

Modified Citrus Pectin Inhibit TNBC

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The chemo-sensitization function of modified citrus pectin to several chemotherapy drugs on triple negative breast cancer(TNBC)has been studied, and the best structure modified pectin which can inhibit TNBC has been screened out.

The apoptosis-inducing activity of different structure modified pectin to MDA-MB-231 cell is shown in figure1.

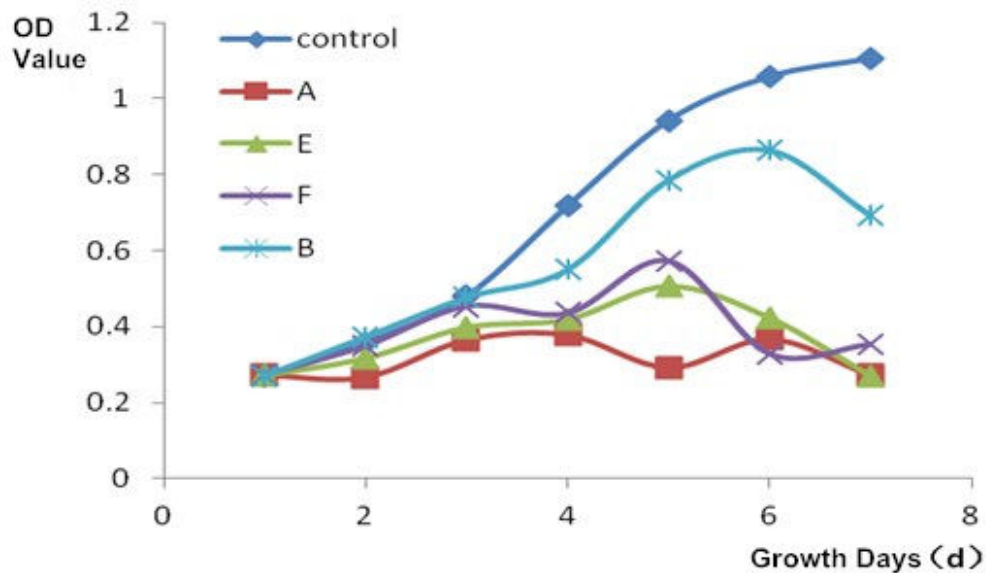


Figure1: the influence of different structure modified pectin to the growth curve of MDA-MB-231 cell

Control group was treated by PBS and culture, A, B, E, F was treated by different modified pectin and culture. A was the MCP from Gold Kropn. E was the MCP from American market. B was the high molecular weight pectin. F was another low molecular weight pectin from Gold Kropn

The toxicity of different modified pectin to normal cell is shown in figure 2.

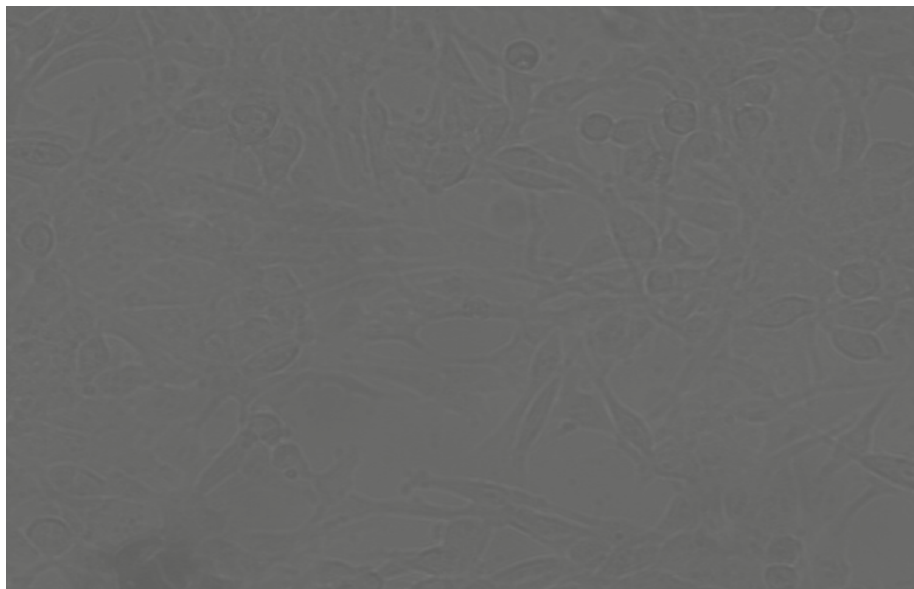


Figure 2A: The normal cell treated with MCP modified by enzyme from gold kropn company

