



## Australian Age of Dinosaurs Ltd

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# Press Release

## Mt Isa Hospital Goes Prehistoric CT SCANS REVEAL BIOMECHANICS OF AUSSIE DINOSAUR

**Winton, 06 March, 2015:**

A 100 million year old patient will soon be visiting the Mt Isa Base Hospital.

A team from the Australian Age of Dinosaurs Museum of Natural History will transport the bones of *Diamantinasaurus matildae*, a gigantic long-necked dinosaur nicknamed 'Matilda' - from their home in Winton to the hospital for CT scanning. This involves taking a number of x-ray images which can then be 'stitched' together into a 3D image, providing both internal and external information. With finger bones that measure up to 40cm long and an upper arm bone weighing around 100kg, 'Matilda' will likely be Mt Isa Hospital's most unusual patient to date.

The bones are being scanned by University of New England's, PhD research student Ada Klinkhamer. She is researching the biomechanics of Australian sauropod dinosaurs: "by CT scanning the bones of 'Matilda' and other sauropods found by the Australian Age of Dinosaurs, I will have detailed information on the structure of the bones which I can then use to look how these creatures bore their weight and moved about". Using a number of sophisticated computer software programs she will measure and test the potential location of major muscle groups in the legs of these dinosaurs, as well as estimate stress distribution through the leg bones using a technique called Finite Element Analysis. This technique is becoming more and more popular in palaeontological research, after being adapted from the aerospace and engineering industries. It is used to test the stress resulting from loads applied to different materials – for example, analysing stress in the skulls of animals during biting.

The long-necked dinosaurs being scanned are from a group known as titanosaurs. This group contains some of the world's largest, but also some of the world's smallest, sauropods. These

dinosaurs from the Australian Age of Dinosaurs Museum lived during the Cretaceous period, a period spanning from about 145 million years ago until 65 million years ago.

“It is wonderful that the Mt Isa hospital is allowing us to use their resources to do this” says Ada as she relates the difficulties of finding a hospital which has both the resources and proximity to Winton. “The fossils are always on display at the museum for the public to come see, so removing them from the museum and taking them a few hours away for CT scanning is a major undertaking. We were determined to find a hospital as close to the museum as possible so the fossils can be back on display quickly”.

The scanning and the research resulting from it will help scientists understand more about the structure, movement and behaviour of these gigantic creatures.

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**Authorised by Naomi Miles,  
Australian Age of Dinosaurs,  
Museum Services Manager**

Computer viewing station of fossils  
being CT scanned.



Steven Rumbold with  
*Diamantinasaurus matildae* -  
“Matilda’s” metacarpal.



L to R: David Friedman, Chief Technologist explains the CT process to AAOD Laboratory Coordinator George Sinapius.



L to R: Steven Rumbold, AAOD Education Coordinator, George Sinapius, AAOD Laboratory Coordinator and David Friedman, Chief Technologist.