



Celecoxib improved melanoma response to Trametinib *in vitro*

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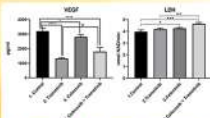
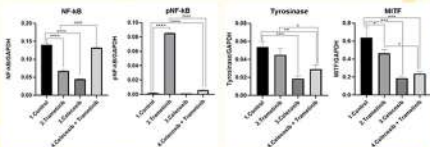
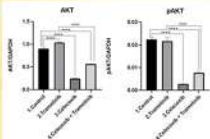
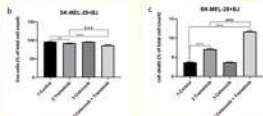
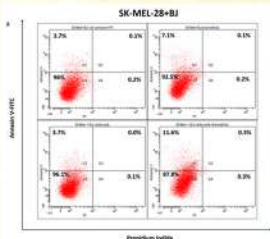
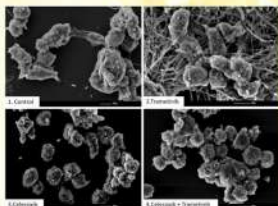
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Introduction & Objectives:

The global incidence of melanoma skin cancer is continuously increasing due to climate change and high UV radiation levels. A well-known status of chronic inflammation initiates and aids the alterations in melanoma microenvironment.^{1,2}

Cyclooxygenase-2 (COX-2) is a key enzyme that sustains inflammation in early melanoma development. There is also a direct correlation between COX-2 overexpression and Breslow index, as well as a poor prognosis for the melanoma cases that express higher levels of this enzyme. Thus, its inhibition becomes a logical approach when it comes to therapy.³

Taking into consideration the many resistance pathways melanoma cells develop, the future of melanoma treatment lies in combinational approaches using drugs from the new melanoma landscape.⁴ The current *in vitro* study evaluated if Celecoxib, a selective COX-2 inhibitor, might improve the tumor response to Trametinib, a selective MEK inhibitor, on an experimental melanoma model.



Conclusion: CELECOXIB

- Enhanced melanoma cells sensitivity to Trametinib
- Increased apoptosis
- Inhibited melanogenesis and angiogenesis
- Prevented AKT resistance pathway activation

Materials & Methods:



References:

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