Evaluation and re-evaluation of the sweetener aspartame: what did we learn?

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Sweeteners are used as food additives in the production of calorie-reduced foods, non-cariogenic foods or foods without added sugar. Among the sweeteners recently assessed or re-assessed by EFSA are aspartame, advantame and steviol glycosides. Aspartame is a dipeptide composed of L-phenylalanine methyl ester and L-aspartic acid. This sweetener has been evaluated on repeated occasions since the 1970’s and has been used in several countries within the European Union since the 1980s. The European legislation harmonised its use in foodstuffs in 1994 through the European Parliament and Council Directive 94/35/EC, following the safety evaluations by the Scientific Committee on Foods. Aspartame was originally scheduled for reassessment in 2020 as part of the food additive re-evaluation program. However, following several recent animal and epidemiological studies that suggested aspartame could have a carcinogenic potential or could increase the risk of preterm delivery, EFSA re-evaluated aspartame in 2013. After reviewing all available studies, the previous Acceptable Daily Intake of 40 mg/kg bw/day was confirmed. This presentation will describe the main difficulties encountered and the new approaches in risk assessment used by EFSA and its scientific panel during the safety evaluation of aspartame.