# Supplements



**Supplementary Figure 1: Incorporation of different melanoma cell lines in OS-Rep.** Hematoxylin and eosin staining of cross-sections of mOS-REp with different melanoma cell lines. mOS-REp were morphologically comparable to OS-REp, as they showed a multilayer epidermis, consisting of *stratum basale*, *stratum spinosum, stratum granulosum and stratum corneum.* Micro tumors formed sucessfully in mOS-REpA11, mOS-REpSK-MEL-28, mOS-REpMUGMELII, mOS-REpMeWo and mOS-REpMM96L appeared as local spots of loose tissue.Scale bar 50 µm.

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**Supplementary Figure 2:** **Influence of vemurafenib treatment on proliferation rates**. Melanoma cells re-isolated from BRAFWT (mOS-REpA11) and BRAFV600E (mOS-REpSK-MEL-28) melanoma skin equivalents and keratinocytes re-isolated from non-melanoma skin equivalents were stained on cytospots with the proliferation marker Ki67. In mOS-REpSK-MEL-28 the number of positively stained cells diminished completely after treatment, whereas the Ki67 expression was not altered by Vemurafenib treatment in OS-REp and mOS-REpA11. Cell nuclei were stained with DAPI. Scale bar 50 µm.