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**A**ndrogens (such as dihydrotestosterone) are a major class of steroid hormones that have key functions in the development and maintenance of the male reproductive system. Chemicals in the environment that act as anti-androgens (able to bind to the androgen receptor and block the normal action of androgens) could impact human and wildlife development and reproduction. Yeast based anti-androgen assays can give false positive results depending on various factors. Some misinterpretations are due to the nature of the chemicals and others are due to the way that the assay is run. This article examines a group of environmental chemicals for anti-androgenic activity and compares the results from two yeast-based assay methods to determine which is the most robust. Over 100 environmental chemicals were tested using a recombinant yeast cell line expressing the human androgen receptor. Both were colorimetric assays with method-1, wherein the substrate was added to the medium at the start of the incubation and in method-2, where the substrate was only added to the medium once the cells had been lysed. By both methods, the anti-androgenic potencies of 16 chemicals were very similar but method-2 was less prone to false positive results when close to toxic concentrations. We therefore consider method-2 to be a more robust assay.

## Biography

Nicola Anne Beresford has been carrying out Environmental Research at Brunel University London for 22 years. She now leads the Environment and Health Technical Team in addition to working part-time on her PhD in Environmental Sciences. Whilst working at Brunel, she has authored almost 30 publications and half of these present results from yeast-based assays.

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