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Greying of human hair follicles

Anil Kumar[1], Sujata Mohanty[2] and Somesh Gupta[3]
[1]Amity University, India
[2]All India Institute of Medical Sciences, New Delhi

The hairs in all species are important cosmetically. Hair fall and greying have always been the subjects for discussion and even today we are not in a position to completely answer these questions. Melanin is synthesized by melanocytes in specialized organelles called melanosomes, which transport melanin to the extremities of their dendrites and distribute melanin to the surrounding Keratinocytes which gives the characteristic colour to hair, skin and eye. As it is now well documented that stem cells are there in the hair bulge to replenish the pool of follicular cells including the melanocytes, here we present data on comparison of stem cell population in grey and pigmented hair follicle in humans.

The strategy we have followed is the enumeration of the stem cells population through flowcytometry in the non cultured hair follicle outer root sheath cell suspension of grey and pigmented hair follicle. To enumerate the progenitor cells through flowcytometry surface marker CD200 which is the most characterized marker for follicular stem cells has been taken. The preliminary study has shown fewer progenitor cells in grey hair follicle in comparison to pigmented follicle.

Biography

Anil Kumar, is presently a Senior Lecturer at Amity University, Haryana, India. He obtained his Doctoral degree (Ph.D.) from All India Institute of Medical Sciences (AIIMS), New Delhi, India (2013). His Ph.D. work involved the isolation, characterization and differentiation (melanocytes, keratinocytes and neuronal lineage) of human epidermal stem cells and their clinical application in vitiligo management. He was the key laboratory person involved in the development of a Novel idea of using non cultured extracted human hair follicle outer root sheath cells in vitiligo management which is widely cited and acclaimed (British J Dermatol. 2011 164, pp1241–1246).

itsanilonline@yahoo.com