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VEMURAFENIB INDUCES THE INCREASE OF QUIESCENT CELLS (Ki-67-NEGATIVE) IN BRAF-NEGATIVE MELANOMA

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Tumor chemoresistance is associated with the presence of quiescent, resting dormant (G₀-positive, Ki-67-negative) cancer cells in the heterogeneous cancer cells population. In order to derive melanoma quiescent cells we treated two melanoma cell lines BRO and SK-MEL-2 with antitumor drug, vemurafenib. We obtained cell populations with a cell cycle arrest in the G₁/G₀. The latter was confirmed by negative staining with Ki-67 antibodies and the changes of gene expression of the cell cycle regulatory proteins, CDK4, CCND1, CDKN1B.

Keywords: melanoma, quiescent cells, vemurafenib, cell cycle, G₀, Ki-67