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## MEDIA RELEASE

### **Veterinary reproduction specialists contribute to food security and farming success**

Beef production plays an important role in food security, by ensuring that a population has, at all times, both physical and economic access to sufficient food to meet dietary needs for a productive and healthy life. In South Africa, both the established commercial farming industry and the emerging small-scale farmer sector contribute to beef production, with products being sold through commercial outlets and directly to consumers. Protein plays a vital role in the development of children, both physically and mentally, and beef is a primary source of protein in most African communities. Grazing on natural veldt, cattle are not merely “recycling” plant proteins, but are “upcycling” by converting human-inedible feedstuff into high-quality human-edible protein and essential nutrients.

Whether on a large commercial or small-scale farm, the beef bull has a single role: to ensure that his cow herd falls pregnant as soon as possible during the breeding season, in order to maximise production and farming profit. This requires that the bull be a healthy animal, which includes reproductive health and fully functional reproductive organs. Injuries or disease affecting the genital system are therefore of particular importance in these animals. The Reproduction Clinic of the Onderstepoort Veterinary Academic Hospital (OVAH) at the University of Pretoria’s Faculty of Veterinary Science is staffed by veterinary clinicians with specialist qualifications and expertise to diagnose and treat genital conditions in bulls.

Traumatic injury to the prepuce or penile sheath is a condition more commonly seen in Brahman and Brahman-cross animals, due partially to the pendulous sheath conformation of these and other *Bos indicus* cattle. Damage to this tissue can prevent penile protrusion and a failure to achieve erection. This has a direct impact on the bull fulfilling his primary role of impregnating cows and, if not rapidly diagnosed and correctly treated, could lead to major loss on the side of the farmer.

Neglect or improper management of such cases can result in scar tissue formation within the sheath, which could worsen the condition. Treatment of these cases frequently requires surgical intervention under general anaesthesia, and preferably in a theatre. This surgery is complicated, and requires specialist surgeons and facilities. Post-operative care is intensive and requires a long period for recovery.

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In general, bulls are challenging to treat because of the associated risks in handling them. For these reasons, and to ensure successful recovery with a return to normal function, it is best performed as a procedure at a referral centre such as the OVAH.

Recently a four-year-old red Brahman bull, who had previously had surgery performed elsewhere to treat a preputial injury, was presented to the Reproduction Clinic. Dr Geoff Brown, senior lecturer and experienced veterinary reproduction specialist in the Reproduction section of the Department of Production Animal Studies, examined the bull and found that severe post-operative scarring had formed, which prevented the bull from mating naturally. In theatre, under general anaesthesia, Dr Brown surgically removed the extensive band of scar tissue and reattached the remaining healthy portions of the penile sheath. After recovering from anaesthesia the bull underwent daily intensive treatment at the Veterinary Academic Hospital for approximately three weeks following the surgery. Initial indications are that the surgery was successful, however the real test will be to see if he is able to successfully serve his cow herd.

**(Ends)**

**Captions:**

1. The Brahman bull before the operation was performed.
2. Following the surgery the bull underwent several weeks of intensive treatment at the OVAH to fully recover.
3. While the surgery was successful, the real test will however be to see if he is able to successfully serve his cow herd.

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**ABOUT THE UNIVERSITY OF PRETORIA**

The University of Pretoria (UP) is one of the largest contact and residential universities in South Africa, with its administration offices located on the Hatfield Campus, Pretoria. This 114-year-old institution is also the largest producer of research in South Africa.

Spread over seven campuses, it has nine faculties and a business school, the Gordon Institute of Business Science (GIBS). It is the only University in the country with a Faculty of Veterinary Science, which is ranked top in Africa. UP has 120 academic departments and 92 centres and institutes, accommodating more than 55 000 students and offering about 1 100 study programmes.

UP is one of the top five universities in South Africa, according to the 2019-2020 rankings by the Center for World University Rankings. The QS World University Rankings also placed UP among the top 100 universities worldwide in three fields of study (veterinary science, theology and law), and UP is in the top 1% in eight fields of study (agricultural sciences, clinical medicine, engineering, environment/ecology, immunology, microbiology, plant and animal sciences and social sciences), according to the Web of Science Essential Indicators.

In May 2020, the annual UK Financial Times Executive Education Rankings again ranked GIBS as the top South African and African business school. The University also has an extensive community engagement programme with approximately 33,000 students involved in community upliftment. Furthermore, UP is building considerable capacities and strengths for the Fourth Industrial Revolution by preparing students for the world beyond university and offering work-readiness and entrepreneurship training.

As one of South Africa's research-intensive universities, UP launched the Future Africa Campus in March 2019 as a hub for inter- and transdisciplinary research networks within UP and the global research community to maximise 4IR innovation and address the challenges and stresses our continent and world is facing. In addition, UP also launched the Javett Art Centre in September 2019 as a driver of transdisciplinary research development between the Humanities and other faculties. In November 2020 UP launched Engineering 4.0. as a hub not only for Smart Cities and Transport, but also to link the vast resources in technology and data sciences to other faculties via Future Africa. These initiatives are stimulating new thinking at the frontier of 'science for transformation'.

For more information, go to [www.up.ac.za](http://www.up.ac.za)