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**ABSTRACT DUE DATE: February 15, 2017**

**You must complete your submission PRIOR TO THE DEADLINE!**

**Font Type:** Times New Roman

**Font Size:** 12 pt (except for title = 14pt)

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**Headings:** First letter of each word capitalized, bolded, 12 pt. Single space between heading and content.

**TITLE:** First letter of each word capitalized, bolded, 14 pt, except scientific names which should be in bolded italics (Example: *Phoca vitulina*), single space after title

**AUTHOR NAMES:** For each author - First name, space, middle initial, period, space, last name. Separate authors by commas. Use superscript number after the comma to identify the author’s affiliation. “\*” after superscript to identify presenting author. “+” after “\*” if presenting author is a student interested in and qualified to compete in the Student \Presentation Competition. (See Sample Abstract Below for Reference)

**\* PLEASE NOTE:** To qualify for the **Student Presentation Competition** you must be an undergraduate, graduate, veterinary student or intern, resident, post doc in a recognized program. You must either be a current IAAAM student member OR provide a letter from your institution stating (**WITH YOUR ABSTRACT SUBMISSION**) that you fit the student classification. You have until March 1<sup>st</sup> to become an IAAAM member (Student membership \$40) which entitles you to a lower conference rate.

**AUTHOR AFFILIATIONS:** List immediately below author names section. For each affiliation - number each with matching superscript; organization, city, state, zip code, country. Separate author affiliations by semicolons.

**ABSTRACT: Text:** 500 words or less. In the text, references should be cited consecutively with superscript numbers after the period and multiple references separated by commas.

**TABLES and FIGURES:** Please limit to those which are absolutely necessary.

**ACKNOWLEDGEMENTS:** Single space after heading.

**LITERATURE CITED:** Single space after heading. Limit number of references to 10. The reference list should be numbered in the order cited in the text and arranged consecutively by number. References conform to the style used in CBE Style Manual, 6th edition (Cambridge University Press).

**SAMPLE ABSTRACT:**

## **Nitrate: A Goitrogenic Compound in Juvenile White-Spotted Bamboo Sharks (*Chiloscyllium plagiosum*)**

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### **Abstract**

Elasmobranchs susceptibility to goiter formation in captive environments has been well documented.<sup>1,2,3</sup> Until recently most public aquariums believed that the etiology of elasmobranchs goiter was nutritional and specifically caused by insufficient dietary iodine.<sup>4</sup> Recent studies have demonstrated that high environmental nitrate inhibits the ability of the thyroid gland to utilize available iodine, resulting in over stimulation of the thyroid gland by thyroid stimulating hormone and ultimately, development of goiter.<sup>5,6</sup> The objective of this study was to evaluate the effects of high environmental nitrate concentrations on thyroid function in juvenile white-spotted bamboo sharks (*Chiloscyllium plagiosum*). We hypothesize that exposure to elevated nitrate will manifest via, a) alteration in growth rate, b) development of a diffuse hyperplastic goiter, and c) decreased plasma thyroid hormone concentrations. In July 2008, ten juvenile *C. plagiosum* (80-150g) were divided into two treatment groups (n=5 per treatment), low nitrate (<1mg/L NO<sub>3</sub>-N) or high nitrate (70mg/L NO<sub>3</sub>-N), for 30 days in flow-through natural sea water system. Results indicate nitrate exposure did not affect growth rate (e.g. weight, length, and condition factor) in juvenile sharks during the study period. However, histological analysis of the thyroid gland in nitrate exposed sharks did demonstrate moderate to severe hyperplasia and hypertrophy of follicular epithelium, suggesting a disruption in normal thyroid hormone production may have occurred.<sup>4</sup> A quantification of plasma thyroid hormone concentrations may confirm that nitrate exposure in juvenile bamboo sharks has the potential to cause goiter in captive elasmobranchs. With increasing restrictions on water use, most modern aquaria operate as re-circulating systems, resulting in higher and more chronic nitrate exposure to their collections. Goiter is one of the most common health problems in captive elasmobranchs and this study suggests that nitrate exposure may be an important factor in the etiology of this disease.

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**Literature Cited-** Please number consecutively as they appear in the text of the abstract and follow the appropriate examples below

### *Standard book*

Voet D, Voet JG. 1990. Biochemistry. New York: John Wiley & Sons. 1223 p.

### *Book authored by organization*

[ILAR] Institute of Laboratory Animal Resources. 1979. Animals for research: a directory of sources. 10th ed. Washington, DC: National Academy of Sciences.

### *Dissertation*

Hoage RJ. 1978. Biosocial development in the golden lion tamarin. [dissertation]. Pittsburgh: University of Pittsburgh.

### *Journal article*

Mainka SA, Zhang H. 1994. Daily activity of giant pandas at the Wolong Reserve. *Zoo Biol* 13:13–20.

### *Book chapter*

Latinen K. 1989. Demography of chimpanzees in captivity. In: Heltne PG, Marquardt LA, editors. *Understanding chimpanzees*. Cambridge (MA): Harvard University Press. p 354–359.

### *Conference proceedings*

Dunn JL, Overstrom NA, St. Aubin DJ. 1996. An epidemiologic survey to determine factors associated with corneal and lenticular lesions in captive harbor seals and California sea lions. *IAAAM 27th Annual Conference Proceedings*, Chattanooga, TN; Pp. 108-109.