



Hynda K. Kleinman Bio

Hynda K. Kleinman was graduated from Simmons College in 1969 with a BS in chemistry and then received an MS and a Ph.D from Massachusetts Institute of Technology in 1971 and 1974 respectively. She subsequently was a postdoctoral fellow at Tufts University from 1973-1975. She ran a research lab at the NIH from 1975-2006.. She has published over 430 papers and has 9 patents. Her interests included the structure and function of the extracellular matrix in cancer, wound healing, and angiogenesis. She currently is a consultant to pharmaceutical and biotech companies where she analyzes preclinical and clinical trial data, participates in meetings with the FDA, helps to develop clinical protocols, and develops assays and reagents using extracellular matrix components.

Research Accomplishments

She developed an extract of extracellular matrix (Matrigel) which is used in vitro to promote cell differentiation and in vivo to effect repair, improve tissue transplant survival, regenerate nerves, increase tumor take and growth, and assay for blood vessel formation. This extract has also been used to screen for malignant cancer cells and to screen for cancer therapeutics. The assay developed by Dr. Kleinman and her colleagues is in wide use and is sold commercially as a kit. She received an international award for this assay. She also identified a multifunctional regenerative protein, thymosin beta 4, which promotes tissue repair. It has been tested in several phase 2 clinical trials for dermal injuries that heal poorly, such as stasis ulcers, pressure ulcers, and epidermolysis bullosa lesions. This protein is currently in phase 3 clinical trials for dry eye, neurotrophic keratitis, and a trial for epidermolysis bullosa will start soon.