

CORRESPONDENCE

Comment on

“Comparative Effects of Trivalent and Hexavalent Chromium on Spermatogenesis of the Mouse.”

SIR:

Your journal recently published a paper which reported adverse reproductive effects in male mice fed trivalent and hexavalent chromium [Cr(III) and Cr(VI)] for 35 days at concentrations of 100, 200 and 400 ppm in food [Zahid *et al.* (1990). Comparative effects of trivalent and hexavalent chromium on spermatogenesis of the mouse. *Toxicological and Environment Chemistry*, **25**, 131–136.] Specifically, the report concluded that “ambiguous” levels of degeneration in the outermost cellular layers of the seminiferous tubules, reduced spermatogonia per tubule, reduced sperm count, and increased percentage of morphologically abnormal sperms were observed at *all* doses. While several rat and mouse intraperitoneal studies have shown such effects with high doses of Cr(VI) (a highly toxic, corrosive element), Zahid *et al.* is the first and only to claim such effects with low doses of orally administered Cr(III) (a non-toxic, essential element). Obviously, the suggestion that low doses of orally administered Cr(III) can cause male reproductive effects could be considered an adequate basis for serious re-evaluation of the manner in which Cr(III) is regulated in the food and water supply and as an environmental contaminant. Hence, we believe it is important to critically evaluate the validity of the Zahid *et al.* study and the credibility of their results. Our review of Zahid *et al.*, summarized below, suggests that the design and conduct of the study are flawed to the point that the reported results should be considered highly questionable at best.