

GUEST SPEAKERS ADDRESS V

Agriculture, Marine Studies and Tourism Development: MARINE ANIMAL IMMUNE SYSTEM STUDIES

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Fish is a heterogeneous group of different organisms which include the agnathans (hagfishes and lampreys), condryctians (sharks and rays) and teleosteans (bony fish). Like in all vertebrates, fish have cellular and humoral immune responses, and central organs whose the main function is involved in immune defence. Fish and mammals show some similarities and some differences regarding immune function. The immune system

is composed of different immune organs, cells and tissues. For now, let's see which immune organs (and tissues) make up the immune system and then move on to the cells. "Primary organs" - These are immune organs concerned with production and maturation of lymphoid cells and including bone marrow and thymus gland. "Secondary organs" - these immune organs are spots or sites in which the lymphocytes localize, identify unfamiliar antigens and triggers reaction in opposition to it. It Contains tonsils, lymph nodes, Spleen, Peyer's patches (in the small intestines), appendix and liver. The most important immunocompetent organs and tissue of fish include the kidney (anterior/or head and posterior/or caudal), thymus, spleen, liver, and mucosa-associated lymphoid tissues. In fish, myelopoiesis generally occurs in the head kidney and/or spleen, whereas thymus, kidney and spleen are the major lymphoid organs. Next to the thymus as the primary T cell organ head kidney is considered the primary B cell organ. Also, head kidney and spleen present macrophage aggregates, also known as melano-macrophage centres.

Keywords: Immune system, spleen, thymus, head-kidney and antigen antibody.
