesis, Univ. of Calif., Davis, 1970.

Case II - 68R35T14 - The lung of the 69-day-old kitten had acute phlebitis induced by an experimental infection of feline infectious peritonitis virus.

Ref.: Ward, J.M., and Theilen, G.H.: Generalized Phlebitis and Chronic Peritonitis in a Kitten. Vet. Med./Sm. Ani. Clin., 64: 1052-1056, 1969.

Ward, J.M.: A Study of the Etiology and Pathogenesis of Feline
Infectious Peritonitis. Ph.D. thesis, Univ. of Calif, Davis, 1970.
Allen, A.C., and Spitz, S.: A Comparative Study of the Pathology of
Scrub Typhus and Other Rickettsial Discuses. Am. J. Path., 22:
603-681, 1945.

Ward, J.M.: Feline Infectious Peritonitis, Calif. Vet., May 1969. Feldmann, B.M., and Jortner, B.S.: Feline Systemic Proliferative and Exudative Vasculitis. CPC. JAVMA, 1944: 1409-1419, 1964.

Case III - S 162 - The 6-year-old female black French poodle dog had a mammary gland adenocarcinoma with multiple metastases to heart, lung, liver, spleen, adrenals, and urinary bladder.

Ref.: Fidler, I.J., and Brodey, R.S.: A Necropsy Study of Canine Malignant Mammary Neoplasms. JAVMA, 151: 710-715, 1967. Moulton, J.E.: Histological Classification of Canine Mammary Tumors: Study of 107 Cases. Cornell Vet., 44: 168-180, 1954.

Case IV - 70-2461 - This section was from tissue removed from a 7-year-old female standard poodle dog and considered by the contributor to be a ductal adenocarcinoma of the mammary gland. Only two of the participants agreed with the diagnosis and considered the comedo formation significant. The remainder of the group preferred a diagnosis of sarcoma with rhabdomyo-sarcoma, liposarcoma, and undifferentiated sarcoma types being suggested. A diagnosis of rhabdomyosarcoma had the largest number of votes but by no means a majority. Further consultation is in process and the results will be reported at a later date.

Ref.: Moulton, J.E.: Tumors in Domestic Animals, Univ. of Calif. Press Berkeley and Los Angeles, 179-188, 1961.

Case V - 70-2250 - The section from the 2 cm. mass removed surgically from a 15-month-old female mouse was a mammary adenocarcinoma. One month after removal of the mass the animal died of multiple pulmonary metastases from

the neoplasm identical to the first tissue removed. The lesion conforms to mammary adenocarcinoma "Type B" as described for the mouse by Dunn. Ref.: Dunn, T.B.: Morphology of Mammary Tumors in Mice. In Homburger (ed.). The Physiopathology of Cancer, 2nd ed., Hoeber-Harper, N.Y., 38-84, 1959.



### Histories for Wednesday Slide Conference 9 December 1970

Case I - 7054 - Tissues taken from a range sheep in a semiarid western state which died auddenly with a blood-tinged fluid about it's nostrils. Clinically, the signs were depression, polypnea, lateral recumbency, convulsions, and death.

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Case II - 17784 - Tissues taken from one of 39 pigs that died over a 10-day period from a herd of 81 feeder pigs. The peritoneal cavity contained an abundance of straw-colored fluid with no fibrin. The pleural cavity had a very small amount of the same type of fluid but a moderate amount was present in the pericardial sac. Of the remaining pigs in the herd, many displayed stiffness of joints of the hind legs and vomiting was observed in 7.

Case III - Tissues taken from one of 40 similarly affected purebred beagle dogs of a group of 390 which were purchased from a single commercial breeder and used in the safety evaluations of 17 pharmaceucical compounds. After wearing, the litter remained together until 3 months of age, at which time they were separated into groups of 3 and placed in housing units which had wire floors and were raised above the ground surface. The dogs were fed a commercial dry dog food supplemented by raw, ground slaughterhouse refuse At approximately 6 months of age, they were lilliered to the century laboratory, maintained in individual cages in climate controlled rooms (70±2°F; 50% relative humidity), and fed pelleted commercial dry dog food.

Case IV - Tissue taken from papillomatous lesions removed from a cichlid.

### Results of Wednesday Slide Conference 9 December 1970

- Case I 7054 The sheep was experimentally poisoned with Halogeton.

  The animal died 3 hours after 500 grams of dried Halogeton ween was

  given via stomach tube into the rumen. Clinical signs were depression,

  polypnea, lateral recumbency, convulsions, and death. The blood calcium

  just before death was 2 mg%.

  Ref.: Jubb & Kennedy: Pathology of Domestic Animals, Vol. 2, 258, 1963.
- Case II 17784 These feeder pigs had gossypol poisoning. The animals had been on a ration containing cottonseed meal.

  Ref.: Smith, H. A.: The Pathology of Gossypol Poisoning. Am. J. Path.,

  33: 353, 1957.
- Case III 1503-70 The parasites present in the dog lung were Filaroides milksi.

  Ref.: Jubb, K. V.: The Lesions Caused by Filaroides milksi in a Dog.

Cornell Vet., Vol. 50, 1960.

Case IV - Cichlid - The lesions were the greatly enlarged cells caused by tymphocystis virus. The virus causes multiplication of DNA in the cytoplasm similar to the pox virus, frog virus, and iridescent virus groups.

Ref.: Lopez, D. M.: Biochemistry and Morphology Studies of Lymphocystis Disease. NCI Monograph #31, Lower Animal Tumors, 223-236.



### Histories for Wednesday Slide Conference 16 December 1970

- Case I 20399 Tissues taken from an II-year-old boy who had been treated with immunodepressant drugs before death.
- Case II 22426 Tissues taken from a 15-month-old male Sprague-Dawley ra Clinical signs included posterior paralysis and total WBC of 18,000/mm<sup>3</sup>. Gross findings included an enlarged mottled liver, splenomegaly, enlarged lymph nodes, and hemorrhage in the spinal cord.
- Case III 4184 Tissues taken from a 5-year-old male toy fox terrier dog with a history of circling to the right.
- Case IV 9755 Tissues taken from an RF female mouse, 283 days of age.

  The mouse had been given 300 r of whole body irradiation with x-ray at 70 days of age.

ROBERT L. EASON Major, USAF, VC

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### Results of Wednesday Slide Conference 16 December 1970

Case I - 20399 - The II-year-old boy had Hodgkin's disease complicated by cryptococcosis.

Ref.: Pathology, 5th. ed., Edited by W.A.D. Anderson, Vol. 2, V. Mosby Co., 1966, 1037.

Gase II - 22426 - The 15-month-old Sprague-Dawley rat had acute lymphocytic leukemia. Extensive infiltration by lymphocytes of the liver, spleen, and lymph nodes was seen. The bone marrow was largely replaced by lymphocytes and the periosteum of the calvarium and spinal canal were markedly elevated by encroaching masses of leukemic cells causing compression of the brain and spinal cord.

Case III - 4184 - The fox terrier dog had reticulosis. Several members of the group diagnosed the disease as a multifocal granulomatous encephalitis, etiology undetermined.

Ref.: Koestner, A. and Seman, W.: Primary Reticuloses of the Central Name System in Dogs. Am. J. Vot. Res., 23: 381-393, 1962.

Case IV - 2755 - The mouse had thymic lymphosarcoma with mediastinal extension involving heart, lung, and lymph nodes.



### Wednesday Slide Conference 6 January 1971

( A) Case I - 69-8-M - Tissue Eken from a bovine in Kenya.

