

## In the news

### INFLAMMATION–CANCER LINK CONFIRMED

Further support for the long-suspected link between inflammation and cancer is provided by two new studies.

In the first study, scientists at the Massachusetts Institute of Technology (MIT), USA, report that chronic inflammation of the intestine or stomach can damage DNA, increasing the risk of cancer (*The Journal of Clinical Investigation*, 2 June 2008).

Besides the suspected role for inflammatory cytokines in cancer, it is thought that reactive oxygen and nitrogen species released by inflammatory immune cells can damage DNA and contribute to cancer. To test this theory, the MIT researchers induced colon inflammation by administering a chemical compound to mice that lacked the normal machinery that repairs damaged DNA. “Lo and behold, the DNA repair deficient mice were more susceptible [to cancer]”, said Lisiane Meira, the lead author of the study (*ScienceDaily*, 3 June 2008). Commenting on the link, Meira said, “It’s something that was expected but it was never formally proven.” (*MIT News Office*, 2 June 2008.) As the effectiveness of DNA repair systems can differ between individuals, such “variation could influence the susceptibility of individuals [to cancer] and how they are going to respond to a chronic inflammation response,” said the senior author of the study Leona Samson (*MIT News Office*).

In the second study, researchers at Imperial College London, UK, studied the health records of ~50,000 men and found a link between gum disease and cancer (*Lancet Oncology*, 6 May 2008). “Periodontal disease was significantly associated with an increased risk of lung, kidney, pancreatic and haematological cancers.” (*Telegraph*, 26 May 2008.) The researchers suggested that the persistent presence of gum disease might be a sign of a weak immune system, which could also allow cancer to develop, or that the bacteria from the gums might directly cause cancer (*BBC News*, 26 May 2008).

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