

BASEMENT MEMBRANE

LIBRARY DISSERTATION

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'Basement membrane'- An unique thin layer separating connective tissue from the parenchymal cells of epithelia, endothelia, muscle, nervous tissue and the like has been the subject of an explosive increase in knowledge in recent years [Martin and Timpl 1987].

Basement membrane contains a wide variety of extracellular matrix elements which are directly involved in a number of critically important biological processes. They represent an extracellular scaffold necessary for the orderly development of distinct tissue patterns [Sanders et.al., 1983]. This function also applies during wound healing, tissue regeneration and repair. An another important role of the basement membrane is in the spatial orientation of the attached cells namely epithelia, thus perhaps helping in organizing their cytoskeletal networks and also affecting their internal properties [Ingber D.E et.al., 1986]. Finally it functions as structural barriers between the connective tissue and the various tissues it supports and in this aspect it also possesses important barrier properties that influences the exchange of macromolecules and cells across the tissues [Abrahamson D.R 1986]. Thus basement membrane is no longer viewed as just a 'glue' between two tissues, its far reaching effects are only now beginning to be understood.

It has been viewed as a complex structure with a chemical composition varying in composition depending upon the site of presentation. The principle constituents however are -- Collagenous proteins and non-collagenous substances like - heparan sulphate, proteoglycan, laminin, fibronectin, entactin and nidogen.

The ultrasructural details of basement membrane are highly controversial as reported in the literature available till date. It has been reported as being an amorphous or fibrillar layer or as having an appearance of a network of anastomosing cords. The recent concept that has received most impetus is the cord theory. However the issue remains debatable. Basement membrane is considered to be a mirror that reflects