Case II - 70-P-176 - Tissue taken from a 3-year-old racing quarterhorse insured for \$125,000. The horse was doing quite well until May 1969 when it developed a persistent cough. The horse was somewhat improved after 3 months at pasture, but began losing weight around Christmastime. When presented to a clinic in January, the horse was moderately depressed and had a unilateral anterior uveitis. The horse's temperature fluctated between 101 and 102°F and it's appetite was meager as the weight loss and depression worsened. The total WBC remained at 8,000-9,000 cm and the proportion of mature neutrophils was about 80%. Radiographs revealed several large, opaque masses in the lungs. The animal became prostate within a few weeks and was finally killed.

Case III - S-163 - Biopsy tissue taken from a palpable mass in the prepubic region of an 8-year-old boxer dog. The mass was later removed surgically and the dog has appeared normal clinically since that time.

Case IV - 8140 - Tissue taken from a lesion found incidentally during a routine necropsy of a Macaca mulatta used as a control on an experiment.

ROBERT L. EASON Major, USAF, VC Veterinary Pathology Division

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### Results of Wednesday Stide Conference 6 January 1971

Case 1 - 69-8 The bovine had East Coast Fever. The Koch bodies could be seen in lymphocytes of the section of lymph node.

Case II - 70-P-176 - The horse had cryptococcosis with granulomas in the lung and meningitis, all of which contained the organisms of <u>Cryptococcus neoformans</u>. There was a granulomatous uveitis which also contained the organisms in the eye section.

Ref.: Emmons, C. W., Binford, C. H., and Utz, J. P.: Medical Mycology, Lea & Febiger, Phila., 1963, p. 147.

Case III - S-163 - The tissue taken from the boxer dog was considered by the group to be a hematoma wall. The contributor's diagnosis, however, was papillary transitional cell carcinoma of the urinary bladder.

Ref.: Jubb, K.V.P. and Kennedy, P. C.: Pathology of Domestic Animals.
Academic Press, Vol. I, N. Y., N. Y., 1963.

Moulton, J. E.: Tumors in Domestic Animals. Univ. of Calif. Press, Berkeley, Calif., 1961.

Osborne, C. A., Low, D. G., and Perman, V.: Neoplasms of the Canine and Feline Urinary Bladder: Clinical Findings, Diagnosis, and Treatment. JAVMA, 152: 247-259, 1968.

Case IV - 2110 - The rhesus monkey had a parasitic cyst in the liver caused by the larval forms of the cestode Echinococcus granulosus.



# Histories for Wednesday Slide Conference 13 Wednesday 1971

Case I - 62-1238 - A brain section taken from a Suffolk rain killed at 4 months of age after 2½ months of progressive ataxia, broad base stance, swaying hind quarters, and occasional falling.

Case II - 27153 - This section of tissue was taken from an aborted pig fetus. At necropsy there was marked subcutaneous edema and hemorrhage with blood stained fluid in the pleural cavity. Strands of fibrin were scattered on the serosal surface of liver, and numerous slightly depressed orangebrown foci 0.1-0.5 cm in diameter were randomly scattered throughout the liver.

Case III - 69-136 - Tissues were taken from a rhesus monkey at necropsy. The animal had an acute fulminating diarrhea of 12 hours duration. Heroic efforts in administering high levels of antibiotics and other supportive therapy were unsuccessful.

Case IV - 14-185 - An incidental finding in tissue taken from an adult female squirrel monkey that died 48 hours after delivering a normal offspring at a zoo. At necropsy the uterus was congested and edematous with the placenta retained.

### Results of Wednesday Slide Conference 13 January 1971

- 547 Case 1 1238 The male Suffolk lamb had systemic neuroaxonal dystrophy. The spheroids were derived from distal portions of axons involving proprioceptive pathways.
  - Ref.: Cordy, D. R., Richards, W.P.C., and Bradford, G. E.: Systemic Neuroaxonal Dystrophy in Suffolk Sheep. Acta Neuropathologica. 8: 133-140, 1967.
- Case II 27153 Leptospiral abortion was the diagnosis. The fetus had many spirochetes in the pleural fluid.
  - Ref.: Fish, N. A., Ryu, E., and Hulland, T. J.: Bacteriological and Pathological Studies of Natural and Experimental Swine Abortion Due to Leptospira pomona. Canad. Vet. J.: 4: 317-427, 1963.
  - Case III 69-136 The rhesus had a cytomegalic virus infection. The large intranuclear eosinophilic inclusions also were seen in the liver and kidneys. The cytomegalocytes, according to the contributor, appeared to have a method of attracting neutrophiles into its vicinity.
- Case IV 14-185 The parasite in the squirrel monkey's lung was ruarouses gornus.

  Ref.: Graham, G. L.: Parasitism in Monkeys. N. Y. Acad. Sci., 842-859, 1960.



### Histories for Wednesday Slide Conference 20 January 1971

- Case I 1322563 Tissue taken from a dog at necropsy which had succumbed to a clinically evident respiratory distress. Treatment was of no value, however, radiographs revealed numerous radiolucent foci scattered throughout the lung.
- A Case II 70-1013 A section of tissue removed from the ear of a 2-year-old Siamese cat with a severe exudative dermatitis.
  - Case III 70-237-A&B An incidental finding in a 7-year-old male

    [A] Papio sp. used in an experiment to study septic shock. One week

    prior to death clinical chemistry values included: Glucose 135 mg%,

    BUN 17 mg%, Sodium 150 mEq., Potassium 4.5 mEq., Chloride 111 mEq.,

    CO 29, Calcium 8.3 mg%, Total Protein, 5.7 gm%, Albumin 1.6 gm%,

    Alkaline phosphatase 24 mU/ml, Total Bilirubin 0.3 mg%, SGOT 85 mU/ml.
- Case IV An incidental finding on a routine blood smear of a rhesus monkey.
- Case V 7364 A young female Macaca mulatta was given an intravenous injection three hours prior to the start of an experimental procedure. What was the purpose of the IV injection? What system is affected?

NOTE: SEE DIAGNOSTIC CHARACTERS OF MERUCYST IN DIFF. 505. OF

HEMTOCYSIS IN AFRICAN DIDINEYS," IN BACK OF RESULTS FER

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### Results of Wednesday Slide Conference 20 January 1971

- 55 | Case I 1322563 The dog had a case of disseminated geotrichosis.

  \* See LODACHROME

  Ref.: Lincoln, S. D. and Adcock, J. L.: Disseminated Geotrichosis
  in a Dog. Path. vet., Vol. 5, No. 3, 282-289, 1968.
- 555 Case II 70-1013 The cat had Sporotrichosis caused by Sporotrichum schenkii. The diagnosis was confirmed by culture and fluorescent anti-body technique by the Communicable Disease Center, Atlanta, Georgia. Fluorescent antibody tests were negative for Histoplasma sp. and other pathogenic fungi.
  - Ref.: Smith and Jones: Veterinary Pathology, 3rd. ed., 542.
- 553 Case III 70-237 A&B The baboon was infected with Hepatocystis simii.

  A+8 The multiloculated merocyst was a differentiating factor to distinguish the cyst from one caused by H. kochi which is not multiloculated.
  - Ref.: Garnham. P.C.C. and Pick, F.: Unusual Form of Merocysts of Hepatocystis (Plasmodium) kochi. Trans. of the Royal Soc. 17.0p. Med. & Uye., Vol. 45, No. 5, 535-537, Sept. 1952.
- 554 Case IV (III) Gametocytes of <u>Hepatocystis kochi</u> were found in red blood cells. Morphologic differentiation from <u>Plasmodium sp.</u> is difficult.
  - Ref.: Garnham, P.C.C.: Malaria Parasites and Other Haemosporidia. Blackwell Scientific Publications, Oxford, 1966.
- Case V 7364 The rhesus monkey was given an intravenous injection of "Thorotrast" which is a 24% to 26% stabilized colloidal thorium dioxide used to block the reticuloendothelial system. The radioactive substance is an alpha particle emitter and onchogenic. When administered it remains in the RE cells for indefinite periods.

