

## 摘要要求：

参赛选手提交的摘要应为本人在微观生物学领域的研究成果，要求全英文书写，字体全部使用 **Times New Roman**，使用 **1.5 倍行距**。摘要全文不超过 **300 个单词**，提交的文件全长不超过 **2 页 A4 纸**。不按要求提交摘要的报名邮件视为无效！

标题：三号，加粗，居中。

作者：小四，居中，通讯作者用“\*”上标标注。

单位：五号，居中，段后空一行。

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**“Key words”**：小四，加粗。

关键词内容：小四，段后空至少一行。

图片：必须清晰！1-3 张单图或 1 张拼图，不超过 1 页 A4 纸，段后空一行。

图注：五号，必须和图片安排在同一页面内，单倍行距。

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后附合格摘要样例。

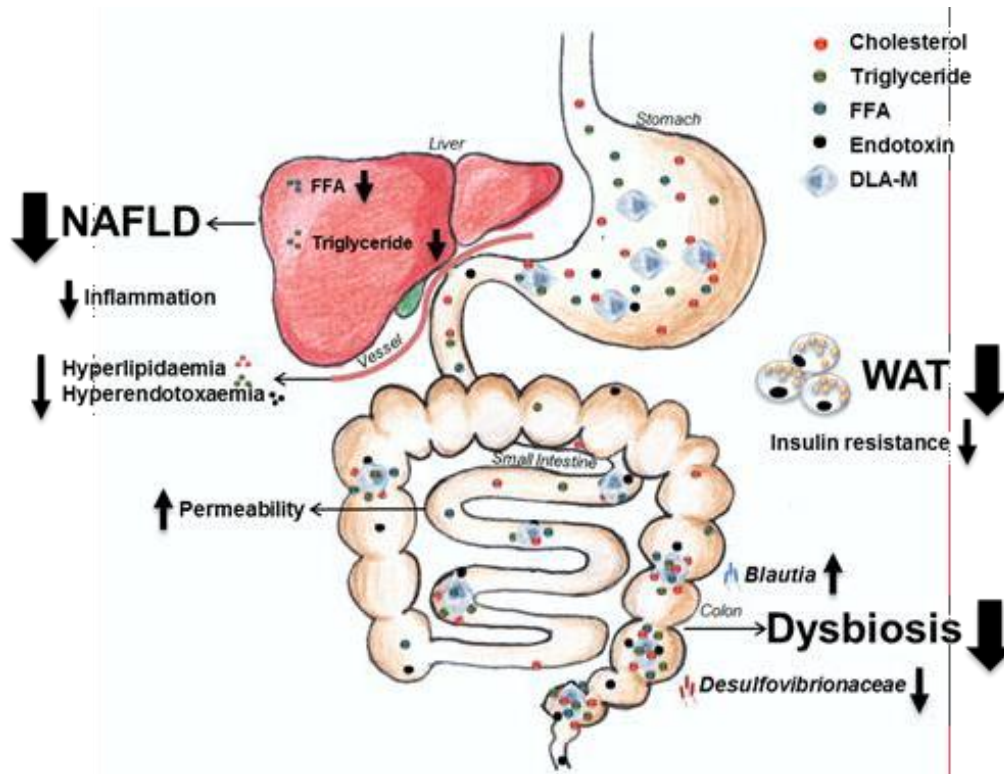
# Microbiome remodeling *via* the montmorillonite adsorption-excretion axis prevents obesity-related disorders

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Obesity and its related disorders are closely correlated with low-grade inflammation and gut dysbiosis. Montmorillonite is a common medicine used to treat diarrhea. We have previously found that dietary lipid adsorbent-montmorillonite (DLA-M) has an unexpected role in preventing obesity via the fixation of dietary lipids (triglycerides and cholesterol) and the promotion of lipid excretion from the digestive tract in rats fed a high fat diet (HFD). Here, we show that DLA-M absorbs free fatty acids (FFA) and endotoxins *in vitro* and *in vivo*. Moreover, the combination of fluorescent tracer technique and polarized light microscopy, showed that DLA-M crystals immobilized BODIPY® FL C16 and FITC-LPS, respectively, in the digestive tract *in situ*. HFD-fed mice treated with DLA-M showed mild changes in the composition of the gut microbiota, particularly increases in short-chain fatty acids (SCFA)-producing *Blautia* bacteria and decreases in endotoxin-producing *Desulfovibrio* bacteria, these changes were positively correlated with obesity and inflammation. Our results indicated that DLA-M may potentially be used as a prebiotic to prevent intestinal dysbiosis and obesity-associated metabolic disorders in obese individuals.

**Keywords:** Montmorillonite; Obesity; Gut microbiota.



Schematic presentation of the DLA-M prevention of obesity-related disorders via immobilization of triglycerides, cholesterol, FFA and endotoxin in the digestive system.