• Ultrafine resistance spot welding particles with similar composition and number concentration but lower mass concentration do not induce such reactions.
• Both, copper and zinc are individually able to induce such inflammation reactions. However, copper seems to have a higher potential for this induction.
• The inflammatory reaction is also reflected by an increase of Serum Amyloid A (SAA) and Interleukin 6 in the blood and by an increase of Interferon-α and CRP in nasal secretions.

Discussion
Since increases of CRP, SAA, and IL-6 indicate an increased risk for cardiovascular disease, exposure to zinc and copper containing welding fumes may have to be considered for the prevention of work related cardiovascular disease. Further studies should investigate, if the observed inflammatory reaction persists after repeated exposure.

THE ASSOCIATION OF BLOOD LEAD LEVEL AND SERUM LIPID CONCENTRATIONS MAY BE MODIFIED BY METALLOTHIONEIN 2A POLYMORPHISMS

Background Metallothionein (MT) is a cysteine rich protein that can influence the detoxification of heavy metals and scavange oxidative stress for free radicals. One of the most expressive functional genes in humans is the MT2A gene.

In this study aims to determine if the association of the blood lead level and lipid biomarkers was influenced by MT2A polymorphisms.

Methods
We recruited 677 participants after informed consent was obtained. All of the samples collected were analysed for MT2A polymorphisms by RT-PCR. A short questionnaire was used for descriptive analyses and linear regression models.

Result
The investigation revealed that lead elevated concentration increased low-density lipoprotein cholesterol (LDL-C) and decreased high-density lipoprotein cholesterol (HDL-C) by multiple linear models. The carriers of the rs10636 GC-rs28366003 AA genetic combination may be less susceptible to lead elevated concentration on HDL-C than other types.

Conclusion
In conclusion, the association of the blood lead level and HDL-C may be modified by the MT2A genetic combination: the rs10636 GC-rs28366003 AA genotype could play a protective role in lead elevated concentration on HDL-C in humans.