FALARIA	CHARACTERTSTICS	STREET, STREET
1. 5-lo days	Duration of primary EE schizogony	2 sonths
2. 40xn0 u	Average size of mature EE schizont	1-4 120 150
3. 10,000-30,000	Merozoites released from EE schizont	Millions
4. 3 types	Types of merozoites released from EE schizont	2 types
5. Schizogony Gametogony	Type of development in RBC	Gametoguny
6. 48-72 hrs.	Duration of primary E schizogony	None
7. 5-7 u	Size of erythrocytic schizont (mature)	None
8. 8-16	No. of merozoites from erythrocytic schizogont	None
9. 4-6 days	Duration of maturation of gametocytes in REC	5 days
10. Mosquito	Invertebrate host	midge
11. Midgut (exterior)	Location of sporogony in invertebrate host	Thorax and !
12. 7-16 days	Duration of sporogony in invertebrate host	5 day (H. k/
13. None	Amoeboldicity of gametocyte	Yes
14. None	Vacuolization of immature gametocyte	Yes
15. Clumps together	Pigment in gametocyte	finely gram
16. No	Mature gametocyte sheds RBC envelope	Yes

# DIACNOSTIC CHARACLERS OF THE NEROCYST IN DIFFERENT SPECIES OF HERMY OUVSTIS IN AFRICAN NOUNETY

1. H. kochi Cercepitheus 2 nm or Smooth surface and Large Cercepitheus 2 nm or Smooth surface and Large Cercepitheus 2 nm or Smooth surface and Large Cercepitheus 3 nm Three into blunt souches no special mona applications external but vacuoles in adultition of several mona average fingle-like processes 5 multi form of several strains average fingle-like processes 5 multi form of several strains average fingle-like processes 5 multi form of several strains average fingle-like processes 5 multi form of several strains average fingle-like processes 5 multi form of several strains average fingle-like processes 5 multi form of several strains average fingle-like processes 5 multi form of several strains average fingle-like processes 5 multi form of several strains average fingle-like processes 5 multi form of several strains 1 mm of several strains 1 mm of several strains 1 mm regular form thick 1 mm regular f								
Cercepithecus 2 mm or Smouth surface and Large actions spp section (100 u) colobus spp section (100 u) and colobus spp section and colobus spp projections external and colobus spp projections external and colobus specifications and colobus specification of colobus specification and colobus specification and colobus specification and colobus specification and colobus specification (starfish-shaped)  M. cyclopis 1.5 - Smooth surface Large colobus time regular form thick colobus time regular form thick colobus time colobus time colobus colobus time colobus colobu	SEE	CI	\$]	VERTEBRATE HOST	SIZE	PLASS ODIAL RIM	CAVITY	SPECIES CHARACTER
Papio spp 3-4 mm Multilocular No central cavity Polyhedral but vacuoles in daughter cysts  Cercopithecus 3 mm Thren into blunt Split into several ly; internally, mero-zoitis external vacuoles ly; internally, mero-zoitis extend in stranjs toward vacuole stranjs toward vacuole nicitians average fings:-like processes Small Threninto bizzare Small Subject to nicitians externally externally neglectus; ctc.  SOUTHEAST ASTAM SPECIES OF HEPATOCYSTIS  Macaca frus I mm digitiform Small Small ctc.  SOUTHEAST ASTAM SPECIES OF HEPATOCYSTIS  M. cyclopis 1.5 - Smooth surface Large rim regular form thick rim	-:	pri	kochi	Cercopithecus acthiops Cercocebus spp Colobus spp	2 mm or less in section	Smooth surface and regular form; narrow (100 u)	Largo	
Cercopithecus 3 mm Thican into blunt Split into several mona projections external vacuoles 19; internally, mero-zoites extend in strands toward vacuole nictitans average finger-like processes neglectus; average finger-like processes small man externally neglectus; average finger-like processes small neglectus; average finger-like processes average finger	5.	m	simtae	Papio spp	3-4 mm	Multilocular	No central cavity but vacuoles in daughter cysts	
Cercopithecus Small Threstinto bizzare Small nictitans average fingst-like processes lama externally neglectus; etc.  SOUTHEAST ASIAN SPECIES OF HEPATOCYSTIS  Macaca frus lam digitiform Small  M. nemestrina (starfish-shaped)  M. cyclopis 1.5 - Smooth surface Large rim regular form thick	3	pi	bouf 11ezi	Cercop'thecus mona	3 mm	Thresh into blunt projections external- ly; internally, mero- zoites extend in strands toward vacuole		
H. semnopithed: Macada frus 1 mm digitiform Small M. nemestrina (starfish-shaped) H. talkanensis M. cyclopis 1.5 - Smooth surface Large Thu regular form thick rim	.7	pi	Cercopitheci	69 10	Small average 1 mm	Threet into bizzare fingst-like processes externally	STTS	Subject to early phagocytosis
H. talkanensis M. cyclopis 1.5 - Smooth surface Large 2 mm regular form thick rim		pi .	sernopitheci		1 mm	digitiform (starfish-shaped)	Seall	
		==	talwamensis	M. cyclopis	1.5 - 2 mm	Smooth surface regular form thick rim	Large	



## Histories for Wednesday Slide Conference 27 January 1971

- with a history of lameness in the left rear foot. Physical findings included multiple dense nodules on the inner right leg and abdomen. The largest mass measured 10 cm in diameter. The left rear foot was enlarged and contained a dense mass over the metatarsus. Partial flaccid paralysis of the rear limbs was observed and patellar reflexes were depressed. Radiologic findings included osteoporotic areas in the left metatarsus and thoracic vertebral spinous processes V, VI, and VII. Irregular densities were present in the chest. A slight leucocytosis (WBC 24,000) with a left shift was found..
- II 70-2478 & 70-2479 Tissue taken from a 6-month-old dog which had a cardiac murmur noted at 10-weeks of age. The animal had been treated for congestive right heart failure prior to death.
- III 14-942 Tissue taken from a rabbit presented for necropsy from a local zoo. All serous surfaces in the thorax were covered with thick white tenacious exudate.
- IV 67227-1 A 4-month-old pig was inoculated intramuscularly man infectious agent and died 12 days postinoculation. This tissue section was taken from the pig at necropsy.

### Results of Wednesday Slide Conference 27 January 1971

- Case I 69-3993 The ten-year-old Weimaraner bitch had a bronchogenic carcinoma. The neoplasm had stromal osseous metaplasia with mineralization and squamous metaplasia of the epithelium. The animal also had a metastatic hemangiosarcoma; a focus of which was seen in the primary lung neoplasm according to the contributor. A few microfilaria were seen in the pulmonary parenchyma.
- 5 Ti Case II 70-2478; 70-2479 The 6-month-old dog had a spontaneous myocardial infarction. The animal had a stenetic pulmonary valve. At 19 weeks of age, the dog was first treated for congestive heart failure and the first infarct probably occurred at this time. At 24 weeks of age, a right heart catherization was done to evaluate the right ventricle and pulmonary valve. A valvulotomy was attempted unsuccessfully two weeks later. Grossly, the atrium and ventricle were greatly hypertrophied Hypertrophy possibly predisposes the myocardium to infarction whether or not vascular occlusion of a coronary artery occurs. No vascular occlusion were found in this heart. Microscopically areas of focal coagulation necrosis of varying age were present in the interventricular septum and free wall of the right ventricle. Mature connective tissue and mineralization were seen in the longer standing infarcts in the interventricular septum. The "intermediate age" infarcts were becoming revascularized. The more recent infarcts were indicated by the presence of hemorrhage and early coagulation necrosis. The cause of the myocardial infarction in this case was thought to be a relative under perfusion of the hypertrophied myocardium.
  - Ref.: Handforth, C. P.: Isoproterenol Induced Myocardial Infarction in Animals. Arch. Path., 73: 161-165, 1962.
    - Haddy, F. J.: Physiology and Pharmacology of the Coronary Circulation and Myocardium, Particularly in Relation to Coronary Artery Disease. Am. J. Med., 47 (2): 274-286, 1969.
    - Ratliff, N. B., Peter, R. H., Ramo, B. W., Somers, W. R., Morris, J. J.: A Model for the Production of Right Ventricular Infarction. Am. J. of Path., 58(3): 471-479, 1970.
- 558 Case III 14-942 The rabbit had a fibrinonecrotic pleuropneumonia caused by <u>Pasteurella multocida</u> which was cultured from the thoracic tissues.
- Case IV 67227-1 The pig was inoculated with Hog Cholera Virus.
  Ref.: Pirtle, E. C.: In Vitro Spread of Hog Cholera Viral Infection from Cell to Cell: Demonstration of Viral Antigen in Cytoplasmic Bridges. Amer. J. Vet. Res., 30: 1913, 11 Nov. 69.
  Leudke, A. J. and Dunne, H. W.: Focal Necrosis in the Mucosa of the Gallbladder in Pigs with Hog Cholera. Amer. J. Vet. Res., 22(88), May, 61.

