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The melanocyte and its environment

proceedings of the

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Foreword

Pigment cells are found in divers locations and tissues in our body. Characterized by the production of melanin or other light absorbing or reflecting structures, one of the main functions of melanocytes is to protect organisms from the harmful irradiation of the sun. As for melanocytes in the skin, which reside in the basal layer of the epidermis or within hair follicles, pigment cells are always in contact with components of the extracellular matrix and with neighboring cells, such as keratinocytes. To survive and to thrive within their environmental niches, melanocytes are stimulated and instructed by paracrine signals provided by the neighboring cells in the tissue. On the other hand harmful environmental influences such as UV-irradiation or reactive oxygen derivatives are affecting the survival and healthy state of pigment cells, causing potentially harmful pathological transformation of melanocytes into nevi and melanoma. However, despite such transformation, nevocytes or melanoma cells are still embedded within and interact with their local tissue microenvironment in specific ways, which in turn modifies the behavior of the melanoma cell.

For these reasons, the program of the meeting was designed, in order to discuss critical signaling, morphogenetic and pathological mechanisms within melanocyte, but also the mechanisms by which the physiological environment imposes and modulate the behavior of healthy melanocytes as well as aggressive and invasive melanoma cells.

Several participants of the meeting (*Pigment Cell Melanoma Research* (2012) **25**; 645-675) decided to present their research results, within these proceedings.

With best regards,

Bernhard Wehrle-Haller

head or the local organizing committee

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