Pharmacokinetics of injectable meloxicam dosed orally and
Determination of pH of the proventriculi of waterbirds

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**Hypotheses and Objectives**

**Hypothesis 1:** Injectable meloxicam dosed orally in native wild birds attains higher drug plasma concentrations than does the oral formulation of meloxicam given orally (based on anecdotally better clinical success; Dr. Susan Orosz, personal communication).

- **Aim 1A:** Determine the pharmacokinetics of injectable meloxicam given orally to native wild birds.
- **Aim 1B:** Compare 1A to previously established pharmacokinetics of the oral formulation of meloxicam given orally to native wild birds and vultures.
- **Aim 1C:** Make recommendations for pain management protocols for the care of native wild birds.

**Hypothesis 2:** The pH of the gastrointestinal tract of birds is more alkaline than that of mammals and may thus affect the uptake rate of these two formulations of meloxicam.

- **Aim 2A:** Determine the pH of native wild birds' gastrointestinal tract (specifically that of the glandular stomach or proventriculus).
- **Aim 2B:** Compare 2A for various species of native wild birds with different feeding habits.
- **Aim 2C:** Compare 2A to published values for falconiformes and domestic avian species.
- **Aim 2D:** Compare 2A to published values for dogs and cats, for whom meloxicam is formulated.