- Weide, Waxler, Whitehair, and Morrill: Hog Cholera in Gnotobiotic Pigs. JAVMA. 140(10): 1056-1061, May 15, 1962.
- Urman, Underdahl, Aiken, Stair, and Young: Intranuclear Inclusion Bodies Associated with Hog Cholera. JAVMA, 141(5): 571-581, Sept. 1, 1962.
- Loan, R. W.: Studies of the Nucleic Acid Type and Essential Lipid Content of Hog Cholera Virus. Amer. J. Vet. Res., 25(103): 1366-1370, Sept. 1964.
- Mengeling, W. L. and Packer, R. A.: Pathogenesis of Chronic Hog Cholera: Host Response. Amer. J. Vet. Res., 30(3): 409, Mar. 3, 1969.
- Cheville, N. F. and Mengeling, W. L.: The Pathogenesis of Chronic Hog Cholera (Swine Fever): Histologic, Immunofluorescent, and Electron Microscopic Studies. Lab. Invest., 20(3): 261, Mar. 1969.



### Histories for Wednesday Slide Conference 3 February 1971

- ShC Case I 3381-70 Specimens of rat tibiotarsal and metatarsophalangeal joints were collected from the hind logs of four animals on days 0. 17. 22 and 29 post introdermal injection of \_\_\_\_\_\_\_ in the tail. The only obvious clinical feature other than a local reaction at the tail injection site was the progressive swelling of both hind feet and variable degrees of hind log largeness.
- Case II 3369-69 This tissue is from a 20-month-old, male registered beagle dog. During the course of a 13-week subacute toxicity study, digits on some of the feet of several high and mid dose animals became swollen. The bairless interdigital skin was reddened and moist, frequently partially covered by a thin viscous yellow material. The swelling consisted of an approximate 20 to 40% increase in digital volume.
- 562 Case III 3052 -66 Upon dissection of the neck region, a unilateral, irregular solid tissue mass was noted adjacent to the trachea, esophagus and cervical skeletal muscle in a mature, male rhesus monkey. This animal had been used as a control and received no medication after arrival at the research laboratory.

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### Results of Wednesday Slide Conference 3 February 1971

- Case 1 3881-70 The rat joints were subjected to an "adjuvant arthritis". The substance injected into the tail intradermally was killed mycobacteria in oil. A nonsuppurative granulomatous disease initially involving the soft tissue of the hind limbs and eventually accompanied by subperiosteal bone formation and disintegration of the underlying cortical bone results from such inoculation in the rats.
  - Ref.: Glenn, E. M. and Gray, J.: Adjuvant-Induced Polyarthritis in Rats: Biologic and Histologic Background. Am. J. Vet. Res., 114: 1180-1193 (1965).
    - Mikolajew, M., Kuratowska, Z., Kossasowska, M., Plachecka, M. and Kopec, M.: Haematological Changes in Adjuvant Disease in the Rat. I. Peripheral Blood and Bone Marrow After Repeated Injections of Freund's Adjuvant. Ann. Rheum. Dis., 28: 35-39 (1969).
    - Winter, C. A. and Nuss, G. W.: Treatment of Adjuvant Arthritis in Rats with Anti-inflammatory Drugs. Arthritis and Rheumatism, 9: 394-403 (1966).
    - Wood, F. D., Pearson, C. M. and Tanaka, A.: Capacity of Mycobacterial Wax D and its Subfractions to Induce Adjuvant Arthritis in Rats. Int. Arch. Allergy, 35: 456-467 (1969).
- Case II Vinter The beagle dogs had granulomatous pododermatitis caused by subcutaneous impaction of fractured hair fragments. The dogs were under continued chemically induced stimulation and as a result were repeatedly subjected to trauma on the expanded metal cage floor.
- 562 Case III 3052-66 The mature male rhesus monkey had a granulomatous cellulitis caused by Kaolin material which was accidentally introduced into the air sacs during esophageal intubation.
  - Ref.: Reed, K. E., Valerio, M. G., Ulland, B. M., Valerio, D. A., and Stookey, J. L.: Mediastinal and Subcutaneous Cervical Granulomas Produced by Faulty esophageal Intubation of Kaolin Mixture in Macaques. Lab. Anim. Care, 20: 720-725 (1970).



### Histories for Wednesday Slide Conference 10 February 1971

- Case I 2490 A 2-year-old female Doberman dog had a history of an acute illness, rapid rise in BUN and serum creatinine. The section presented was taken at necropsy.
- 564 Case II 61-67 Tissue taken from a steel head caught in the Snake River.
- 555 Case III 5362 The tissue section is from a 7½-year-old male dog with generalized lymph node enlargement, splenomegaly, enlarged tonsils, and a previous history of a tumor on the prepuce which had been surgically excised.
- 566 Case IV This section was taken from a biopsy of a breast mass which had been noticed for one month on a 10-month-old cat. During surgery 5 or 6 additional masses were seen in other mammary glands. Discuss the endocrinologic features of this condition.

Major, Long, VC Vatorinary Pathology Division

### Results of Wednesday Slide Conference 10 February 1971

- 563 Case I 2490 The 2-year-old Doberman dog had a chronic sclerosing glomerulonephritis. Much discussion ensued as to the primary cause of the condition; an immune-complex basis was given strong consideration.
- Sake River contained many encysted metacercariae of Nanophyetus salmincola, the fluke associated with salmon poisoning.
  - Ref.: Milleman, R. E. and Knapp, S. E.: Biology of Nanophytes salmincola and "Salmon poisoning" disease, Adv. Parasit., Vol. 8, 2-41, 1970.
- Case III 5362 The tumor in the male dog, according to the contributor, was a malignant transmissible venereal tumor. Karyotypes of cells of the primary neoplasm on the prepuce and of neoplastic cells in regional lymph nodes demonstrated the presence of 59 chromosomes in most cells. The tonsil according to the contributor, also contained the neoplasm; however, a chromosome study was not done on this tissue.
  - Ref.: Moulton, J.: Tumors in Domestic Animals, pp. 164.
  - 666 Case IV 4482 The mammary biopsy from the 10-month-old female cat had morphological changes similar to those seen in juvenile hypertrophy of the breast in humans. In addition to the mammary biopsy, an ovariohysterectomy was performed. The ovaries contained several large corpora lutea as well as many large secondary follicles. The uterus had evidence of progesterone stimulation.
    - Ref.: McDwitt, R. W., Stewart, F. W., and Berg, J. W.: Tumors of the Breast. Atlas of Tumor Pathology, Fascicle 2, 144, 1968.



