



**Figure 1 | Simple link?** Bintanja and colleagues' approach<sup>1</sup> connects deep-ocean temperatures, as inferred from oxygen-isotope ratios in the remains of benthic foraminifera (inset), with temperatures at high latitude in the Northern Hemisphere and glacier formation.

suitable — after all, convection in the Atlantic may be the link between high-latitude surface-air temperatures and deep-sea temperatures. Bintanja *et al.* tackle the issue of the correct choice of benthic record in the Supplementary Information to their paper. Some differences between model runs with different benthic isotope records are apparent, but in general their method is robust for the alternative cores they use.

This paper fires the imagination with ways to test the ideas contained in it and, if those ideas are right, directions in which to extend the work. The central assumption — of a simple link between deep-ocean temperature and high-latitude Northern Hemisphere temperature (Fig. 1) — is a well defined hypothesis that should be eminently testable using Earth System Models of Intermediate Complexity (EMICS). But how far into the past can we push this method to understand Earth's glacial cycles during different climatic periods? As benthic oxygen isotope records of higher

temporal resolution become available, what will this approach have to say about periods of millennial sea-level variability?

Bintanja and co-workers' approach<sup>1</sup> provides an elegant new way of deciphering the riddle of ice volume change contained in the benthic record. It is now up to the various interested communities to take up the challenges posed by this work. ■

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## CANCER IMMUNOLOGY

# Cat and mouse games

Cornelis J. M. Melief

**The immune system is intimately involved in how tumours develop. But how do tumours avoid being killed by immune responses? It seems that in some instances they can lull immune cells into a false sense of security.**

A troubled relationship exists between the immune system and tumours — not unlike that between the cartoon characters Tom and Jerry. Tom's disposition is to catch and devour mice, but he hardly ever succeeds in capturing Jerry, who has just too many tricks up his sleeve. On page 141 of this issue Willmsky and Blankenstein<sup>1</sup> report a novel ploy used by

tumours to evade the immune system. It seems that sporadic tumours in mice, against which the immune system initially reacts, nevertheless manage to spread by moulding the immune cells that are most effective against them — the killer T cells — into a state that tolerates them.

The report adds fuel to a controversy that has been raging for some time, namely



## 50 YEARS AGO

Wittgenstein once argued that no paper read to a scientific society should last more than fifteen minutes, because anyone who had anything to say on any subject could easily say it in that time. He would probably have regarded with some horror the Twelfth International Congress of Applied Psychology, which met in London during July 18–23. Few of the speakers named on the programme took less than half an hour, and there were more than a hundred of them. Yet only four special lecturers had been asked to talk for more than twenty minutes. Perhaps many of the others felt that, having come from the ends of the earth, or thereabouts, they could justify themselves... only by going on and on. Nor was the unbargained-for time always well spent. In fact, and as usual, the people who spoke the longest had the least to say.

From *Nature* 3 September 1955.

## 100 YEARS AGO

Mr. W. E. Cooke, Government astronomer for Western Australia, has sent us a communication explaining a novel plan that he has adopted for giving more definiteness to the weather forecasts issued in that colony. Each forecast for a definite district is subdivided into specific items, to each of which a figure is attached, "1" representing that the occurrence prognosticated has only the barest possibility of being successful, and so on, up to "5", which indicates that the prediction may be relied upon with almost absolute certainty. Each item of the forecast has therefore a "weight" attached to it; on the whole, Mr. Cooke states that the new method has proved a distinct success, and that while people find that whenever the figure 5 appears the forecast is fulfilled in 99 cases out of 100, they do not feel so disappointed in case of failure when the lower numbers are attached...

From *Nature* 31 August 1905.

50 & 100 YEARS AGO