Medical Xpress

Scientists create new cell lines from ocular melanoma patients

March 11 2011

Researchers at UCLA's Jules Stein Eye Institute have created new tumor cell lines from fine-needle biopsies of ocular melanoma patients who had undergone treatment but died when their cancer spread aggressively.

These new cell lines will afford scientists valuable insights into how the eye cancer causes rapid metastasis. The findings could lead to new methods for testing drugs for treatment.

Until now, scientists have had a limited number of models for studying ocular melanoma. The cancer does not naturally occur in animals, and commercially available cell lines may differ from the original tumor.

"Each cell line retained the molecular features found in its original tumor," said principal investigator Dr. Tara McCannel. "That's important, because the more closely a model resembles the actual tumor, the more likely that discoveries made using the model are to be valid."

Ocular melanoma, which forms in the pigmented layers under the retina, is the most common eye cancer in adults, with approximately 2,000 new cases (seven in 1 million people) diagnosed each year. The cause remains unknown.

Patients whose tumors contain a genetic marker linked to rapid metastasis have at least a 50 percent chance of death within five years, due to swift spreading of the tumor to the liver and other organs. Particularly aggressive cases can result in blindness and death within a

year.

More information: The research appears in the Feb. 25 online edition of the journal *Molecular Vision*.

Provided by University of California Los Angeles