# Histories for Wednesday Slide Conference 24 February 1971

- 567 Case I 70N-830-T13 and T14 These sections are from a 2-year-old bovine examined 4 days after the first observation of illness that had a temperature of 104°F. This bovine was completely anoretic, constipated, and blind with deep vascularization of the corneas. The nasal mucosa was reddened and focally necrotic. Foot or skin lesions were not recognized.
- 568 Case II 66-1419 This tissue section was taken from a subcutaneous nodule on the leg of a chicken and was an incidental finding at postmortem examination in a processing plant.
- Gase III P-142, P 143 Two littermate guinea pigs were weaned at 3 weeks of age and placed in separate cages. One was given the regular guinea pig commercial feed and the other was given a mouse chow diet. After 4 weeks, the skin over the withers of each animal was raised and snipped off leaving an oval wound that would have to heal by second intention. Both animals were sacrificed one week later and the wounds bisected for histology. P-143 is the wound from the guinea pig on the normal diet and P-142 is from the guinea pig on the mouse chow diet.

### Results of Wednesday Slide Conference 24 February 1971

- Case I 70N-830 T13&14 The 2-year-old pregnant bovine had malignant catarrhal fever.
- 568 Case II 66-1419 The subcutaneous nodule from the leg of a chicken was a myelocytoma. The contributor regarded the lesion as having an unusual location.
  - Ref.: Mladenov, A., Heine, U., Beard, D., and Beard, J. W.: Strain MC29 Avian Leucosis Virus, Myelocytoma, Endothelioma, and Renal Growths: Pathomorphological and Ultrastructural Aspects. J. Nat. Can. Inst. 38: 251-285, 1967.
    - Darcel, C. L.: A Note on the Classification of the Leucotic Diseases of the Fowl. Canad. J. Comp. Med. Vet. Sci., 21: 145-159, 1957.
- Case III P-142 and P-143 The skin wounds were used to demonstrate wound healing in scorbutus. The mouse chow was not supplemented with ascorbic acid which the guinea pig requires in its diet. After 5 weeks on also present in the bones and teeth.
  - Ref.: Wolbach, S. B.: Controlled Formation of Collagen and Reticulum.

    A Study of the Source of Intercellular Substances in Recovery
    from Experimental Scorbutis. Am. J. Path., Suppl. 9: 689,
    1933.
    - Ross, R. and Benditt, E. P.: Wound Healing and Collagen Formation. IV. Distortion of Ribosomal Patterns of Fibroblasts in Scurvy. J. Gell. Biol., 22: 365, 1964.



### Histories for Wednesday Slide Conference 3 March 1971

- 570 Case I 69-1221 This section is of tissue taken at necropsy from a juvenile rhesus monkey. The animal had an illness clinically diagnosed as severe bronchopneumonia and was placed on a gallant but unsuccessful course of antibiotics, vitamins, and fluids. Marked consolidation of the lungs and a nodule at the head of the pancreas was described at necropsy.
  - 57 | Case II 69-469 Several 6-week-old kittens recently placed in a laboratory animal colony developed a severe diarrhea, emaciation, ocular discharge and died. The WBC was 6,000. The tissues presented were taken from one of these kittens.
  - 572 Case III 462A This tissue is from a biopsy of a chronic skin lesion in a dog.
  - 573 Case IV 69-1784 This tissue section is from a mass found during necropsy of an 11-year-old male Labrador retriever dog. The clinical history included polyuria and difficult micturation. On January 15th the WBC was 25,000 (74% neutrophils and 7% bands) and the urinalysis was as follows:

dark cloudy urine
pH - 6.5 to 8
Specific gravity - 1020 to 1030
protein - 3+ to 4+
NBC - numerous
RBC - numerous
culture - negative

A pneumocytogram demonstrated a normal bladder. In March of the same year, a relapse occurred at which time the WBC was 10,300 with 69% neutrophils and the BUN was 23mg%. The animal was killed at request of the owner in June.

### Results of Wednesday Slide Conference 3 March 1971

- 570 Case I 69-1221 The diagnosis of cryptosporidiosis was established by the contributor. The morphologic diagnoses included chronic pancreatitis with atrophy, choledochitis (secondary to cryptosporidiosis), biliary hyperplasia, and a mild duodenitis. The organisms could be seen on the surface of the biliary ductal epithelium.
  - Ref.: Slavin, D.: <u>Cryptosporidium meleagridis</u>. J. Comp. Path. Therap., 65: 262-266, 1965.
    - Jervis, H. R. et al: Coccidiosis in the Guinea Pig Small Intestine Due to A Cryptosporidium. Amer. J. Vet. Res., 27: 408-414, 1966.
- Case II 69-469 The liver lesions in the kitten were attributable to Bacillus piliformis (Tyzzer's disease). The animal was found to have a multifocal hepatitis with demonstrable organisms in the hepatocytes at the margin of the liver lesions. The organisms were also seen in the epithelium of the ileum. Whether the kittens had Infectious Feline Enteritis was mere speculation. The findings at necropsy included enlarged mesenteric lymph nodes and thickened intestines, especially the ileum. Two other kittens were examined at necropsy and the lesions were restricted to the small intestine and colon, but no organisms were demonstrated. One participant in the conference stated that he found what could be toxoplasma organisms in the intestinal epithelum. The majority of the group did not see the bacilli and made a diagnosis of Infectious Feline Enteritis.
- 572 Case III 462-A The chronic granulomatous dermatitis of the dog was caused by Microsporum canis.
- 573 Case IV 69-1784 The 11-year-old male Labrador retriever dog was found to have an adenocarcinoma of the prostate gland. Metastatic lesions were found in the lungs, bronchial lymph nodes, kidney, and adrenal gland.



### Histories for Wednesday Slide Conference 10 March 1971

- 574 Case I 025 Tissues were taken at necropsy from one of several rhesus monkeys in an epizootic during the quarantine period after arrival from the exporter. Mortality and morbidity were very high.
- Case II 66-1854 A 5-year-old collie dog was killed for humane reasons following a clinical diagnosis of brain and eye neoplasia.

  The tissue was taken at necropsy.
- 576 Case III 978 Tissue was taken from a subcutaneous mass removed surgically from the wing of an adult parrot.
- 577 Case IV 63-385 This tissue was taken at necropsy from a 9-yearold mare with a history of enlarged distal joints.

#### Results of Wednesday Slide Conference 10 March 1971

- 574 Case I 025 The rhesus monkey died as a result of Simian Hemorrhagic
  - Ref .: Allen, A. M. et al: Simian Hemorrhagic Fever. II. Studies in Pathology. Amer. J. Trop. Med. & Hyg. 17: 413-421, 1968.
- 575 Case II 66-1854 The diagnosis for the 5-year-old collie dog was Protothecosis. Gross lesions included numerous small foci in the heart,
- lungs, liver, brain, choroid of the eye, and intestines. Microscopically, the other affected tissues had lesions similar to those in the kidney sections.
  - Ref .: Van Kruiningen, H. J., Garner, F. M., and Schiefer, B.: Protothecosis in a dog. Path vet. 6: 348-354, 1969.
- 576 Case III 978 The subcutaneous mass from the wing of the adult parrot was diagnosed as Xanthomatosis.
  - Ref.: Nieberle and Cohers: Textbook of the Special Pathologic Anatomy of Domestic Animals, Pergammon Press, Oxford, 120, 952, 1967.
    - Petrak, M. L.: Diseases of Cage and Aviary Birds, Lea and Febiger, 463-464, 1969.
- 577 Case IV 63-385 A granular cell myoblastoma was found in the right cardiac and diaphragmatic lobes of the lung. The mass appeared to be encapsulated and was composed of dense pinkish tissue. The right lung weighed 12,750 gm and the left lung weighed 2600 gm. The distal joints of all limbs were enlarged by periosteal proliferation and exostosis. Ref .: Alexander, J. E., Keown, G. H., and Palotay, J. L.: Granular Cell Myoblastoma with Hypertrophic Pulmonary Osteoarthropathy

in a Mare. JAVMA 146: 703-708, 1965.

