

## Letter to Editor

# Aspirin suppresses colorectal cancer initiation in populations without cardiovascular disease by inhibiting cell glycolysis

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The previous study has indicated the chemo-protective effect of low-dose aspirin in reducing the incidence of colorectal cancer (CRC) in individuals without cardiovascular disease [1]. However, it is unknown if inhibition of glycolysis in cancer cells by aspirin plays a potential role in this protective effect. Here, we speculate that prophylactic administration of low-dose aspirin decreases the incidence of colorectal cancer upon inhibition of cell glycolysis.

Warburg effect has been consistently observed in and is vital for most types of colorectal cancer, which means cancer cells produce energy by predominant use of glycolysis, irrespective of oxygen availability [2]. Aspirin is a commonly used medication to prevent cardiovascular disease, which has been identified as an inhibitor of glycolysis. Dervisevik et al. [3] reported that aspirin impaired glycolysis in diabetic rat heart as a result of decreased phosphofructokinase (PFK) activity. In addition, aspirin was suggested to attenuate glycolysis in HCT-116 colon cancer cells by acetylation of glycolytic pathway enzymes [4]. What's more, aspirin was shown to suppress cancer initiation and progression via promoting cell glycolysis inhibition [5]. All these

results undoubtedly have shown that aspirin may have great protective effect against CRC.

In conclusion, aspirin may inhibit cell glycolysis to decrease the incidence of CRC. If so, prophylactic administration of low-dose aspirin presents an ideal strategy for CRC prevention.

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