

Probiotics for piglets

Isabela Fernandes de Oliveira studied new ways of reducing the use of antibiotics on farms. She looked at the microorganisms found naturally in animals and discovered bacteria that could offer protection as probiotics. She received her doctorate for this research on 17 May.

The bacterium *Streptococcus suis* is a big problem in pig farming. About three to five per cent of pigs get meningitis or septicaemia as a result. Infection by *Streptococcus suis* is one of the main reasons why antibiotics are used in the pork industry. The bacterium is also starting to develop resistance, which is a threat to public health.

Fernandes de Oliveira studied the microorganisms in the tonsils of pigs to look for possible probiotics and natural antimicrobial substances that could inhibit or prevent the growth of streptococci. She isolated, cultured and identified the microorganisms that are found naturally in pigs' tonsils. 'This microbiome turned

out to be a rich source of natural bioactive products produced by bacteria,' she says.

Yakult bottles

The PhD candidate tested the effect of various species of bacteria in a small-scale 'farm experiment' in a secure laboratory.

Yakult-style bottles are not yet available for pigs but Fernandes de

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Oliveira does see a future for probiotics for pigs that farmers can add to the feed, water or milk. 'The bacteria may also develop resistance to these products eventually, but unlike antibiotics, the natural products use several different methods in combination to inhibit the bacteria. That is why I think my results can be used to control the bacteria in a more sustainable manner.' RL