### Histories for Wednesday Slide Conference 17 March 1971

- 578 Case I 7600 Tissue was taken from a mass in the nares of a German shepherd "seeing eye" dog. The dog had a brief history of epistaxis from nostrils and severe pain.
- 5 79 Case II P-140 A shorthorn heifer calf was born with stiffness in many joints and could only walk with a stilted gait. The animal was killed at 1-week of age and this tissue was taken from the thigh at necropsy.
- Case III 69-248 Tissue was taken during the necropsy of a mature, male Sarcorhamthus papa. The animal was found lame and hospitalized the first of January at the National Zoological Park. The animal was killed a few days later for humane reasons.
- 581 Case IV 75-52 A burro was found dead in the barnyard. This tissue was taken at necropsy.

# Results of Wednesday Slide Conference 17 March 1971

- 578 Case I 7600 The German shepherd "seeing eye" dog had a rhabdomyosarcoma according to the contributor. The group diagnoses numerically favored chondrosarcoma followed by rhabdomyosarcoma with osteosarcoma.
- 579 Case II -P-140 The shorthorn heifer calf's stifle joint was ankylosed and the muscle bundles were pale and soft. The contributor's diagnosis was arthrogryposis. The animal also had a partial duplication of the lumbar spinal cord.

  11 Arthrogryposis and Associated Defects in
  - Ref.: Leipold, H. W. et al: Arthrogryposis and Associated Defects in Newborn Calves. Amer. J. Vet. Res. 31: 1367, 1970. Whittem, J. H.: Congenital Abnormalities in Calves: Arthrogryposis and Hydranencephaly. J. Path. Bact. 73: 375, 1957.
- SSO Case III -69-248 The Sarcorhamphus papa (King vulture) was afflicted with severe frostbite. The section was taken from the leg which had dry gangrene.
  - Sol Case IV 75-52 The section was of testicle taken from a stillborn mature burro fetus. The contributor considered the tissue normal for the burro at birth.



#### Histories for Wednesday Slide Conference 24 March 1971

- 582 Case I 69N918-T43 This section of tissue was taken from an adult equine with large areas of alopecia and enlarged lymph nodes.
- 583 Case II 70R121-T4 A suckling Syrian hamster was injected intraperitoneally with an experimental agent. The section was taken at necropsy 3 days later.
- 584 Case III 18474 Section taken at necropsy from an adult female flamingo found dead at a local zoo.
- 585 Case IV 54-390 A 12-day-old beagle dog, with no prior symptoms, died suddenly. Necropsy revealed petechial hemorrhages in the cortex of the kidney, congested liver, edematous lungs of normal color, and about 10 ml. of straw-colored pleural fluid.

# Results of Wednesday Slide Conference 24 March 1971

- 82 Case I 69N918-T43 The primary skin lesion of the adult horse was collagen necrosis. Other microscopic findings included a generalized granulomatous arteritis, membranous glomerulonephritis, and extensive fibrosis of the lymph nodes. The contributor thought the condition most likely represented a collagen disease (autoimmune mediated) of the horse.
- 83 Case II 70R121-T4 Thirty-second passage hamster adapted equine rhinopneumonitis virus was the agent injected intraperitoneally into the suckling Syrian hamster resulting in experimental Equine Herpes I. Ref.: Doll, E. R., Richards, M. G., and Wallace, M. E.: Adaptation of the Equine Abortion Virus to Suckling Syrian Hamsters. Cornell Vet., 43: 551-558, 1953.
  - Randall, C. C. and Bracken, E. C.: Studies on Hepatitis in Hamsters Infected with Equine Abortion Virus. I. Sequential Development of Inclusions and the Growth Cycle. Amer. J.
  - Arhelger, R. B., Darlington, R. W., and Randall, C. C.: An Electron Microscopic Study of Equine Abortion Virus Infection In Hamster Liver. Amer. J. Path., 42: 703-714, 1963.
- 584 Case III 18474 The kidney of the adult female flamingo had extensive amyloidosis secondary to generalized tuberculosis.
  - Ref.: Feldman, W. H.: Avian Tuberculosis Infections, Williams and Wilkins Co., Baltimore, 228, 1938.
    - Biester, H. E. and Schwarte, L. H.: Diseases of Poultry, 5th. ed. Iowa State Univ. Press, 397, 1967.
- 585 Case IV 54-390 The 12-day-old beagle dog died suddenly as a result of Herpesvirus canis infection.



# Histories for Wednesday Slide Conference 7 April 1971

- Case I 27479 Six female Macaca mulatta "conditioned for laboratory use" were killed after the results of a clinical test were known. The animals were surplus at a city zoo and were shipped directly to a hospital laboratory (interstate) by an animal dealer. The section was made from tissue collected at the time of necropsy.
- 587 Case II 32735 This section is from a biopsy of a tumor on the right side of the face below the ear of a 4-year-old female dog.
- S88 Case III 56-1964-T2 A purebred polled Hereford bull calf was well formed, alert, and could nurse if held up to the udder. He could not stand and demonstrated marked spasms of the muscles of the legs and neck upon handling. The animal was killed at one day of age and the section is from tissues taken at necropsy.
- 589 Case IV 12,071 This section is from tissue taken at necropsy of an adult male Kinkajou which died 48 hours after severe convulsive seizure.

# Results of Wednesday Slide Conference 7 April 1971

- Case I 27479 The rhesus monkeys had tuberculosis. All 6 animals 6 had a positive intrapalpebral tuberculin reaction and 5 had positive cultures for Mycobacterium tuberculosis.
- 37 Case II The 4-year-old female dog had a basal cell tumor.
  - Case III 56-1964-T2 The purebred polled Hereford bull calf had neuraxial edema. Similar lesions were widespread throughout the CNS. Ref.: Cordy, D. R., Richards, W.P.C., and Stormont, C.: Hereditary Neuraxial Edema in Hereford Calves.
- 589 Case IV 12,071 The adult male Kinkijou a member of the family Procyonidae had canine distemper. The intracytoplasmic inclusions are easily seen in the bronchial epithelium.



### Histories for Wednesday Slide Conference 14 April 1971

- Case I 31978 This section is from tissue taken at necropsy of a 12-year-old Siamese cat in Lancaster, California. In March the popliteal lymph nodes were enlarged, and later in August, the animal became cachectic. The owner requested that the animal be killed 30 days later. Gross lesions consisted of congestion and patchy consolidation of the lungs as well as a pronounced enlargement of the mediastinal and mesenteric lymph nodes.
- Case II D-2524 This section is from a biopsy of a growth associated with a large vein in the neck region of a 9-1/2 year-old male Irish setter dog.
- Case III 27122-70 This section was taken at the time of necropsy of a 7-month-old great Dane dog with a history of progressive lameness and a clinical diagnosis of hip dysplasia. No gross lesions were found at necropsy.
  - Case IV 13951 Frogs (Rana pipiens) were dying around a stock pond in Arizona in which a massive die-off of fish had occurred 10 months earlier in the fall of the previous year. Reddened spots on the skin of the inner thigh, ulcers on a foreleg, subcutaneous edema, focal to massive hemorrhages in the thigh muscle, and ascites were seen in this frog at necropsy.

