

## Global Resources in ZIMS - Support for Species Conservation Programs in Aquariums

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1. Species360

Medical, physiological and biochemical information regarding a multitude of species is a critical component in the practice of aquatic medicine and in advancing species conservation outcomes. But, unfortunately, such information is not always readily available. Increasing the speed and volume of health care information and experience across the aquatic medicine community is a conservation challenge that needs to be solved. Electronic medical records offer opportunities for both real-time sharing of information between institutions and data mining of existing records to build unique global information resources.

ZIMS is the most widely used records system within the aquarium community. Partnering with the Institute of Museum and Library Sciences, Species360 focused on extracting, summarizing and organizing information contained within millions of medical records to produce resources that could support and improve veterinary care in aquariums and advance conservation initiatives. The project successfully produced 3 completely new medical resources (Anesthesia Summaries, Drug Usage Extracts, Morbidity and Mortality Analysis) and significantly enhanced an existing resource (Expected Test Results). For each of the 4 resources, an algorithm extracts relevant records, discards outliers, calculates values, and assembles the remaining data into a searchable compilation of medical experience that is useful to species conservation efforts.

The global nature and size of the ZIMS database ensures that each resource is the most comprehensive summary available on that subject. Questions about pharmaceutical usage or anesthesia protocols, topics in aquatic medicine that historically relied extensively on personal experience or information shared directly by colleagues, can now be answered in seconds from within ZIMS. As a result, this unique compilation of medical experience and knowledge is critically useful to medical staff and research partners in pursuit of in-situ and ex-situ conservation goals.