Flocculation, the calcium-dependent, non-sexual aggregation of yeast cells into 'flocs', is stimulated by nutrient limitation and is a process of great importance to the brewing characteristics of yeast strains. Characterization of flocculation characteristics has defined two classes of flocculation phenotypes. The FLO1-type is inhibited only by mannose sugars. The NewFLO-type, common in brewing strains, is inhibited by the sugars mannose, maltose, glucose, and sucrose, as well as by ammonium ions.Sequence analysis suggests that the flocculation genes are a multi-gene family localized to telomeric sequences, similarly to the SUC, MEL, and MAL gene families, all of which also encode characteristics important for brewing strains. In addition to FLO1 and FLO5, there are thought to be two more flocculation genes and three pseudogenes. The FLO9 geneis 94% similar to the FLO1 gene and may be the source of a 4.2-kb transcript whose presence is not affected by deletions of FLO1 or FLO5. The FLO10 geneis 58% similar to FLO1, but has 81.9% similarity in the N-terminus. Three presumed pseudogenes, YAL065C, YAR061W and YAR062W, and YHR213W have also been identified as fragmentary pieces with sequence similarity to FLO1.