

# Neutering is no longer 'one size fits all'

Prepubertal sterilisation can negatively impact long-term animal health.

NeuterReady's bioassay technology can guide the timing of surgical and non-surgical sterilisation in dogs.

Allows data-driven management of sterilisation, to positively impact long-term animal health.



## A snapshot of maturity - Discover more at [www.neuterready.vet](http://www.neuterready.vet)



### The full picture

Technology based in biology, not chemistry, to determine circulating levels of all androgens, beyond only testosterone.



### Sensitive, simple, accessible

A single serum sample sent to NationWide Laboratories' UK laboratory, no specialised equipment or training required. Animal maturity confirmed within 2 - 7 days.



### Supports existing guidelines\*

Measurable data to confirm maturity, and support sterilisation decisions based on existing veterinarian knowledge.



### Supports long-term health

Not all breeds, or dogs within breeds, mature at the same age. InsituGen's technology confirms maturity, and can prevent complications of prepubertal sterilisation.



“Where neutering is considered necessary and no suitable alternative options are available, the very least that should be considered is ensuring sexual maturity before the procedure. NeuterReady can help guide this timing by assessing biological maturity, enabling veterinarians and owners to make more informed decisions with the aim of supporting long-term animal wellbeing.

Allowing dogs the opportunity to reach sexual maturity before considering sterilisation may offer important health and behavioural considerations that should be evaluated on an individual basis.”

Prof. Dr. Sandra Goericke-Pesch  
University of Veterinary Medicine Hannover

\*Updated Guidelines for neutering. Hart LA, et al (2024). Front. Vet. Sci. 11:1322276. doi: 10.3389/fvets.2024.1322276

\*Assisting Decision-Making on Age of Neutering for Mixed Breed Dogs of Five Weight Categories. Hart BL, et al (2020). Front. Vet. Sci. 7:472. doi: 0.3389/fvets.2020.00472

\*Assisting Decision-Making on Age of Neutering for 35 Breeds of Dogs. Hart BL, et al (2020) Front. Vet. Sci. 7:388. doi: 10.3389/fvets.2020.0038

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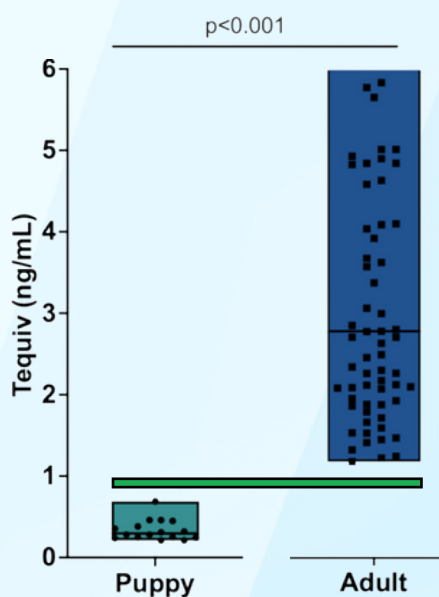
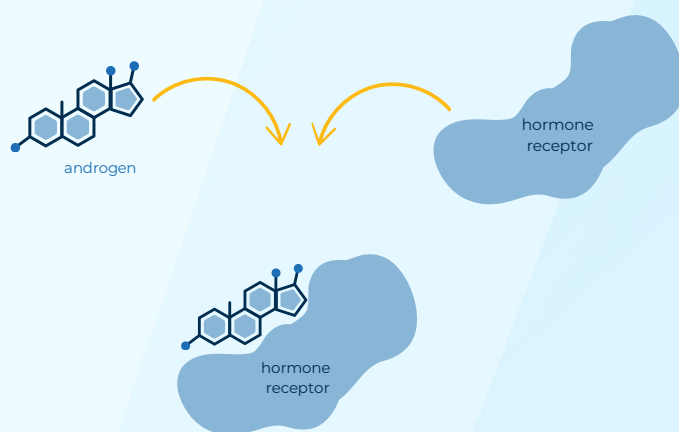
# How NeuterReady works

The natural biological signalling pathways of steroid hormone receptors are replicated using synthetic biology to create a novel in vitro detection mechanism, capable of detecting activity from androgens in an animal plasma sample.

InsituGen's bioassay is sensitive at low concentrations, and shows significant separation between adult and puppy equivalent testosterone concentrations. A more sensitive and complete view of circulating hormone bioactivity than any other method currently available.

InsituGen's approach is backed by experts including Prof. Goericke-Pesch (DECAR TiHo Hanover), Dr. Marty Greer (Canine reproduction specialist), and Dr. Marc Goldhammer (DECVS).

A list of publications detailing the science behind the technology can be found on the InsituGen website.



Above: the bioassay combines steroid and receptor to generate fluorescence

Left: Bioactivity, as testosterone equivalent, of male puppies and adult intact male dogs, including small and large breeds shows clear differences in puppy and adult levels of circulating androgens.

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InsituGen's technology, in partnership with NationWide Laboratories is currently available as a third-party service for veterinarians in the United Kingdom, providing data to inform decisions on the timing of neutering.

An equivalent estrogen test for female dogs is in development.