### Results of Wednesday Slide Conference 14 April 1971

- 590 Case I 31978 The 12-year-old Siamese cat from Lancaster, California, had coccidiomycosis. The spherules were easily seen in the granulomatous tissue.
- Case II D-2524 The biopsy from the growth in the neck region of the 9½-year-old male Irish setter dog was diagnosed by the contributor as a parathyroid adenocarcinoma. The majority of the conference group considered the neoplasm to be thyroid in origin.
- 592 Case III 27122-70 The 7-month-old great Dane dog had toxoplasmosis lesions in the brain. No distemper inclusions were found.
- 593 Case IV 13951 The frogs had trematodiasis and red leg. Aeromonas hydrophilia was cultured from the subcutaneous fluid. The genus of the fluke metacercaria was not determined.

### Histories for Wednesday Slide Conference 21 April 1971

Case I -754-69 - A rhesus monkey with 4 consecutive negative TB tests developed progressive incoordination and was killed 35 days later. On the day of death, the following data were obtained:

Blood glucose - 58.0 mg% PO<sub>4</sub> ----- 2.6 mg% Hemoglobin --- 12.3 gm Hematocrit --- 35.5%

WBC - 6820 lymphocytes - 52 neutrophils - 45 monocytes - 2 eosinophils - 1 Spinal fluid glucose ----- 57.0 mg'
Spinal fluid total protein ---- 39.0 mg'
Spinal fluid -- many RBC's
Spinal fluid -- 4 lymphocytes

Electrolytes - Na K Ca Blood 145 3.8 5.4 sp. fluid 150 3.0 1.8

This section is from tissue taken at the time of necropsy.

595 Case II - 3981 - This section is from an ulcerated tumorous mass 3x4½ cm discovered near the cardia at the time of necropsy of a guanaco (Lama huanachi) found dead in a city zoo. Similar masses up to 2 cm in diameter were found in the rumen mucosa and liver.

Case III - 70-107 - A 4-year-old male cat was presented to a clinic with anorexia and vomiting and died shortly thereafter. Necropsy findings were an enlarged spleen, mottled liver, and duodenal ulcer. This section was made of tissues taken at the time of necropsy.

Gase IV - This section is of tissue taken during necropsy of a 1-year-old male prairie falcon which had a brief illness and died. No respiratory signs were observed. Gross findings at necropsy included multiple small abscesses in the liver and bone marrow. All cultures for fungi and bacteria were negative.

### Results of Wednesday Slide Conference 21 April 1971

- Case I 754-69 The rhesus monkey had listeriosis. The presence of the mononuclear perivascular infiltration gave the group considerable difficulty in arriving at the diagnosis. The contributor stated that <u>Listeria monocytogenes</u> was cultured from the brain tissue. Similar lesions were seen throughout the brain, apparently without predilection for any one area.
  - 595 Case II 3981 The guanaco had a primary squamous cell carcinoma of the rumen which had metastasized to the liver.
  - Case III 70-107 The 4-year-old male cat had mastocytosis. The granules in the cytoplasm were metachromatic with the Toluidine blue stain.
  - Case IV 409-70 The 1-year-old male prairie falcon had a viral hepatitis. Efforts to isolate the virus have been unsatisfactory; however, when a cell free filtrate from the tissue was injected into other prairie falcons, death ensued very quickly and lesions were quite similar.



### Histories for Wednesday Slide Conference 28 April 1971

- 578 Case I MAT 227 This section is of placenta from a marmoset that aborted one month after conception. The aborted material consisted of an unruptured chorionic vesicle 1.0 cm in diameter containing a small amount of turbid amniotic fluid in which a single 0.5 mm embryo was identified.
- Gase II 17563 A 2½-month-old Angus bull was noticed limping and died 24 hours later. At necropsy the animal was in excellent nutritional condition. A scar was found on the anterior surface of the right metatarso-phalangeal joint and on incision a subcutaneous yellow gelatinous fluid was found in the area of the joint that extended over the metatarsus. The popliteal lymph nodes in the right rear limb were enlarged to 4 cm in diameter and the right internal and external iliac lymph nodes were both enlarged. The nodes upon incision were juicy, pale, and shiny and the corticomedullary junctions were sharply defined. The brain on coronal section had an area 3 cm in diameter in the right cerebral hemisphere which was ovoid, extremely friable, and streaked with blood tinged fluid. The section is of tissue taken at the time of necropsy.
- Case III 70-S-16 A 15-year-old female tricolor terrier dog had a large soft mass, 6x7 cm in the left flank region for several years. A smaller mass was noticed on the left rear leg and after 2 months duration was surgically excised; it was 2x2 cm. The larger mass was also excised and diagnosed as a lipoma. The section is of tissue collected from the smaller mass.
- 60 | Case IV 3120 This section is from tissue taken at the time of necropsy from a female German shepherd dog killed because of old age and chronic canine pancytopenia.

### Results of Wednesday Slide Conference 28 April 1971

- 598 Case I MAT 227 The marmoset placenta had numerous intracellular leishmanial forms of <u>Trypanosoma cruzi</u>. The kinetoplast, which is characteristic of this type of protozoan organism, could be seen within organisms in this section.
- 599 Case II 17563 The angus calf had a cerebral infarction. Malignant edema was diagnosed after Cl. septicum was cultured from the lymph nodes. Streptococcus and Staphlococcus were cultured from the brain tissues, but an anaerobic culture was not accomplished on the brain tissue.
- Case III 70-S-16 The 15-year-old tricolor terrier dog had what the contributor considered to be a chronic verminous granulomatous dermatitis. The sections submitted did not include the nematode parasite and the group preferred to call the lesion a fibroma, although many had reserved opinions due to the chronic inflammatory cell infiltration.
  - 601 Case IV 3120 The female German shepherd dog had an adrenal tumor which the contributor preferred to call a pheochromocytoma due to the large size of the medulla described at necropsy.



### Histories Wednsday Slide Conference 5 May 1971

- 602 Case I 69-3175 Seven-week-old chicks were inoculated with experimental material and killed 8 days later. Section is from tissue taken at necropsy.
- 603 Case II 432-70 This section is from a growth removed from the lateral aspect of the metacarpus of a dog.
- 604 Case III 27-015-70 A 4-month-old heifer was noticed bloating in the evening and was found dead the next morning. Findings at necropsy included subcutaneous edema and congestion of the ventral neck region, flanks, and hindquarters. Also found were extensive petechial and ecchymotic hemorrhages in the trachea and bronchi, clots of blood within the bronchi, and a rumen distended with gas. Plant awns were found in large numbers between enlarged ruminal papillae. This section is from tissue collected at necropsy.
- 605 Case IV 69-S-14 A 1-year-old collie dog was hospitalized for a few days with melena and vomition. Three weeks later the animal was returned with an episode of acute respiratory symptoms and died the same day. This section is from tissue taken at necropsy.

### Results of Wednesday Slide Conference 5 May 1971

- 602 Case I 69-3175 The 7-week-old chicks were inoculated with Infectious Bursal Agent producing Gumboro disease. The bursa of Fabricius had very few lymphocytes and much edema. Ref.: Helmboldt, C. and Garner, E.: Experimentally Induced Gumboro Disease (IBA). Avian Dis. 8: 561-575, 1964.
- 603 Case II 432-70 The lesion from the metacarpus of the dog was an epidermal inclusion cyst.
- Gase III 27-015-70 The 4-month-old heifer had chronic rumenitis as a result of having been fed a barley ration.

  Ref.: Fell, B. F., Kay, M., Whitelaw, F. G., and Royne, R.: Observations on the Development of Ruminal Lesions in Calves Fed on Barley. Res. Vet. Sci. 9: 458-466, 1968.
- 605 Case IV 69-S-14 The 1-year-old collie dog had aspiration pneumonia incurred during the administration of a barium swallow. The barium was non-birefringent.

