

2.1 WORKING/OPERATIONAL DEFINITIONS

Tissue

An aggregation of similarly specialized cells united in the performance of a particular function. Cells serving the same general function and having the same extracellular matrix.

Connective Tissue

The matrix-continuous tissue which binds together and is the support of the all of the structures of the body. The predominant structural protein comprising the extracellular matrix of connective tissue is collagen.

Organ

Two or more tissues combined to form a larger functional unit.

Unit Tissue Structure

The smallest repeating unit of a tissue or organ comprising a cell and its surrounding matrix (synthesized by the cell).

Development

The process of growth and differentiation of tissues and organs.

Embryology

The science of the development of the individual during the embryonic stage (2 weeks after fertilization of the ovium to the end of the eighth week) and, by extension, in several or even all preceding and subsequent stages of the life cycle.

Regeneration

The renewal of a tissue or organ at the completion of healing.

Repair

The formation of scar at a site of injury at the completion of healing.

Remodeling/ Maintenance/ Turnover

The process by which extracellular matrix is replaced in a process of degradation followed by synthesis.

Endogenous Mechanical Force

Force generated within a control volume of the unit cell process (e.g., by cell contraction).

Exogenous Mechanical Force

Force applied to a control volume of the unit cell process.

Autocrine

Denoting the influence of chemical factors secreted by a cell on itself.

Paracrine

Denoting influence of one cell on other cells in the vicinity.

Endocrine

Refers to tissues and organs whose function is to secrete into the blood or lymph a substance (e.g., hormone) that has a specific effect on another organ or tissue.

Hyperplasia

The abnormal multiplication or increase in the number of normal cells in normal arrangement in a tissue.

Hypertrophy

The enlargement or overgrowth of an organ or part due to an increase in size of its constituent cells.

Atrophy

A diminution in the size of a cell, tissue, organ, or part.