Results:

Figure 1: PCA analysis of DGGE profiles from rats fed 14 weeks with 0,33% pectin diet (green) or control diet (red). It is clear that the groups segregate into two separate clusters. Similar findings were seen with higher pectin concentration and with whole apples, but not with other tested apple components. Hence, a clear difference in microbial composition is present, and based on these results the effect is mainly based on the presence of pectin in apples.

Discussion+Conclusions

The collected evidence thus suggests that apples have a health-promoting effect on the rat intestinal microbiota, and that this effect is mainly explained by the presence of pectin in the apples. However, a human being must eat 3 kg apples a day to see a marked effect of pectin consumption as observed in the long-term trial, as seen here.

Acknowledgments

The Danish Council for Strategic Research and the European Union through the ISAFRUIT project (2006-2008) are acknowledged for financial support. The Danish Council for Strategic Research grants are acknowledged for financial support. The Danish Council for Strategic Research and the European Union through the ISAFRUIT project (2006-2008) are acknowledged for financial support. The Danish Council for Strategic Research and the European Union through the ISAFRUIT project (2006-2008) are acknowledged for financial support.