

## Dolphin health under microscope

*"These animals will need all the help they can get"*

**W**hale and dolphin stranding is being investigated to discover what part disease plays in this phenomenon.

The work will be led by Dr Pádraig Duignan, a specialist in the health and diseases of marine mammals, who joined the University of Melbourne's Faculty of Veterinary Science after a 20-year career that has taken him across the globe, studying the health of seals, sea lions, dolphins and whales.

His latest project is conducted in collaboration with colleagues at Zoos Victoria, Monash and Deakin, the Dolphin Research Institute, the Australian Animal Health Laboratory, and the departments of Primary Industries and Sustainability and Environment.

Duignan is trying to



discover why some whales and dolphins become stranded on beaches and why – despite best efforts to save them – they often do so repeatedly until they die. He says this is a perennial question that has intrigued naturalists for centuries and is an enigma which years of research have failed to resolve.

"The project will study the effects of infectious diseases and pollutants on stranding, mortality rates, survival rates and reproduction. An important component of the

research is the prevalence of viral and bacterial infections in fur seals and dolphins, which have been shown to significantly decrease reproduction or cause severe and often deadly secondary infections," Duignan says.

"With climate change projected to dramatically alter the environment of our marine mammals – potentially dramatically changing their exposure to disease – these animals will need all the help they can get."

Photo: Sue Mason

## New cancer scanning

*"Potential to revolutionise the way cancers are treated"*

**M**onash PhD student Sarah Everitt, has led the way in research using a new scanning technique to reduce the time taken to identify the extent of a cancer patient's response to treatment.

She said the technique could reduce the amount of time to assess the effectiveness of treatment to just weeks.

"Usually, when we're planning radiation therapy for these patients, they would receive 30 treatments over six weeks. But throughout that time, we don't actually know



if the treatment is working and need to wait until a couple of months later to monitor them," she says.

The new scanning technique uses a

combination of hi-tech scanners with a new type of radioactive "tracer" called FLT (18F-3'-deoxy-3'-fluoro-l-thymidine) which is injected into the patients. The tracer then binds to the rapidly dividing cells and these are highlighted during a scan.

Everitt said the technique had the potential to revolutionise the way cancers are treated.

"We're doing the scans in the second and fourth week of treatment and hope to find out when the most informative time might be for scanning patients in the future. There's evidence that some lung tumours may start to grow very quickly towards the end of treatment, so [at four weeks] we've also got two weeks to adapt the treatment if we observe this biological response," Everitt said. □

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