1. **Infectious disease and immune system**

Immune system (Lymphocytes): The immune system is the coalition and coordination of specialized fighters whose major function is to defense the body against disease-causing agents. Therefore, the immune system is antithetical to pathogens. The word s*pecialized fighter* as noted above, denotes a highly organized and structured multi-molecular components that interact (bind) together in a *specific manner* to specifically protect the body against any slightest incoming (foreign) attack on the body. As a great country is known for its formidable and highly structured soldiers, the same can be said of human immune defense systems (antibodies) and their energy to wall off pathogens that attempt to initiate attacks on the body causing infectious/chronic diseases. In fact, without the antibodies (group of soluble proteins), survival of living things, including humans will be practically impossible.

The ability to identify and distinguish good organisms or substances from bad ones is what gives the immune components their unique quality and characteristic as *deliberate* and *strategic* attackers. The structural quality and blue prints of the antibodies are gained at birth through chromosomal (genetic) recombination and some are acquired after birth. Even though all humans, by nature are bequeath with this highly structured defense system, some, however, may be born with defected immune system, while for other the defects may happen as a result of medical, psychological or environmental factors.

In order to understand how the GOOD antibodies work, we must also know what makes a GOOD immune system BAD and what happens to the individual with BAD immune defense systems. To be able to underscore these points, we have to briefly discuss the following topics:

- ✓ Types and levels of immune system,
- ✓ The basic characteristics of immune system, and
- ✓ The mode of operation of the immune system.