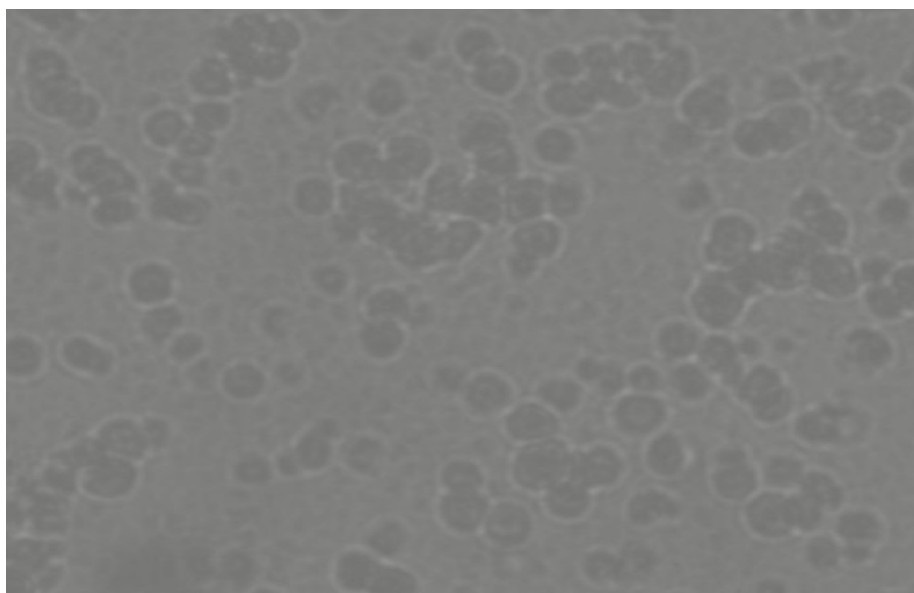


Figure 2B: The normal cell treated with MCP modified by alkali from American market

The inhibition rate of modified pectin to MDA-MB-231 cell has been increased when combination with chemotherapy drugs 5-Fu, cis-platinum or taxol. It is shown in figure 3, 4, 5.

