**THIS WEEK IN CHEMISTRY**

18TH JANUARY - 24TH JANUARY 2015

**NANOPARTICLE DRUG PREVENTS CANCER SPREAD IN MICE**

Spreading cancer cells avoid immune detection by altering sugars on their surface. A drug to prevent this exists, but is also lethal to normal cells. A new method of packaging it in nanoparticles was effective in mice; whether it will work in humans is still uncertain.

**ANTIBIOTICS IN BLOOD INCREASE MOSQUITO MALARIA CHANCE**

A new study found that mosquitos that suck the blood of people with malaria are 21% more likely to develop the infection if that person is also taking antibiotics. The mechanism is unclear, though could be due to the effect on the mosquito's natural gut bacteria.

**MICROMOTORS DELIVER DRUGS TO MOUSE STOMACH WALL**

For the first time, tiny micromotors placed in a mouse stomach were able to deliver a cargo to the stomach wall. The micromotors contain zinc, which reduces H⁺ ions to hydrogen gas, propelling the motor. In future they could be used to deliver drugs in humans.

**COMET 67-P IS COVERED BY POLYMERIC ORGANIC COMPOUNDS**

Analysis of the first set of data from the Rosetta mission has shown that the comet is covered in polymeric organic material. Carbon-hydrogen and oxygen-hydrogen bonds were detected in this material, with very few nitrogen-hydrogen bonds also detected.

**CONE SNAILS USE ‘WEAPONISED’ INSULIN IN THEIR VENOM**

A species of cone snail was found to use a type of insulin in its venom, which sends fish into hypoglycemic shock and allows it to eat them whole. It’s the smallest insulin molecule ever seen, and could help development of treatments for diabetes.

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