



NEWS FROM THE UNIVERSITY OF TASMANIA, AUSTRALIA

Media Release

Chiefs of Staff, News Directors

Tuesday, 29 December, 2015

Tasmanian devils affected by a second transmissible cancer

Routine field research has identified a second transmissible cancer in Tasmanian devils that is very similar to Devil Facial Tumour Disease.

Investigations into a possible second cancer began when researchers at the University of Tasmania's Menzies Institute for Medical Research, who were investigating an apparent case of DFTD, noticed cancer cells that displayed features that were not typical of DFTD. Laboratory studies indicated that the case was a second, and therefore new, type of devil facial cancer.

Menzies researcher Dr Ruth Pye, who obtained the original samples and performed the initial analysis, said eight cases had now been identified, all from the D'Entrecasteaux Channel area.

The leader of DFTD research at Menzies, Professor Greg Woods, said the new transmissible cancer was discovered and identified through diligent research. "Fortunately this is similar to DFTD and the procedures in place to deal with DFTD will be used to investigate this new cancer. Vaccine research will not be affected as the new cancer can be incorporated into the vaccine," Professor Woods said.

When the different cancer cells were originally noticed the Cytogenetics Department of the Royal Hobart Hospital undertook chromosome analysis and established that the case was not DFTD. When a second apparent case of DFTD from the same geographical area was discovered to have the same chromosomal abnormalities, it became likely that this was a new transmissible cancer.

Further chromosomal studies performed at the Animal Health Laboratories, Department of Primary Industries, Parks, Water and Environment, confirmed that the chromosomal changes were different to DFTD.

Thorough genetic analysis performed at the University of Cambridge in the UK provided conclusive evidence that a second transmissible cancer is affecting Tasmanian devils. This new cancer has similarities to DFTD as it causes tumours, primarily on the face or inside the mouth, and is probably also spread between devils by biting.

Dr Elizabeth Murchison from the Department of Veterinary Medicine at the University of Cambridge, said that until now it had been thought that transmissible cancers arose extremely rarely in nature. "It makes us wonder whether transmissible cancers may not be as rare in nature as we previously thought. Alternatively, perhaps Tasmanian devils are particularly vulnerable to the emergence of transmissible cancers."

Because there are now two types of devil facial cancers, the original transmissible cancer (first identified at the Mt William National Park) will be referred to as DFT1, the second transmissible cancer (first identified in the Channel area) will be referred to as DFT2. Collectively they will be known as DFTD.

The research was primarily supported the Wellcome Trust and the Australian Research Council, with additional support provided by Dr Eric Guiler Tasmanian Devil Research Grants and by the Save the Tasmanian Devil Program.

Professor Woods said the support of the Australian Research Council and the Save the Tasmanian Devil Appeal (www.tassiedevil.com.au) was critical for ongoing work.

“A second transmissible cancer in Tasmanian devils” by R.J. Pye, D Pemberton, C Tovar, JMC. Tubio, KA. Dun, S. Fox, J Darby, D Hayes, GW. Knowles, A. Kreiss, HVT. Siddle, K. Swift, AB. Lyons, EP. Murchison, and GM. Woods. It appeared in Proceedings of the National Academy of Science on 28 December, 2015.

[For media queries relating to DFTD vaccine development and immunisation research at the Menzies Institute for Medical Research contact:](#)

Ben Wild
M: 0438 510 616
E: ben.wild@utas.edu.au