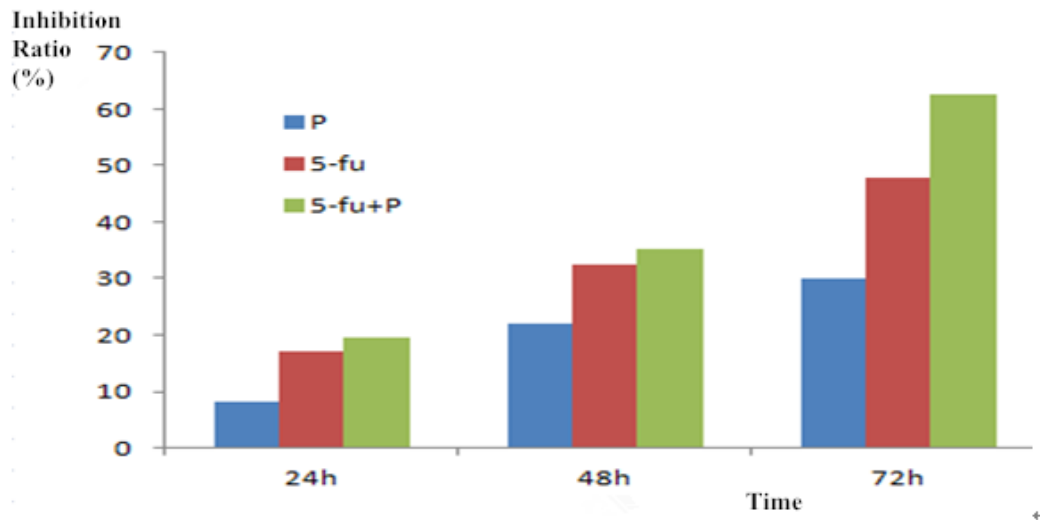


Figure 3: the inhibition rate of modified pectin (from Gold Kropp) +5-Fu to MDA-MB-231 cell

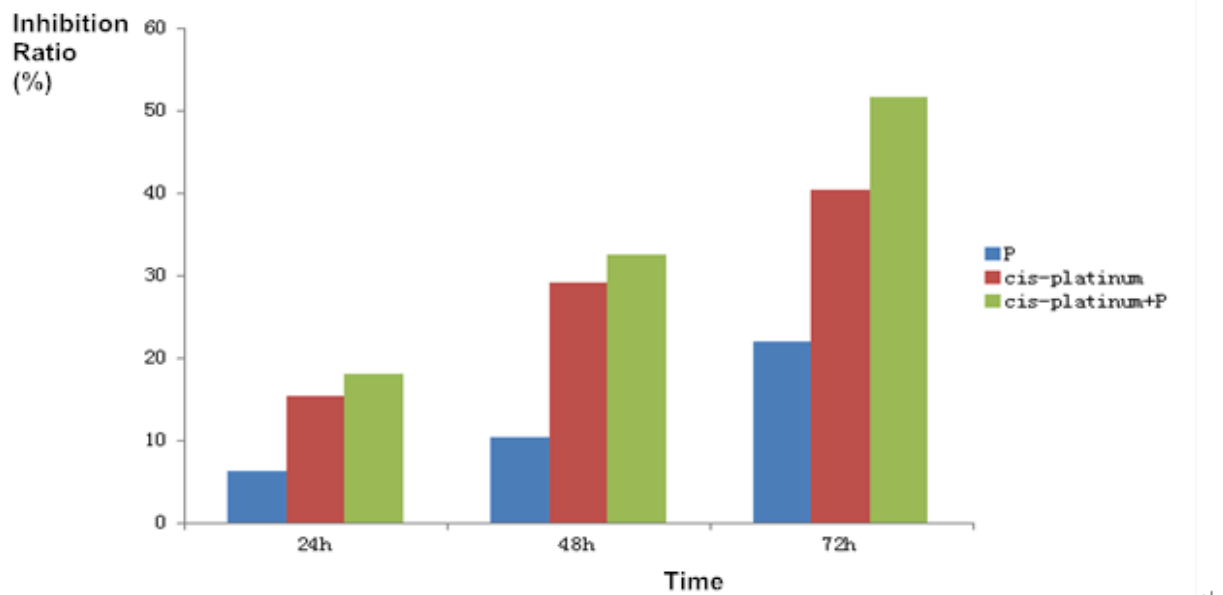


Figure 4: the inhibition rate of modified pectin (from Gold Kropp) +cis-platinum to MDA-MB-231 cell

