

# THIS WEEK IN CHEMISTRY

14<sup>TH</sup> DECEMBER - 20<sup>TH</sup> DECEMBER 2014

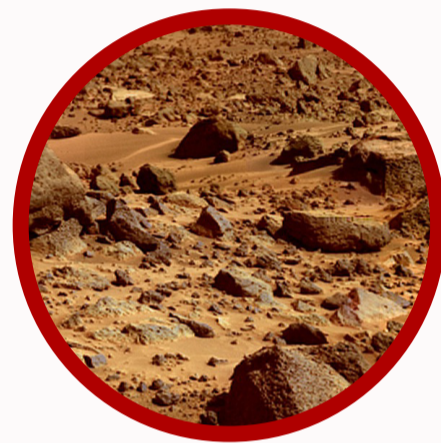
## IBUPROFEN BOOSTS LIFESPAN OF YEAST, WORMS & FLIES

Yeast, nematode worms and fruit flies given doses of ibuprofen, comparable to what humans would take, had their lifespans increased by up to 17%. Applicability to humans is uncertain, however, as long-term ibuprofen use can cause stomach bleeding.



## METHANE 'BURPS' DETECTED ON MARS BY CURIOSITY

In two months of Martian air analysis, the Curiosity rover detected methane gas, as well as spikes in its concentration. This has raised hopes of potential life on Mars, as methane is a known byproduct of microbial life, but it could also originate from other sources.



## CYTISINE ALTERNATIVE TO NICOTINE PATCH TO QUIT SMOKING

A study involving over 1300 adult smokers found that, after 6 months, 22% of those receiving cytisine (a plant extract) maintained abstinence, compared to 15% receiving nicotine. However, cytisine also had a higher frequency of self-reported adverse effects.



## ZINC SPARKS & EGG FERTILISATION: SOURCE DISCOVERED

Upon fertilisation by a sperm cell, egg cells release zinc 'sparks', caused by the release of waves of zinc cations. Researchers have now discovered that this zinc is contained within vesicles near the outer membrane of the cell.



## NEW ALKENE COUPLING REACTION CAN BE RUN IN WHISKEY

Reactions that form carbon to carbon bonds are vital in synthesis of a range of organic compounds. A new iron-catalysed method avoids unwanted side products, and uses mild conditions. Its versatility means it can even be run using commercial alcohols as solvents.



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