### DR. DODD'S LARGE ANIMAL LECTURE

## 29 April 1971

		SLIDE NO.	SPECIES	ORGAN
606	A B	70-413	Pig	Liver Kidney
607	В	70-417	Pig	Liver Heart
608	A B	70-515	Cow	Ileum
609		70-557	Horse	Lung
610	A B	70-592	Horse	Brain
611	A,B C,D	70-645	Cow	Gut
612		71-034B	Mule	Skin Tumor
613	A,B	L71-017	Cow	Kidney
614	A,B	71-185	Cow	Kidney
615	A B C	71-186	Cow	Lung Mammary Gland Jugular vein Supramammary node
616	A B	L71-014	Cow	Kidney Urinary bladder
617	A B	L70-056	Cow	Kidney Uterus
618		L69-161	Cow	Lymph node
619		L69-132B	Cow	Lymph node
620	A B C D	L69-121	Cow	Abomasum Urinary bladder Skin
621		69-183	Horse	Liver
622		69-359B	Cow	Fat
623		70-304B	Cow	Fat

### DR. DODD'S LARGE ANIMAL LECTURE (Continued)

# 29 April 1971

		SLIDE NO.	SPECIES	ORGAN
624	В	70-018	Horse	Spleen Liver
	C			Lung
	E F		Fig.	

#### Dr. Dodd's Large Animal Lecture: Diagnoses

- 606 Toxic hepatitis, etiology, Vit. E/Se deficiency.
- 607 Toxic hepatitis and myocarditis, etiology Vit. E/Se deficiency.
- 608 Johne's disease.
- 609 Equine influenza (Lesions are similar to ERP and several thought the two diseases could be differentiated only with serology).
- 610 Cerebellar hypoplasia.
- 611 BVD complex
- 612 Hemangiosarcoma
- 613 Sclerosing interstitial nephritis, etiology unknown.
- 614 Embolic nephritis. Thrombosis of the jugular vein was severe, valvular thrombi were present as well as bilateral renal thrombi. Etiology was probably related to multiple venapunctures.
- 615 The contributor thought the mammary gland and all tissue kesions were caused by Candida. Candida had been isolated from the mammary gland before death. Most felt the lung and jugular vein fungi to be Aspergillus.
- 616 Papilloma of the urinary bladder and obstruction of urine to produce interstitial nephritis and dilated renal tubules.
- 617 Lymphosarcoma.
- 618 Lymphosarcoma.
- 619 Lymphosarcoma.
- 620 Lymphosarcoma (Dr. Dodd does not try to classify malignant lymphomas beyond lymphosarcoma.)
- 621 Serum hepatitis.
- 622 Fat atrophy.
- 623 Fat atrophy.
- 624 Lymphosarcoma (Most felt this was a tumor of granulocytic origin and not lymphocytic.)

(26)

### Histories Wednesday Slide Conference 12 May 1971

- 625 Case I 1369469 Several steers in a feedlot herd of about 500 head had a sudden profound central nervous system depression and death. Among the lesions observed at necropsy was an ulcerative laryngitis, multifocal hemorrhagic areas of necrosis in the brain, and a polyserositis. The section is of brain tissue collected during necropsy of one of the steers.
- 6 26 Case II 1363558 This section is from a skin biopsy of an adult dog which had been unsuccessfully treated for several months for a fungus infection.
  - 627 Case III 1357299 An adult Cercopithecus aethiops developed a temperature of 104°F. which lasted for 3 days with no other clinical signs. On the 4th day the animal became depressed, lethargic, and refused to eat or drink. Death occurred on the 5th day. The section is from tissue taken at necropsy.
  - 628 Case IV 1367596 This section is from an apparently fat and healthy trout netted from a lake in Colorado.
  - 629 Case V 1342360 A marmoset monkey had a bilirubin of 10 mg % and an SGOT of over 250 units. The alkaline phosphatase was normal. Several small thread-like nematodes were found in the peritoneal cavity. The section is from tissue collected at necropsy.

### Results Wednesday Slide Conference 12 May 1971

- Case I 1369469 The steer from the feedlot herd had thromboembolic meningoencephalitis.
- Ref.: Little, P. B. and Sorenson, D. K.: Bovine Policencephalomalacia, Infectious Embolic Meningoencephalitis, and Acute Lead Poisoning in Feedlot Cattle. JAVMA, 155: 1892, 1969.
- 626 Case II 1363558 The adult dog had sarcoptic mange. The mites were limited to the stratum corneum and a moderate degree of acanthosis was present.
- 627 Case III 1357299 The vervet monkey (Cercopithecus aethiops) had been inoculated intraperitoneally with Marburg virus material from a human patient.

  Ref.: Zlotnik, I.: Marburg Agent Disease: Pathology. Trans. Roy.

  Soc. Trop. Med. Hyg., 63: 310-323, 1969.
- Case IV 1367596 The trout netted from the lake in Colorado had trematodes of the genus <u>Diplostomum</u> in the eye between the pigmented layer and the rods and cones of the retina. The trout were still feeding on the tasty natural food but were not "hitting" the artificial lures of the unhappy fisherman.
- 629 Case V 1342360 The marmoset monkey had distomiasis due to a common fluke of New World monkeys, Athesmia foxi. The multiple bile lakes in the periportal areas were due to rupture of bile cholangioles (probably due to an ascending cholangitis) resulting in multiple granulomas with giant cell formation. Several sections had microfilaria which were compatible with Dipetalonema sp. in the blood vessels.



### Histories Wednesday Slide Conference 26 May 1971

- 630 Case I 2291 An adult mouse exhibited mild central nervous system disturbances and died shortly thereafter. This section is from tissue collected at the time of necropsy.
- Case II (2x2) #33 A, B, C, D An adult Beagle dog had been bilaterally since birth and was killed for humane reasons. The photograph includes findings from sections of an eye taken at necropsy. Normals are included for comparison.
  - 632 Case III G-4 This section is of tissue taken from a young Gunn rat at the time of necropsy.
  - 633 Case IV 2990 Tissues were collected from an apparently healthy dog at necropsy. Evaluate the section of lung.
  - 634 Case V 3952 Small yellow circular lesions were found to be quite extensive in the wall of an intestine of a bovine at slaughter. The section is from one of these lesions.

### Results of Wednesday Slide Conference 26 May 1971 (Last Conference of 1970-1971)

- 630 Case I 2291 The adult mouse was one of several in a laboratory colony affected with spontaneous recovirus infection.

  Ref.: Jenson, A.B., Rabin, E.R., Phillips, C.A., and Melnick, J.L.:

  Recovirus Encephalitis in Newborn Mice. Amer. J. Path. 47: 223-239, Aug. 1965.
- Case II 33 A,B,C,D (2x2) The bilaterally blind 1½-year-old beagle dog had optic nerve hypoplasia which had been observed clinically since birth. Radiographs of the optic foramina upon comparison with others of the same age and breed were markedly diminished to about one-third the normal size. Other findings included hypoplasia of the optic chiasma and a very small lateral geniculate body.
- 632 Case III G-4 The young Gunn rat had bilirubin encephalopathy. The cerebellum was hypoplastic with Purkinje cell vacuolation.

  Ref.: Schutta, H.S., and Johnson, L.: Bilirubin Encephalopathy in the Gunn Rat (a fine structure study of the cerebellar cortex). J. Neuropath... and Exp. Neurol., Vol. XXVI, No. 3, July 1967.
- Endothelial cells were focally hyperplastic and a mononuclear infiltration of the adventitia sometimes extended into the intima. The mononuclear cells, and less often, the endothelial cells contained cytoplasmic basophilic morula forms of Erlichia canis, the etiological agent of tropical canine pancytopenia. Ref.: Hildebrandt, P.: The Pathology of Tropical Canine Pancytopenia to be published in Amer. J. Vet. Res.
- Gase V 3952 The intestinal lesions found in the bovine at slaughter were mastocytomas. A Giemsa stain of the lesion revealed metachromasia of the cytoplasmic granules in the neoplastic cells.