Conservative vs. non-conservative amino acid substitutions

Science, Chemistry

On the other hand, a non-conservative amino acid substitution brings about a change in the protein. There is a remarkable change in the position, shape and other attributes of the amino acid arrangement. Non-Conservative amino acid substitutions result in changes in the protein which can be described as mutations. The occurrence of mutations may cause malfunctioning of the protein (Krawczak, 48). Many chemical changes cause damage to DNA. There are different mutations that affect the functioning of the gene in different ways. Because of this abnormalities in body and blood function such as sickle cell anemia can be witnessed. Mutations can block protein synthesis, disrupt transcription and splicing, produce protein products that are truncated, and generally disrupt the functioning of proteins (Krawczak, 47). Mutations affect the functioning of red blood cells so that the transportation of oxygen to the cell becomes very difficult. Body nutrition is therefore adversely affected (Chasman, 690).