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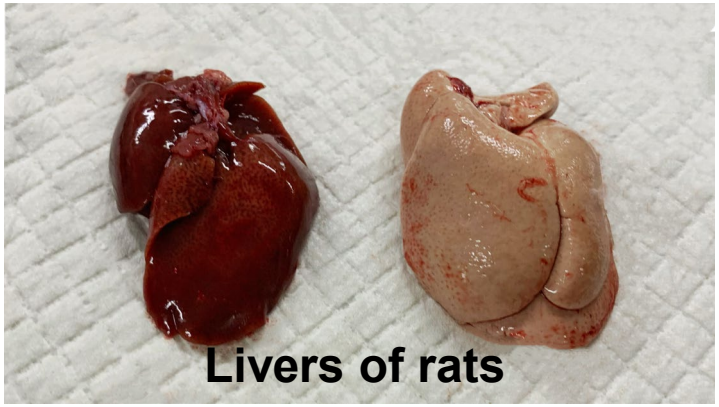
New observations on the effect of camellia oil on fatty liver disease in rats

Key words: **Camellia oil, Fatty acid, Lipid droplet, Hepatocyte ultrastructure, Organelle**

Research Summary

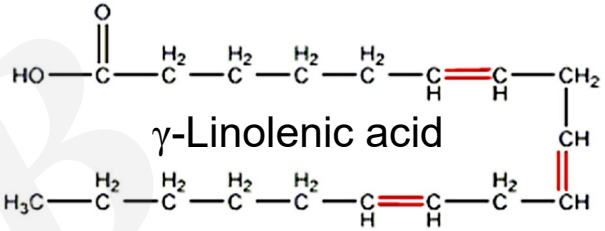
This study mainly focused on effect of camellia, soybean and olive oils on the nonalcoholic fatty liver (NAFLD) disease, and the key contents included in the following aspects:

- **Analysis of fatty acid profile for camellia, soybean and olive oils**
- **Effect of different plant oils on body weight，liver index and serum lipids of rats**
- **Cytological and ultrastructure characteristics in hepatocytes of rats fed by different plant oils.**

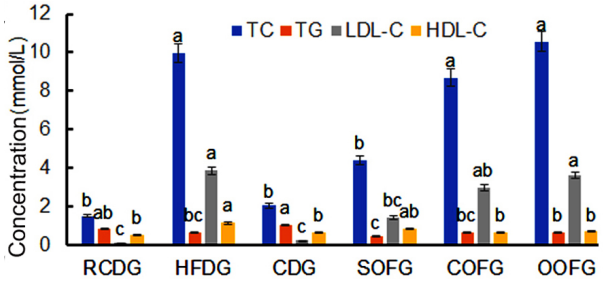


Innovation points

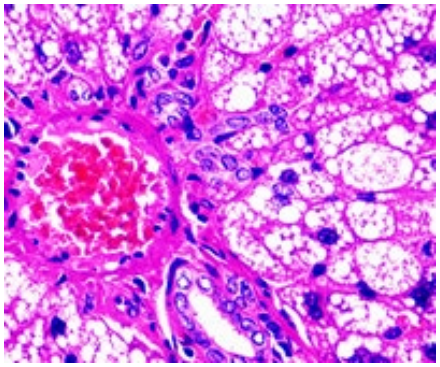
●**PUFAs (Polyunsaturated fatty acids) n-6/ n-3 ratios in soybean, camellia and olive oils were determined.**

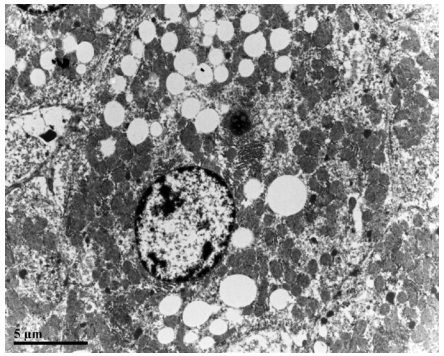


● **Research found that effect of camellia oil on increasing risk of NAFLD was higher than that of soybean oil but lower than that of olive oil.**



● **Analysis of cytology and ultrastructure revealed that effect of three oil diets on formation of fatty droplets and organelle damage was different in the rat hepatocytes.**





Innovation points

A series of figures were generated to the latest knowledge about effect of camellia, soybean and olive oils on the NAFLD in rat hepatocytes

Fig.1| Effect of different diet groups on body weight, liver index and serum lipids and lipoproteins in rats.

Fig. 2| Micrographs of the hepatocytes in liver tissues stained with hematoxylin and eosin in different diet groups of rats

Fig. 3| Transmission electron micrographs of hepatocytes in rats in the regular chow diet group .

Fig. 4| Transmission electron micrographs of hepatocytes in the control diet group

Fig. 5 Transmission electron micrographs of hepatocytes in rats in the high-fat diet group

Fig. 6| Transmission electron micrographs of hepatocytes of rats in the olive oil-fed group

Fig. 7| Transmission electron micrographs of hepatocytes of rats in the soybean oil-fed group

Fig. 8| Transmission electron micrographs of hepatocytes of rats in the camellia oil-fed group