



As the human population continues to grow around the world, wildlife is increasingly confined to smaller and fragmented islands of habitat. Many wildlife species, even if they are considered endangered, can be overabundant in the ever-shrinking ranges that they occupy. Overabundant species, even native ones, can reduce biodiversity and ecosystem resilience by monopolizing resources, spreading infectious diseases, and changing species composition or relative abundance. Humane options for management of free-ranging wildlife populations are needed, and SpayVac is the answer.

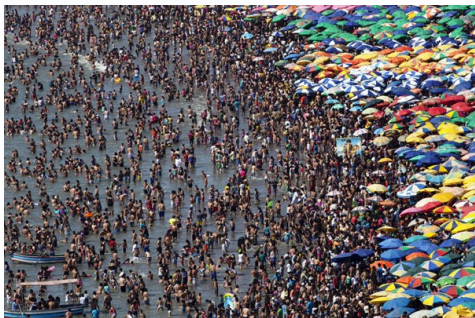


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SpayVac-for-Wildlife, Inc.

Learn more: <https://spayvac.com>

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Contraceptive vaccines for humane wildlife population control

Horses

Feral equids have few predators, which contributes to high survivorship and rates of population growth in the range of 15 to 20% per year. Wildlife managers, conservation biologists, and ranchers are concerned about the impacts that free-ranging horses can have on rangelands shared by native ungulates and domestic stock. Free-ranging horses are known to compact soils, increase erosion, and decrease plant cover in many habitats, which in turn causes declines in other species like birds and reptiles. Managing populations of free-ranging horses is a significant challenge, involving animal welfare, environmental, sociological, public policy, and economic dimensions. Public agencies charged with this task are desperate to find viable solutions - slaughter and spaying mares has met with staunch public resistance, and contraceptive vaccines that require annual boosters are labor intensive to administer.

A *single injection* of SpayVac has resulted in significant fertility reductions for 4-5+ years in two trials with mares. SpayVac serves as a humane and cost-effective alternative to slaughter, surgery, long-term holding and other contraceptive vaccines. SpayVac's use in horses is supported by the U.S. Public Lands Council and animal welfare organizations.



Photo credit: Jim & Emily Bush.





Photo credit: Sabah Wildlife Rescue unit.



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Single-Injection, Multi-Year Contraceptive Efficacy

A patented, liposome-based delivery platform gives SpayVac its unique long-lasting contraceptive efficacy. Unlike other immunocontraceptive vaccines that require boosters, SpayVac is effective for multiple years with a single injection, making it economically and logistically feasible for application to free-ranging wild and feral animal populations.

SpayVac currently uses porcine zona pellucida (pZP) as its antigen, which is effective in horses, deer and other animals. However, other antigens can be used in its patented formulation to target different species, like dogs and cats.

Other Species

SEALS — An overabundant population of seals off the east coast of Canada was targeted as SpayVac’s first field trial. During years 2–5 and 10 post-treatment, fertility rates in control animals ranged between 70–75%, while fertility in animals treated with a *single injection* of SpayVac ranged from 9–15%, which was an 80–85% decrease.

DEER — Overabundant deer in suburban areas can contribute to animal–vehicle collisions, disease transmission, and damage to vegetation. In many communities, hunting is not possible. SpayVac resulted in significant fertility reductions with a *single injection* for 3+ years in fallow deer and 7+ years in white-tailed deer in three trials.

ELEPHANTS — Free-ranging elephant populations are increasingly confined to smaller ranges, resulting in a higher frequency of human–elephant conflicts. Current elephant population management options include translocation, culling, dispersal techniques, surgical sterilization, and contraceptive vaccines that require annual boosters. A *single injection* of SpayVac resulted in consistently elevated pZP-antibody titers for 7+ years in six captive African elephants. Trials to test contraceptive efficacy in wild Asian and African elephants are being planned.

MACAQUES — These primates are considered pests in Asia, causing property damage and spreading zoonotic diseases, particularly in urban areas. Promising results were obtained in a SpayVac trial in Hong Kong, and a second trial to test SpayVac’s

duration of efficacy is currently being planned in collaboration with the Caribbean Primate Research Center at the University of Puerto Rico.

OTHER — Overabundant kangaroos in Australia, feral cattle in India, swine in the U.S. and Europe, feral dogs and cats worldwide, and other species need humane population control options.

The SpayVac Team

Tom D’Orazio, MS, MBA, serves as the CEO and has co-founded multiple pharma and medical device companies. The science team includes:

Ursula Bechert, DVM, PhD, Vice President of Research & Development, who specializes in reproductive endocrinology.

Mark Fraker, MS, RPBio, Vice President of Operations, who is a wildlife biologist.

David Kroeger, PhD, Director of Immunology, who specializes in immune activation, antibody technology, and immunotherapy.

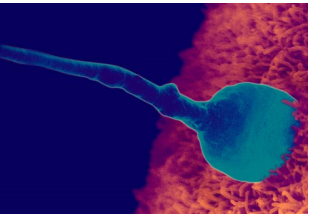


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Working to provide wildlife managers with humane, cost-effective population management