



Stop AMR Global Media Monitor

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Antibiotics may increase risk for opioid abuse

Consumption of antibiotics coupled with opioids may increase risks of abuse.

As opioids and antibiotics are commonly prescribed after a surgery, scientists wanted to check either or not it could be a threat.

Researchers used rats as model. Two groups were tested for opioid consumption behaviour. One received, prior to exposure to opioid, an antibiotic treatment, leading to a totally depleted gut microbiome, influencing brain health and playing a role in brain disorders such as addiction.

Researchers discovered that rats with an altered microbiome were more sensitive than rats who did not receive antibiotics. The depleted microbiome exacerbated the effects of intoxication and weakened the effects of withdrawal.

Source: [EurekAlert!](#), 27 April 2020

Faecal transplantation improves outcomes in patients with multi-drug resistant organisms

A research demonstrated that the transfer of faecal matter from a healthy donor to an extremely ill patient, previously infected by AMR organisms, induced shorter hospital stays and more benign infections than non-transferred ill patients.

The results emerged from a cohort of 20 patients infected, during extensive medical care, with multi-resistant organisms. After a successful transplantation of faecal matter, patients were followed for a 6 month-period. Although resistant bacteria were cleared in only 41% of the patients, researchers discovered significant benefits induced by the transplantation.

Across all patients, a significant reduction in bloodstream infection has been observed. In the case of 8 patients, their states improved so drastically that they achieved to undergo stem-cell transplants, with no serious adverse effects.

Researchers will investigate further as they recognize that their study needs a control-group to better assess the method's efficiency.

[EurekAlert!](#), 30 April 2020

Bacteria that are persistently resistant to one antibiotic are 'primed' to become multidrug-resistant bugs

Researchers reported in a paper published in Nature that, for a bacterial pathogen already resistant to an antibiotic, a long period of exposure to that specific antibiotic induces a metabolic change inside the bacteria promoting the acquisition of other resistances.

The exposure of bacteria to an antibiotic to which they are already resistant, boosts the expression of the resistance gene and increases its capacity to pick up other possible resistance genes. Therefore, they can easily become multi-drug resistant.

It appears that a long exposure 'primes' the bacteria. This observation could explain how antibiotic resistance is maintained and spreads in the environment, even long after the antibiotic exposure stopped as the bacteria's antibiotic-resistance plasmid was retained at significantly higher levels than before the antibiotic exposure.

Source: [Phys.Org](#), 27 April 2020

'Dirty' mice could help make a more effective flu vaccine

A study recently questioned the use of 'pure' mice lineage for lab experiments. As those mice are commonly disease-free and protected from a large variety of bacteria and viruses, some researchers emit the hypothesis that the immune response, expressed while testing antibiotics or vaccines, may not be a correct reflection of the reality once translated to humans, as humans are commonly dealing with a variety of illnesses.

This hypothesis was based on a study of two different batches of mice. One was a usual group of disease-free mice, the other a mix of lab and commercial mice. Half of the mice in each group were given a flu vaccine. Researchers then exposed the mice to a strain of Influenza, and it appeared that the dirty mice were more susceptible to die of the infection despite the vaccination.

Researchers believe that dirty mice, because of previous exposure to pathogens, cannot mount, as efficiently as their fellow disease-free mice, a sufficient immune response. As humans are in the same situation, dealing with numerous diseases, it could explain why flu vaccine efficiency differs each year.

Source: [EurekAlert!](#), 27 April 2020

Hopes rise on coronavirus drug remdesivir

A clinical trial on remdesivir seems to demonstrate that the compound could significantly shorten the recovery time of Covid-19 patients. The results were so positive that researchers decided to stop the experiment to give the compound to people receiving a placebo.

Onlookers are hopeful that the large NIAID (US National Institute of Allergy and Infectious Diseases) trial provides the first glimmer of promise in a race to find a drug that works against the coronavirus, which has infected more than three million people worldwide.

In the long term, clinicians will probably want a bevy of antiviral drugs - with different ways of disabling the virus - in their arsenal, says Timothy Sheahan, a virologist at the University of North Carolina in Chapel Hill, who has teamed up with Gilead researchers to study remdesivir.

Source: [Nature](#), 29 April 2020

Slovenian study reveals low levels of C. difficile in food

Slovenian researchers tested, for a three-year period, retail minced meat and meat preparation for presence of *Clostridiodes difficile*. Of the 434 tested samples, only 18 were contaminated, 12 in meat samples and 6 in raw vegetables. Of the 12 positive meat samples, five were poultry preparations, three beef and/or pork meat preparations, three raw poultry and one bivalve mollusk. Ten of these were made in Slovenia and two in Austria. For retail fresh vegetables, of the six positives, three were raw leaf salads, one was parsley and two were ready-to-eat salads. Vegetables from three positive samples were grown in Italy, two in Slovenia and one in Poland.

Given the low detected prevalence of contaminated samples, the food safety risks for the tested food types are likely very low.

Source: [Food Safety News](#), 30th April 2020

Australian study: Antibiotics likely overprescribed for older adults

As older people are a population at risk, especially the ones with chronic respiratory diseases, priority antibiotics are commonly prescribed, even without microbiologic tests. The problem is that those antibiotics have a high potential to develop resistance.

To prevent a sharp rise of antibacterial resistant organisms, authors of an Australian study insisted on the need of microbiologic testing as it can be considered as a proxy for assessing the appropriateness of antibiotic use.

"Since watch group antibiotics have high resistance potential, focusing antibiotic stewardship efforts might be needed among older populations with chronic respiratory diseases in the primary care setting," they concluded.

Source: [CIDRAP](#), 27 April 2020
