

## **Researchers develop test for targeted therapy in acute myeloid leukemia**

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Oregon Health & Science University Cancer Institute researcher Jeff Tyner, Ph.D., has created a way to identify proteins that are candidates for targeted therapy in acute myeloid leukemia using an assay that yields results in just four days. This research will be presented at the American Society of Hematology annual meeting in Atlanta, on Monday, Dec. 10.

This functional assay, called RAPID, because it rapidly delivers the information, has the capability of telling researchers which actual proteins from the tyrosine kinase family are contributing to an individual patient's cancer.

"If you know what protein is driving the cancer, you have the ability to target that protein and stop it.

With this knowledge it may be possible to match targeted drugs with the appropriate patient. It may also be possible to identify mechanisms as to why certain leukemias respond well to therapy and why others may not. The real novelty of our work is that we have performed this assay directly on patient samples. It gets us one step closer to the clinic and personalized medicine," said Tyner, a fellow in hematology/ medical oncology, OHSU School of Medicine.

This research has several important aspects. First, it will enable researches to more quickly compile a database of mutant genes that cause cancer. That will enable better diagnosis in the future using DNA sequencing technology. Second, it is possible that this technology may, in the future, be adapted for direct clinical use for diagnostic purposes. In



this manner, the RAPID screen could be run on a patient's malignant cells, and the appropriate drug could then be determined to treat that patient. Thirdly, the assay can be completed in just four days, whereas previous technologies could take months to years to yield similar information.

Tyner came about his discovery as many scientists do: trial and error and then success.

Source: Oregon Health & Science University

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