**Nanotubes pose health risk, study shows**

**Tiny fibres used to strengthen items such as bike frames and hockey sticks could pose risks to workers who make them.**

Certain types of carbon nanotubes - cylindrical molecules about one-thousandth of the width of a human hair - could cause cancer in the lining of the lung, University research shows.

The study in mice found short carbon nanotubes appear relatively harmless if they entered lung cavities.

However, longer nanotubes were more likely to get stuck there and ultimately cause a type of cancer known as mesothelioma.

**Need for risk assessment**

Researchers are looking at assessing the level of risk involved, for instance examining how many of the long fibres are present in the air at workplaces.

The study was published in the American Journal of Pathology.

The industrial-scale manufacture of carbon nanotubes is increasing, with a global market in excess of £1 billion.

This research shows that there is a potential hazard in the manufacture of certain types of carbon nanotubes.

**Ken Donaldson**

***Professor of Respiratory Toxicology***

**Similarities with asbestos**

The research found that longer carbon nanotubes caused a reaction in the lung lining similar to that of asbestos.

Longer asbestos fibres are more harmful than shorter fibres since they also get stuck in the lung cavity where they can cause diseases including mesothelioma.

**Finding safest kind of nanotube**

The study demonstrates the need for industry to design safe nanofibres that are long enough to be useful but short enough to avoid causing disease.

It follows previous research in mice looking at the effect of carbon nanotubes on the stomach cavity.