

## Environmental health and toxicology

### ***In vitro* immunotoxicity of untreated and treated urban wastewaters using various treatment processes to rainbow trout leucocytes**

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Municipal effluents are known to impede the immune system of aquatic organisms. The purpose of this study was to examine the immunotoxicity of urban wastewaters before and after 6 treatment processes from 12 cities toward trout leucocytes. Freshly prepared trout leucocytes were exposed to increasing concentrations of solid phase (C18) extracts of wastewaters for 24 hr at 15°C. Immunocompetence was determined by following changes in leucocyte viability and the proportion of cells able to ingest at least one (immunoactivity) and at least three (immunoinefficiency) fluorescent beads. The influents were treated by six different treatment strategies consisting of facultative aerated lagoons, activated sludge, biological aerated filter, biological nutrient removal, chemically-assisted physical treatment and trickling filter/solid contact. Water quality parameters of the wastewaters revealed that

