

MELANOCYTES – MULTIFACE PIGMENTED CELLS

Summary

Melanocytes are the pigment-cells, which through a multistage process called melanogenesis produce melanin from the amino acid tyrosine. Melanocyte precursors, known as melanoblasts, derive from the neural crest and migrate throughout the developing embryo to the basal layer of the skin's epidermis, the hair follicles, the eye, the inner ear, and the different parts of the brain and the heart, where they differentiate into melanocytes. Melanocytes contain a unique intracytoplasmic organelle, the melanosomes, in which two major forms of melanin, brown to black eumelanin and yellow to red pheomelanin, are produced and deposited. Although

melanocytes are predominantly associated with the production of melanin in the skin in response to UV radiation, they can perform different functions in living organisms. They give the color to the skin, the hair, iris and certain areas of the brain; they protect tissue of the skin, the heart, the brain, and the hair against reactive oxygen species; they are involved in inflammatory processes, maintaining body balance and in the processes of seeing and hearing. Melanocytes are also involved in pathological processes such as malignant melanoma and Parkinson's disease.