Yanong R. 2023. **Fish medicine updates.** In: Miller RE, Callet PP, Lamberski N (eds.). Fowler's Zoo and Wild Animal Medicine Current Therapy 10. Elsevier, St. Louis, pp. 389-393.

Laura Martinelli

Question: Select the correct pairing regarding emerging fish viruses below:

1. Megalocytivirus 🡪 DNA 🡪 Viral Nervous Necrosis
2. Betanodavirus 🡪 RNA 🡪 Red Seabream Iridovirus
3. Picornavirus 🡪 DNA 🡪 Bluegill Picornavirus
4. Betanodadvirus 🡪 RNA 🡪 Barfin Flounder Nervous Necrosis Virus
5. Megalocytivirus 🡪 RNA 🡪 Infectious Spleen and Kidney Necrosis Virus

Answer: D

Hepps Keeney CM, Waltzek TB, de Oliveira Viadanna PH, Frasca S, Reinhardt E, Lovy J, Lewbart GA. 2023. ***Myxobolus lentisuturalis* infection in a farmed population of goldfish *Carassius auratus* from the USA.** Dis Aquat Org 154:7-14. <https://doi.org/10.3354/dao03735>.

Laura Martinelli

Question: *Myxobolus lentisuturalis* has a particular tropism for which of the following tissues in Goldfish (*Carassius auratus*) and Prussian Carp (*Carassius gibelio*)?

1. Muscle and Spleen
2. Muscle and Liver
3. Gastric and Spleen
4. Gastric and Nervous
5. Muscle and Nervous

Answer: E

Sun FJ, Crim MJ, Leblanc M. 2021. *Edwardsiella ictaluri* in a colony of zebrafish (*Danio rerio*) used in a teaching laboratory. Comp Med 71:318-322.

**Practice Question:**

Which of the following bacterial organisms is the causative agent of Enteric Septicemia of Catfish?

