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Cluster Analyses to Assess Weight Loss Maintenance: An Application of Clustering in Nutrigenomics

Within nutrigenomics, data generated by microarray gene expression profiles can be clustered to help identify sub-populations of subjects that respond differently to a dietary intervention. The use of clustering analyses in obesity-related research is burgeoning as personalized nutrition gains popularity. This study focuses on clustering a human adipose tissue gene expression dataset obtained during a low-calorie diet intervention to identify differential responders. The aims of the study were to identify the best performing clustering method for samples, pick out differential responders to the low-calorie diet, and help find the biological pathways affected during the low-calorie diet by the differential responders.