

Scientists develop protocol to harvest mouse cell lines for melanoma research

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Dartmouth researchers have developed a protocol that permits cells harvested from melanoma tumors in mice to grow readily in cell culture. Their findings were published in an article, Multiple murine BRAFV600E melanoma cell lines with sensitivity to PLX4032, in the January 25, 2014 issue of *Pigment Cell & Melanoma Research*.

"We anticipate that these [cell lines](#) will be extremely useful to many investigators who use mouse melanoma as a model system," said Constance E. Brinckerhoff, PhD, professor of Medicine and of Biochemistry at the Geisel School of Medicine at Dartmouth and a member of the Norris Cotton Cancer Center (NCCC) Mechanism Research Program.

There is a lack of mouse cell lines that harbor the BRAF mutation that is so prevalent in human melanomas, and the cell lines that are available grow slowly in culture and are not representative of human melanoma cell lines. Detailed experiments on molecular mechanisms controlling mouse cell line behavior have been difficult because the currently available mouse cell lines do not grow well in culture.

The Geisel School of Medicine researchers are the first to have developed a [protocol](#) that permits mouse melanoma cells to be harvested from tumors in the mice and to grow readily in cell culture. Importantly, these cell lines are genetically compatible with a strain of mice that are immunologically competent, while human [cells](#) need to be placed into immunologically weakened mice in order to grow. Thus, the ability to

study these mouse melanoma cell lines both in culture and in [mice](#) with an intact immune system is an experimental advantage.

Provided by The Geisel School of Medicine at Dartmouth

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