

Cell glue gives insights into cancer

July 17 2012

(Medical Xpress) -- University of Queensland researchers have discovered an important step in how proteins glue cells together to form healthy tissues, a process that is often disturbed in diseases such as cancer and inflammation.

Professor Alpha Yap, Dr Aparna Ratheesh and Dr Guillermo Gomez from UQ's Institute for [Molecular Bioscience](#) (IMB) led a team that discovered the signals that prompt proteins to build the "[glue](#)" that binds cells into tissues.

“Cells are the basic building blocks of our body,” Professor Yap said.

“Healthy tissues require their component cells to recognise and adhere to one another.

“This adhesion is achieved through specialised bundles of proteins whose formation is promoted by a signalling [protein](#) called Rho.

"You can think of this signal like the conductor of an orchestra, making sure that all the players work together.”

Professor Yap and his team studied Rho and discovered a network of proteins that ensure Rho is activated at the correct time.

“Many of the proteins in this network have been implicated in cancer, meaning this discovery will provide valuable insights into how healthy tissues are disturbed in disease,” Professor Yap said.

It follows the Yap laboratory's 2010 and 2011 discoveries of how adhesion proteins come unstuck inappropriately.

The study is published in the current edition of the international scientific journal *Nature Cell Biology*. Subscribers can access the paper at this address: bit.ly/L2JWDD

This work was financially supported by the Human Frontiers Science Program, the National Health and Medical Research Council of Australia, the Australian Research Council, and the Oncology Children's Foundation.

Provided by University of Queensland

Citation: Cell glue gives insights into cancer (2012, July 17) retrieved 29 April 2024 from <https://medicalxpress.com/news/2012-07-cell-insights-cancer.html>

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