A. *Aeromonas hydrophila*

**B. *Edwardsiella ictaluri***

C. *Francisella orientalis*

D. *Nocardia asteroides*

E. *Yersinia ruckeri*

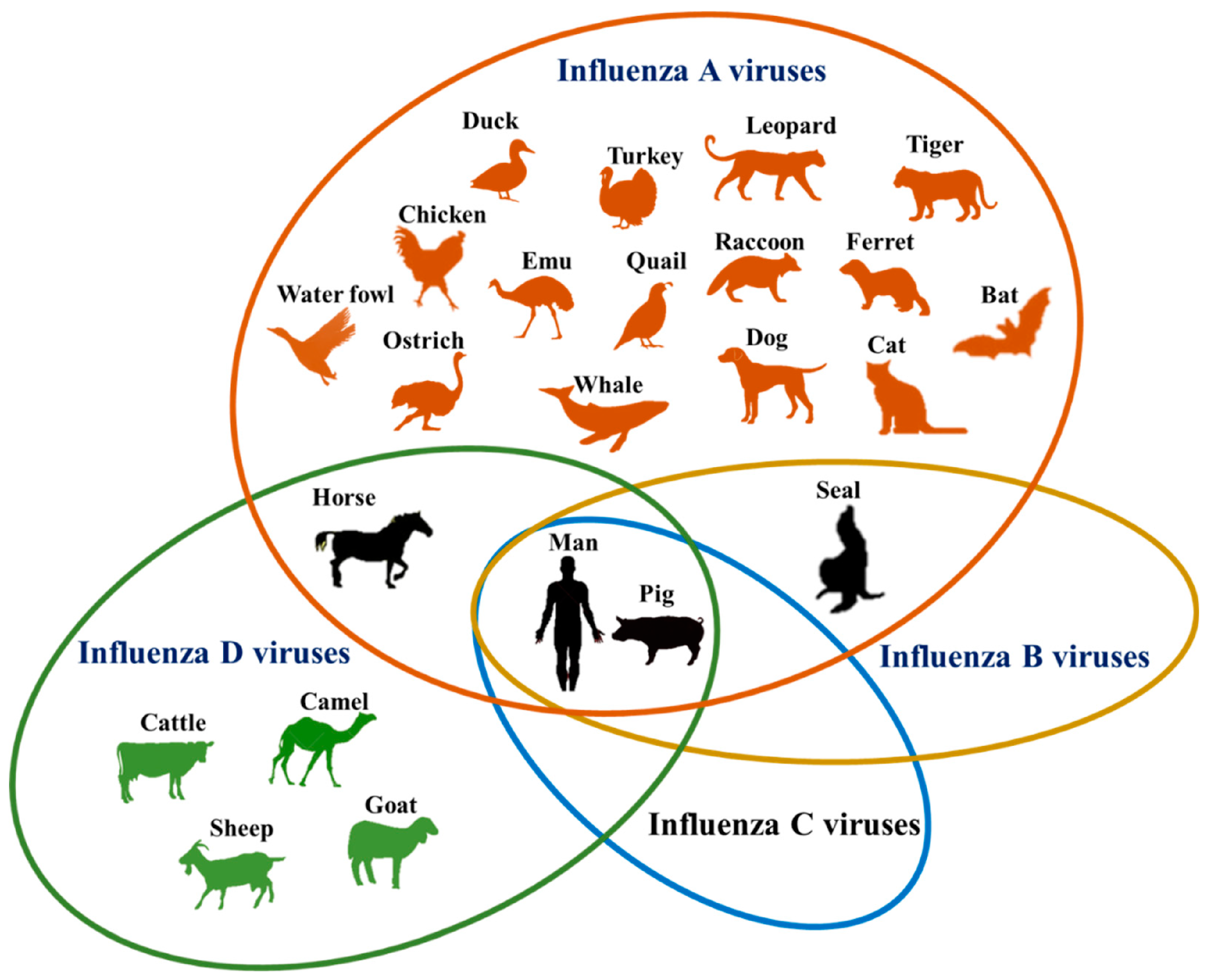
**Question:** Which taxa is known to be susceptible to both influenza A and influenza B viruses?

1. Cats
2. Ferrets
3. Ducks
4. Seals
5. Bats

Answer: D

Source: Highly Pathogenic Avian Influenza A(H5N1) Virus Outbreak in New England Seals, United States. Puryear W, Sawatzki K, Hill N, et al. Emerging Infectious Diseases (CDC.gov). 2023;29(4):786-791.

**A diagram of different animals

Description automatically generated**

A close-up of a dolphin

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1A) Name a viral, bacterial, and fungal cause for the above lesions found on this cetacean, in addition, name a possible environmental cause.

Answer:

1. Viral: Caliciviridae, Herpesviridae, Papillomaviridae, Poxviridae
2. Bacterial: Dermatophilus, Erysipelothrix rhusiopathiae, Mycobacterium marinum, Pseudomonas spp., Streptococcus iniae, Vibrio spp.
3. Fungal: Candida albicans, Fusarium spp., Trichophyton spp.
4. Environmental: Acute hypo-salinity for prolonged period of time (“Fresh Water Skin Disease”)

1B) On further evaluation, eosinophilic inclusion like bodies in acanthocytes are seen- what are two differentials for this finding?

Answer:

1. Poxvirus and Fresh Water Skin Disease

Note: Poxvirus- usually in younger animals; Fresh Water Skin Disease- mature or young, found in acute hypo-salinity for prolonged periods of time; however, pox lesions can lead to fresh water skin disease under the right circumstances

**Practice Question:** Which of the following is associated with increased risk of skin ulceration in common dab (*Limanda limanda*) from the North Sea?

1. Smaller total length
2. Higher body condition
3. Increasing temperature
4. Lower pH
5. Decreased fishing density

Answer: C

**Practice Question:** What is the etiology of the following condition observed in a wild ionfish (*Pterois* spp.)?

**A close up of a person's face

Description automatically generatedA close-up of a fish

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