

ATOMIC FORCE MICROSCOPY OF SICKLE-SHAPED RBC

The cyto-architecture studies of normal red blood cells (RBCs), using Atomic Force Microscope (AFM), obtained from a hierarchy of species in the course of phylogenetic evolution, ranging from fish to mammals depicted an interesting consensus in their surface membrane structural pattern. In our present investigation, sickle-shaped RBCs of Sickle Cell Anaemia patients are imaged for the first time using AFM, to our knowledge, and their distinct cyto-architecture features are described. Differences in membrane surface structural features are reflection of the emergence of deviated cell type due to genetic anomaly. In sickle-shaped RBCs we observed gross alteration of morphology with cyto-architecture and the altered cyto-architectural pattern of sickle-shaped cells may be related to unknown alteration of membrane properties.

Keywords: *Sickle Cell Anaemia, Cyto-architecture, Ultra-structure, AFM*
