

Corrigendum

Abstracts of the 12th International Comet Assay Workshop held at the University of Navarra, Pamplona, Spain, 29–31 August 2017 (<https://icaw.vito.be/>)

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The following abstract 'Use of whole blood to measure DNA damage in a group of wildland firefighters', was inadvertently omitted from the published Abstracts of the 12th International Comet Assay Workshop.

This has now been included online.

Use of whole blood to measure DNA damage in a group of wildland firefighters

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Genotoxicity evaluation is a valuable tool for studying the most important occupational hazards allowing a reasonable epidemiological evaluation of potential health effects. Comet assay has proven to be a very sensitive

tool for the detection of different levels of DNA damage in human bio-monitoring. Although lymphocytes are the preferred cells whole blood has been presented as a viable and easier alternative to lymphocytes in the comet assay. Its use avoids additional DNA damage from lymphocyte-isolation steps and loss of cells. Portugal is among the European countries more devastated by forest fires in the summer each year. Firefighters are exposed to many toxic combustion products, including many known, probable or possible carcinogens. There are a limited number of studies evaluating genotoxic effects in firefighters results reported are inconsistent and inconclusive. In this context, the aim of the present study was to assess DNA damage and oxidative stress in whole blood of Portuguese wildland firefighters. Study population consisted of a total of 61 non-smoking male subjects, 30 firefighters and 31 control subjects.

Oxidative damage was measured by formamidopyrimidine glycosylase. Basal DNA damage and oxidative DNA damage were increased in firefighters compared to controls. However, only basal DNA damage was significantly higher. The influence of lifestyle factors and work-related variables (duration and recent exposure) was also studied, but no significant effect was found. Results obtained provide new data on the biological impact of wildland firefighting and the need to implement effective measures in order to protect firefighter's health, including regular monitoring and surveillance activities, good practice campaigns, training programs and implementation of written policies and procedures.

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