Discovering the secrets of tumor growth

January 24 2013

Scientists at the University of Copenhagen's Center for Healthy Ageing have identified a compound that blocks the expression of a protein without which certain tumours cannot grow. This compound has the potential as an anticancer agent according to the research published in the journal *Chemistry and Biology* this week.

The BLM protein is also known to be important in maintaining stability in cells when they multiply, thus preventing cancer. However, certain types of tumour need BLM to grow. This is typical of osteosarcomas - aggressive malignant tumours often seen in bone cancer – and also soft tissue sarcomas.

Now for the first time scientists have been able to turn off the BLM function in cells using an inhibitor called ML216, which stops cells that express BLM from multiplying, leaving cells without BLM alone.

Tumour treatment one step closer

Professor Ian D. Hickson, who led the research says: "Sarcomas and especially osteosarcomas are notoriously difficult to treat. This compound has the potential to lead to a treatment that could stop such tumours growing."

Professor Hickson's team is now working on finding derivatives of the compound that will be more potent and suitable to use as a basis for a drug.

"Once we have the compound in the right form, the next step is to test it using mice as a model and then, all being well, to move on to a clinical trial. However, we are several years off having an actual treatment." He says.

Provided by University of Copenhagen