Traces of ARVs in SA water a concern

Analyses of drinking water in SA have shown that a range of pharmaceuticals and personal care products are in our water including antibiotics, antidepressants, artificial sweeteners, illegal drugs and ARVs. So says Dr Eunice Ubomba-Jaswa, a research manager at the Water Research Commission (WRC), in an analysis on the **Daily Maverick** site. 'While SA is on track to meet its HIV/AIDS testing and treatment targets, the scale of the treatment programme in SA and the concentration and possible accumulation of HIV ARVs in the environment could be creating new health challenges,' she warns. 'A number of research studies conducted have identified HIV ARVs in South African waters. Currently, Project K5/2594, a three-year WRC funded project being conducted by the University of the North West, looks at the presence, concentrations and risk implications of HIV ARVs in South African water resources. **Preliminary results indicate the presence of HIV ARVs in treated waste water, in ground water, in tap water and in aquatic life, including fish,'** notes Ubombo-Jaswa. 'Studies are still ongoing to determine the long-term effects of exposure to ARVs in water which are largely unknown,' she goes on to say. 'Some of the routes through which pharmaceuticals, including ARVs, enter our water sources is through human excretion – making toilet waste which ends up in treatment works the biggest contributor,' she explains. 'HIV ARVs also reach our water through the improper disposal of unused or expired drugs. Medication may be flushed down drains which directly enters the water system, or thrown away into landfills where water soluble components can eventually seep into ground and surface water,' she notes. 'The absence of evidence does not mean that humans are safe from any adverse effects of continual exposure to drug waste in water. For example, low concentrations of HIV drugs consumed through drinking water could create a situation for drug resistance once consumed by people living with HIV who are not on treatment,' warns Ubombo-Jaswa. 'Additionally, the long-term effects of drug waste in water are occurring against the backdrop of climate change, extreme weather patterns and ecological imbalances which all have a profound impact on water availability and water quality. Changes in water quality have a direct impact on water security and sustainability and consequently on our country's economic and social goals. Adequate policy responses and actions are required to ensure that SA stays on track to meet its development goals as outlined in the National Development Plan,' she concludes.