

### **Hypoxia**

Hypoxia is a pathophysiological state characterized by decreased oxygen content in inspired air and/or blood that ultimately decreases oxygen delivery to metabolising tissues of the body despite adequate perfusion/blood flow.

### **Inflammation**

Inflammation is the normal response to stimuli including physical (e.g. physical injury) and chemical stresses (e.g. foreign substances in the body) that elicit cellular damage. The inflammatory process is characterized by distinct phases including initiation, the recruitment of cellular mediators, and the release of inflammatory mediators, and contributes to tissue repair following injury. An inappropriate and/or prolonged inflammatory response that is not self-limiting can contribute to cellular damage.

### **Viability**

Viability, at the tissue level, is the ability of parenchymal cells to withstand a pathological insult, and subsequently survive and maintain normal-to-near normal function.

### **Edema**

Edema is the excess extravasation into, and hence accumulation of fluid in the interstitial/extracellular space.

### **Chemokines**

Chemokines are small protein cytokines secreted by cells that induce chemotaxis (migration towards chemicals in the nearby environment) of neighbouring responsive cells.

### **Adhesion molecules**

Adhesion molecules are cell surface proteins that bind other cells or the extracellular matrix during the process of cellular adhesion.

### **Growth factors**

Growth factors are primarily proteins or steroid hormones that can stimulate cellular proliferation, growth, and/or differentiation. They are usually essential signalling molecules involved in the differentiation and maturation of cells (ie. preadipocyte to adipocyte). •