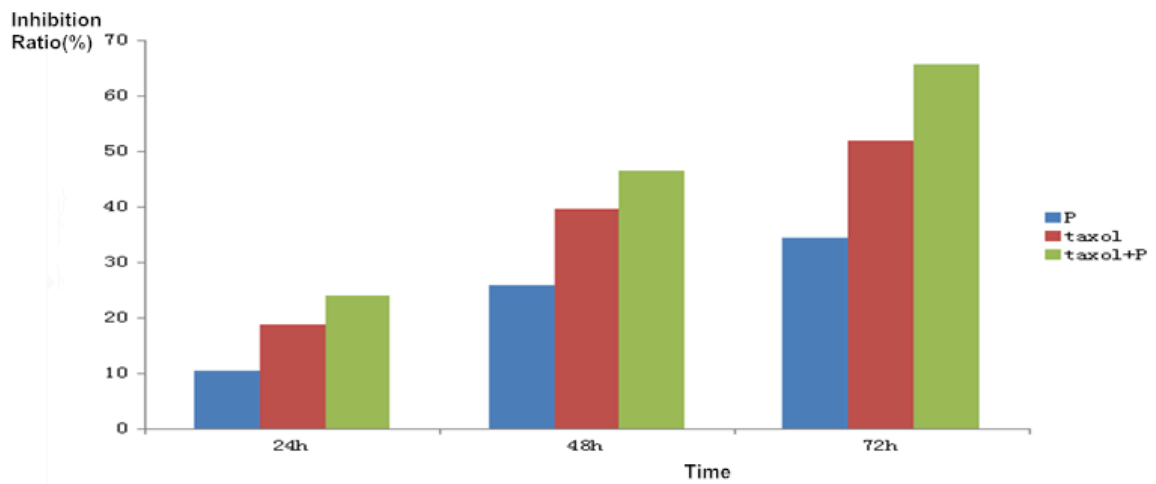


Figure 5: the inhibition rate of modified pectin (from Gold Kropn) +taxol to MDA-MB-231 cell

The invasion ability of MDA-MB-231 cell treated with 5-Fu, modified pectin+5-Fu and PBS by transwell experiment.

It was shown that the invasion degree: PBS > 5-Fu > 5-Fu+MCP (See figure 6-8 below)

