



## European Coffee Federation

Brussels, 25 February 2015

### **European Coffee Federation contribution to the EFSA stakeholder consultation on the draft opinion on caffeine**

The European Coffee Federation welcomes the opportunity given to all stakeholders and interested parties to comment on the EFSA draft opinion on caffeine.

The European Coffee Federation welcomes the draft opinion on caffeine published by EFSA on the 15<sup>th</sup> of January 2015. The European Coffee Federation believes that the opinion considers the wealth of scientific research which suggests that moderate coffee consumption can be part of a healthy balanced diet and may even confer health benefits for the general adult population.

The European Coffee Federation has thoroughly analysed the EFSA draft opinion on caffeine and will respond to it in full by the 15<sup>th</sup> of March at the latest.

At this stage we would like to raise the following points for clarification:

#### 1. Line 1494, section 4.4.2 Hydration status and body temperature

The statement that 'It is well established that caffeine has a diuretic effect' is misleading in its conciseness and would benefit from adding nuance. A study was published by Killer et al. (2014), most likely after the cut-off date of the literature review, which directly assessed the effects of moderate coffee consumption compared to consumption of equal volumes of water. The researchers found no significant differences in total body water or any of the blood measures of hydration status between those who drank coffee or those who drank water, nor did they find any differences in 24-hour urine volume or urine concentration between the two groups.

- Killer S. C. et al (2014) No Evidence of Dehydration with Moderate Daily Coffee Intake: A Counterbalanced Cross-Over Study in a Free-Living Population. PLoS ONE, 9(1): e84154.

2. Line 1576-1579, section 4.4.3.1. Sleep, anxiety and behavioural changes

In addition to the information presented, please note two additional references in terms of the inter-individual variation in the sleep effects of caffeine related to a polymorphism of the ADORA2A gene.

The first study, based on epidemiologic, genetic, pharmacokinetic, and polysomnographic methods, demonstrated a role of adenosine A2A receptors for sleep in humans, and suggest that a common variation in ADORA2A contributes to subjective and objective responses to caffeine on sleep. The second study is a genome-wide association study in which several genes have been identified as potentially influencing the caffeine induced insomnia and replicated a previously identified polymorphism in the ADORA2A gene.

- Retey J.V. et al. (2007) A genetic variation in the adenosine A2A receptor gene (ADORA2A) contributes to individual sensitivity to caffeine effects on sleep. Clin Pharmacol Ther, 81:692-8.
- Byrne E.M. et al. (2012) A genome-wide association study of caffeine-related sleep disturbance: confirmation of a role for a common variant in the adenosine receptor. Sleep, 35(7): 967-75.

3. Line 1586, section 4.4.3.1 Sleep, anxiety and behavioural changes, sub-item Children and adolescents

In addition to the information presented, please note that a study has been published by Ruxton (2014), most likely after the cut-off date of the literature review, which includes 11 randomised controlled trials and 13 observational studies. The study suggests that caffeine intakes of 2.5 mg/kg bw may be considered appropriate for children aged four years and above.

- Ruxton C.H.S. (2014) The suitability of caffeinated drinks for children: a systematic review of randomised controlled trials, observational studies and expert panel guidelines, Journal of Human Nutrition & Dietetics, 27:342-357.

4. Lines 1668-1677 in section 4.4.3.2 Perceived exertion during exercise

In line 1668-1672 reference is made to the health claim opinion on reduced perceived exertion as a beneficial effect (EFSA, 2011); in line 1673-1677 this is considered a potential adverse effect. These findings seem contradictory and we would like to ask the panel for further clarification.