

THE IMMUNITY ACCELERATION SUPPORT FOR CHRONIC
ESOPHAGITIS / GASTRITIS IN A BOTTLENOSE DOLPHIN (*TRUSIOPS*
TRUNCATUS) DURING LACTATION WITH IMUNO-2865®

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Treating a pregnant or lactating dolphin can be difficult due to the lack of safety studies. The present study discusses the use of Imuno-2865® reducing clinical signs in a case of esophagitis / gastritis in a bottlenose dolphin (*Trusiops truncatus*). Imuno-2865® is a beta glucan supplement extracted from a blend of mushrooms (shitake, maitake, and lingzhi), grass plant family (Poaceae), and yam family (Dioscoreaceae) delivered in a proprietary micro particle process to promote improved absorption.

Imuno-2865® has been given safely during gestation and lactation as an adjunctive immune support supplement. An elevation of tumor necrosis alpha-factor TNF α was observed in malnourished weanling elephant seals when supplemented with Imuno-2865® compared to the control group. TNF α is a cytokine helping to induce inflammation, inhibit viral replication, and has been demonstrated to enhance the systemic humoral immune response to *Helicobacter pylori*. Imuno-2865® also contains arabinogalactan, a polysaccharide, that acts as a prebiotic for beneficial gut microflora.

An 18-year-old, 250 kg, multiparous female nursing bottlenose dolphin had a chronic history of esophagitis / gastritis for eleven years. Clinical signs included chronic bleeding with evidence of red coloration of gastric samples, increased inflammation on cytology, loose cardia, and peeling from the esophagus membrane. Gastric medication protocols were attempted, but not successful at providing complete resolution. All medications were stopped and Imuno-2865® was started 1500 mg PO BID for 21 days to support the immune and digestive system. Gastric cytology showed that the esophagitis / gastritis was improving. When the animal was taken off Imuno-2865®, seven days later the cytology again showed evidence of inflammation and gastric fluid appeared grossly red.

Reference

Bauditz J., Ortner M., Bierbaum M., Niedobitek G., Lochs H., Schreiber S. (1999). Production of IL-2 in gastritis relates to infection with *Helicobacter pylori*. *Clinical and Experimental Immunology*. 117(2):316–323.

Chavoustie S., Perez P., Fletcher M., Maher K., Mitrani A., Thomas R. (2003). Pilot study: Effect of PDS-2865 on natural killer cell cytotoxicity. *Journal of the American Nutraceutical Association*. 6(2):39–42.

Gregg A. L., Milton L., Lindsay J., Erika G., Deborah W., Shawn J., Karisa T., Greg F. (2014). Evaluation of Imuno-2865® on general rehabilitation outcomes and cytokine profile analysis in abandoned neonatal harbor seals (*Phoca vitulina*) and malnourished weanling elephant seals (*Mirounga angustirostris*). *IAAAM 45th Annual Conference Proceedings*.

Iwaoka K., Kamio T., Ago A., Nishimura R., Hishinuma M. (2015). Analysis of serum progesterone level and nursing observation of captive bottlenose dolphin (*Tursiops truncatus*). *IAAAM 46th Annual Conference Proceedings*.

Robeck T. R., Montano G. A., Steinman K. J., Smolensky P., Sweeney J., Osborn S., O'Brien J. K. (2013). Development and evaluation of deep intra-uterine artificial insemination using cryopreserved sexed spermatozoa in bottlenose dolphin (*Tursiops truncatus*). *Animal Reproduction Science*. 168–181.

Robinson R. R., Feirtag J., Slavin J. L. (2001). Effects of dietary arabinogalactan on gastrointestinal and blood parameters in healthy human subjects. Randomized controlled trial. *Journal of the American College of Nutrition*. 20(4):279–285.

Vighi G., Marcucci F., Sensi L., Cara G. D., Frati F. (2008). Allergy and the gastrointestinal system. *Clinical and Experimental Immunology*. 153(1):3–6.