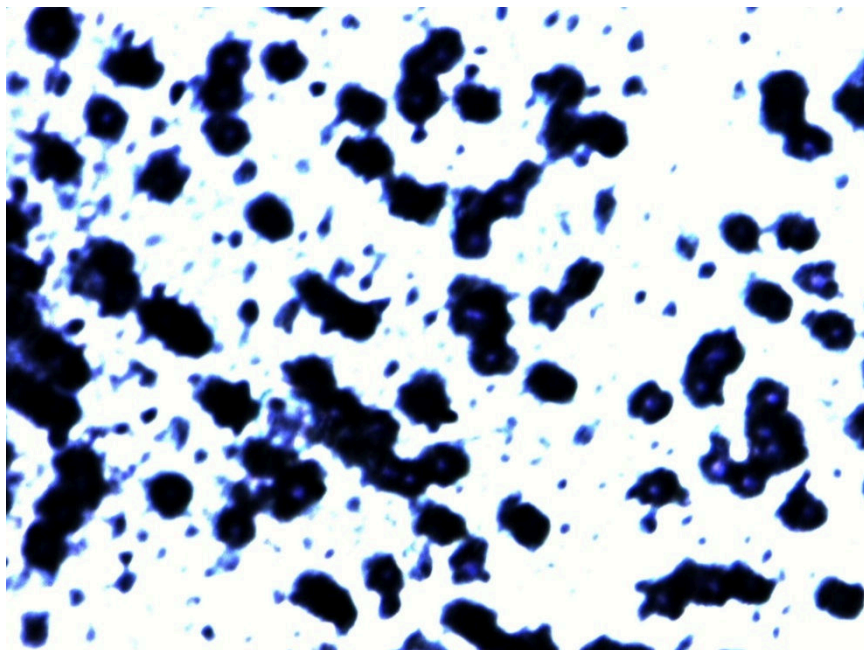


Figure 6: Treated with PBS group

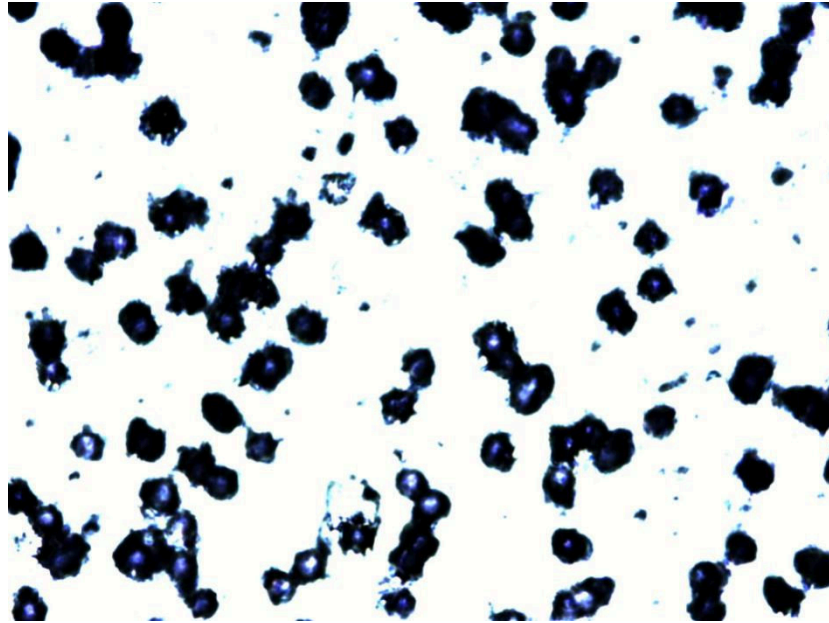


Figure 7: Treated with 5-FU group

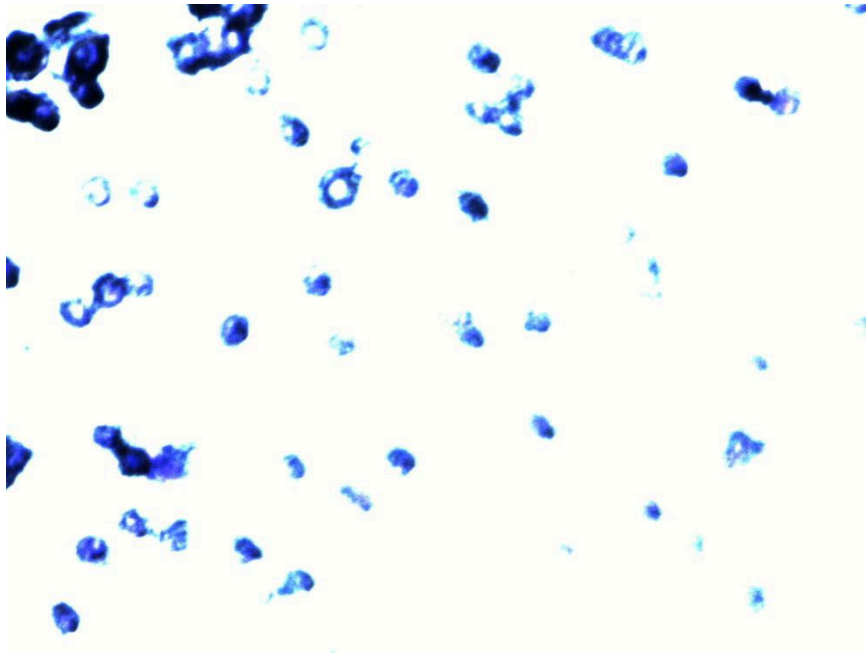
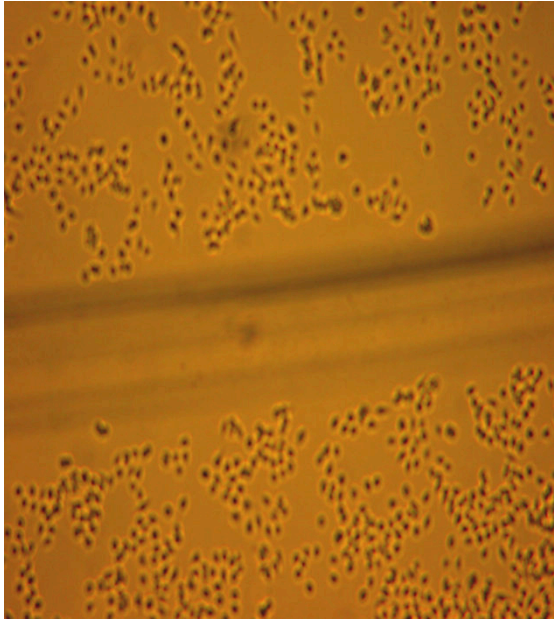
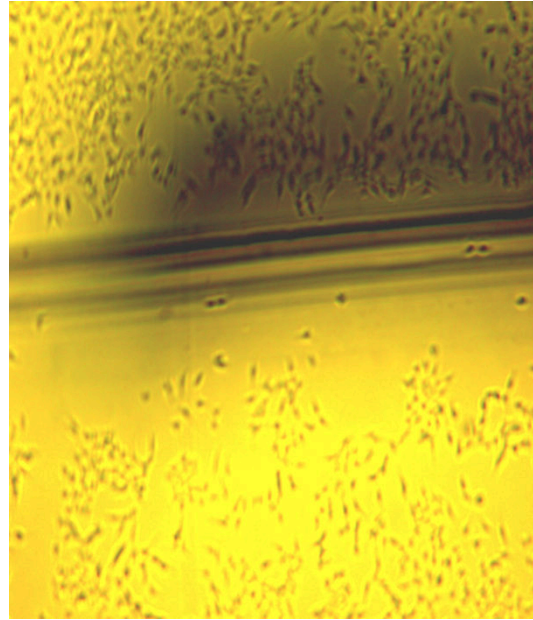


