

## Appendix

### *Important Immune System Terms*

#### **Adaptive immunity**

Protection that arises by an immune response, including production of antibodies and cellular immunity.

#### **Antibody**

Y-shaped protein made by the body's immune system to recognize and help fight infections and other foreign substances in the body.

#### **Antibody-mediated immunity**

Regulated by B cells and the antibodies they make and defends against invading viruses and bacteria.

#### **Antigen**

Anything causing an immune response, usually foreign material but may be our own tissues.

#### **Autoimmunity**

A failure of tolerance, the immune system reacts to self.

#### **Cell-mediated immunity**

Deals with cells in the body infected by viruses and also kills cancerous body cells.

#### **Chemokines**

Molecules released by pathogens and infected tissues to attract cells of the immune system.

#### **Cytokines**

Signaling molecules released by one cell to cause a response in another. Signaling is extremely important in our immune response.

#### **Immune system**

A network of cells that work together to defend the body against pathogens and other foreign materials.

#### **Innate immunity**

Protection that is always present. Includes phagocytic (cells that eat other cells), macrophages, and dendritic cells.

#### **Lymphocytes**

White blood cells that arise in the bone marrow and control the immune response; include T cells and B cells.

#### **Macrophages**

White blood cells that search for and destroy foreign (nonself) molecules, viruses, microbes. Small fragments of the antigen are displayed on the outer surface of the macrophage cell membrane.

#### **Pathogen**

Any disease causing micro-organism.

#### **Tolerance**

Refers to a non-reaction to "self" and is a non-reactive state of the immune system.

