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Validation of IgY for the diagnosis of *Streptococcus agalactiae*-caused endocarditis and bacterial meningitis in Nile tilapia (*Oreochromis niloticus*)

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1 **Validation of IgY for the diagnosis of *Streptococcus agalactiae*-caused endocarditis**
2 **and bacterial meningitis in Nile tilapia (*Oreochromis niloticus*)**

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22 **Abstract**

23 *Streptococcus agalactiae* (*Sta*), which belongs to Lancefield group B, causes sepsis,
24 endocarditis and bacterial meningitis in human neonates and Nile tilapia. Because the
25 pathophysiology of *Sta* infection is partially similar in both species, the identification of
26 biomarkers for the diagnosis and study of this disease is of importance for human and
27 animal health. Therefore, in the present study, we produced an immunoglobulin Y (IgY)
28 by immunizing laying hens with *Sta* proteins and evaluated its ability to detect *Sta* in
29 paraffinized tilapia brain and cardiac tissue by direct immunofluorescence (IMF) and
30 indirect immunohistochemistry (IHC). The IgY produced was effective in the diagnosis
31 of *Sta* infection in Nile tilapia, justifying the use of this species as a biomodel for the
32 study of this disease.

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34 **Keywords:** immunodiagnostics, antibody, teleost fish, neuropathy

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