不同飼糧對紐西蘭白兔腸道糞便菌相之影響

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摘要

本研究利用 16S rRNA 基因定序技術，分析不同飼料配方給予紐西蘭白兔，其腸道糞便菌相分布之差異。72 隻三週齡紐西蘭白兔分成三組分別給予國產一般兔飼料(粗纖維含量 16%)、進口高纖兔飼料(粗纖維含量 22.6%)及國產特製兔飼料(粗纖維含量 20%)至七週齡，其中進口高纖兔飼料組及國產特製兔飼料組再各別分成二組，一組維持給予進口高纖兔飼料及國產特製兔飼料組，另一組則改給予國產一般兔飼料，給予飼料至 10 週齡。結果顯示三週齡仔兔其糞便菌相豐富度較離乳兔為高，但菌相均勻度較差，菌相組成份分析顯示七週齡時更換給予一般兔飼料的組別較未更換飼料組其糞便菌相差異大。

Effect of different diets on the fecal microbiome in New Zealand white rabbits

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Abstract

In this study, we used 16S rRNA gene sequencing to investigate the gut microbiome in New Zealand white rabbits fed with different diets. Seventy-two 3-week-old New Zealand White rabbits were divided into three groups. Groups A, B, C were fed with commercial diets comprising different compositions of crude fiber (CF) for 28 days (21 to 49 days old): A – 16％ CF, B – 22.6％ CF, and C – 20％ CF. Groups B and C were further divided into two groups after 50 days old, and one group was fed with the same diet while the other was fed with diet A (groups BA and CA), both for another 20 days. Our results revealed that the gut microbiome exhibited higher richness and lower evenness at 21 days old in all groups when compared to weaned rabbit gut microbiomes. Principal coordinates analysis demonstrated that clusters form delineating the A, B and C groups, had greater difference of microbiota in groups BA and CA.