

## **High throughput bioanalytical screening of inland waters of southern California**

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### **Abstract**

Currently, only a few in vitro assays have been shown to achieve good measurement precision across measuring entities while demonstrating the ability to differentiate samples of differing water quality (Leusch et al. 2010, Mehinto et al. 2015). Standardization and benchmarking of water quality using high content in vivo methods is at an even less advanced stage. This study applies high throughput in vitro and in vivo bioanalytical methods to screen water samples collected from inland streams in southern California (USA), a highly populated region whose waterbodies are impacted by multiple stressors, including anthropogenic contaminants, fluctuating precipitation and changes to streambed morphology and flow. The bioanalytical screening responses were utilized to focus targeted and non-targeted chemical analyses performed to assess chemical-specific exposure, and were compared to other measures of water quality and stream condition, including indices of the health of invertebrate communities determined in situ.