DRUG FRAGMENTS INCREASE POTENCY OF ANTIMICROBIALS

A study found including small fragments of antibiotic molecules with the antibiotic molecules themselves inhibited natural bacterial defences, aiding treatment of resistant bacteria. The fragments stop bacteria from pumping drug molecules from their cytoplasm.

MOLECULES BIND TO HIV AND PREVENT REPLICATION

Researchers found that a mix of an inhibitory compound and two proteins bound to the protective capsule of the HIV-1 virus. This prevented it breaking apart, and helped stop viral replication. The findings may lead to potential new treatments for the virus.

DIRECT METHOD FOR PREPARING AROMATIC POLYMERS

A Japanese study describes the first direct method for synthesising poly(o-arylene) polymers. The manner in which the polymers are linked alters their shape, and the findings could have implications for nanocarbon materials, electronic devices, and chemical sensors.

RED WINE PIGMENTS DETECTED IN WHITE WINE GRAPES

A study examining the skins of the grapes used to make white wines found anthocyanins, the pigments that contribute to red wine’s colour. Though found in much lower concentrations, the pigments were previously thought to only be found in red grape skins.

NANOPARTICLES DELIVER DRUGS TO CANCER CELL NUCLEUS

One of the issues with chemotherapy is that the drugs often fail to enter cancer cell nuclei, resulting in resistance. Chinese scientists have developed ‘smart’ nanoparticles that can deliver drugs directly to cancer cell nuclei, which killed more cancer cells than controls.