**CASE STUDY**

**UWI VET GRAD MAKES HISTORY:** 1st Prosthetic Limb for Animals in Caribbean

The local newspaper headlined: "Cow gets new limb and new life. It was a loving story about an ill boy and Garfield Grifin, the pet cow, a gift from his grandfather. A heathy pregnant Grifin had lost the lower part of her hind leg due to a rope burn. She was given a new lease on life through the efforts of her veterinarian and the fitting of what is touted to be the first prosthetic limb for animals in the Caribbean.

But who is the vet behind this historic achievement? Nicole Lambe has a BSc in Agriculture and is a Doctor of Veterinary Medicine (DVM). She also has an MS in Tropical Animal Science and Production and her academic interest is in animal reproductive bio-technology, in particular the water buffalo. Dr Lambe is also a 5th Degree Black Belt who has represented Trinidad & Tobago, getting Bronze at the 20th WAC Squash Games. She was nominated for the Sport Woman of the Year in 2009, 2010 and 2011. And, at Christmas time, when she's not dedicating her time to her patients, she's performing with the Trinidad & Tobago纪律, winning the Best Martial Artist award on two years.

It all began with a telephone call to the Equine Office of the Ministry of Food Production from Paula Baptiste, a farmer and owner of a mini-stall, and her husband Adrian, a fisherman. It was referred to Dr Nicole Lambe as a possible 'call case'. Dr Lambe went along to assess. They found a cow with a gruesome foot injury but otherwise in remarkable good condition and that was something to worry about 8 months pregnant. The cow, Garfield Grifin, had been a gift to the last grand-cousin of a man who worked the land and the first calf had been promised to another grand-don. At that point, Dr Lambe adopted the case and was determined to bring the cow safely to parturition - much easier said than done. The cow was in Maracana Bay and her office was in Sanger Grande. There was just one cell phone contact with the family which was often not available for various reasons. It would turn out to be a 7-week odyssey.

Dr Nicole Lambe is a Veterinary at the Ministry of Food Production and Grifin's Adopted Vet. All photos were taken on her cell phone by Dr Nicole Lambe and keeper as well as by Dr Lambe.

1. The first visit to Garfield at Maracas Bay. Her left hind hoof had been amputated from a rope injury. The skin and bones of the hoof would dangle away to expose her metatarsal bone. A week later the bone broke but, luckily, it was a clean break and her medication prevented infection.

2. Garfield's wound is terrible and her leg is amputated. Her leg is now 9 inches shorter than the right, resulting in a large pelvic tilt. Her immense distress was made worse because of pregnancy. Dr Lambe began looking for something to support her. It would have been to carry 390 lbs and be light enough for Garfield to move around. It wouldn't stir the temp. Google and YouTube became Dr Lambe's friends as she researched other prosthetics - elephant prosthetics and that of a cow named Toffee being the best examples of rudimentary designs. With her colleague, the bioengineers, ideas, materials, persons to whom she showed pictures offered help and advice. Some even contributed headphones. Her voyage of discovery would eventually lead her to Trinidad & Tobago Orthotics and Prosthetics Limited (TTOP).

3. The amazing fourths: Dr. Jovita Worrell, Dr. Nicole Lambe, Dr. Nichelle Jaspere and Dr. Cheryl Ann Whitmore. The newspaper article on the TTOP website, April 14, 2013, is a reference to Dr. Lambe and her team. This was a collaborative effort. Assistance may have been in materials, research data, data around with me on sources materials in granting aid, took turns driving the many times to Maracas, one person was on a weekend to treat Garfield, make one of the many necessary phone calls to the former for updates on Garfield, to hold a rope or tail while Dr Lambe and to simply take an interest. They are all graduates of St Augustine Veterinary Medicine, UWI.

4. "I was determined to find a solution despite those who thought it was lost cause. An idea began to take shape and these are my sketches and measurements for a rudimentary, low cost prosthetic to somewhat do myself. The plan was to use fiber glass. This design was made over a blank copy book page given to her by Adrian. Her main problem then was how would it stay on without dressing to her body?"

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6. After the designer's sketch was created, Dr Lambe was sent to Trinidad & Tobago Orthotics and Prosthetics Limited (TTOP) to discuss the design and make the prosthetic. When they were finished, they turned around to find a lot of ordnance - including a nice entire family!

7. Garfield the mother - her bell calf, Kansas, was born on Good Friday 2015. It was an assisted delivery by Nally, Rubinho's uncle and neighbour, who followed Dr Lambe's instructions conveyed to him by his girlfriend via cell phone.

8. Garfield's prosthetic leg was made of 4 layers of carbon fiber and titanium. Here she is being fitted. There's a cast maker that makes the outsole to fit in place while the prosthetic is the back part. It would go back to TTOP for minor adjustments after the first fitting.

9. It took Garfield just about 30 minutes to adapt to her new leg. Her speed may have been due to an enticing bit of grass that had eluded her before her reach.

10. The one who made it all possible - Russell Bouree, Richard Gonzalez, Dr Nicole Lambe, Mario Gadelia. Together we did the seemingly impossible. Russell Bouree is the owner/director of New Life Inc and Limb based in Houston, Texas. New Life is the parent company for Trinidad & Tobago Orthotics and Prosthetics Limited (TTOP) and he generously donated the company's first animal prosthetic. Outstated contract of TTOP made the trace andMario Gadelia was adventurous enough to accept a challenge.

11. Garfield Grifin, with her real owner 3 yr old Rubinho Baptiste, out in pastures where she's most happy. Dr Lambe is a deeply appreciative of everyone who helped her to help Garfield, even if it was to make sure she had water when the family could not be there. Commitment and team effort resulted in this successful outcome. Garfield Grifin is doing well.