Figure 8: Treated with 5-FU + MCP group (from Gold Kroppn)

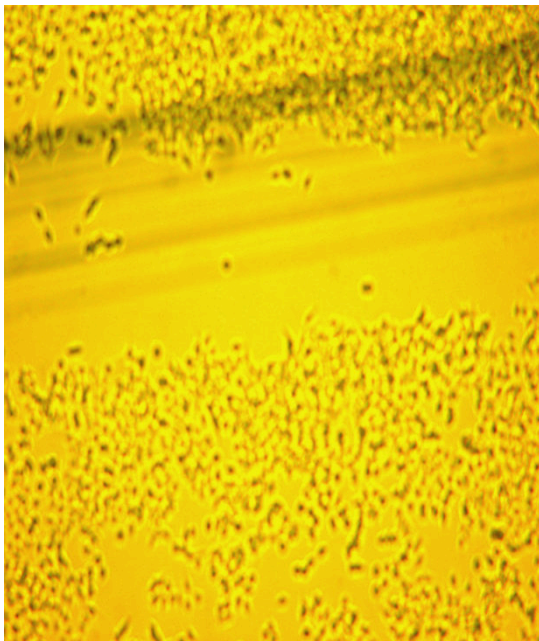
The scratch test showed that modified pectin (from Gold Kropp) + 5-Fu can inhibit the metastasis of MDA-MB-231 cell.



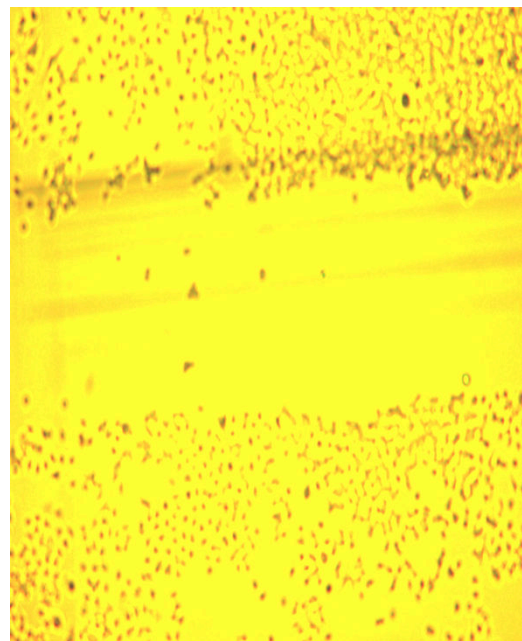
Fu+ MCP (from Gold Kropp) group



control group



MCP (from Gold Kropp)



5- Fu group