

# Fruit-derived antibacterial with potential application in the food industry

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Looking for alternatives that promote health through the food and medical industry, a group of experts in the south of Mexico conducted a study of the pulp of the fruit *Bromelia pinguin* L. and found that this

native plant has high antibacterial potential.

"We know that proteins inside the fruit have [antibacterial activity](#). We have tested it with *S. aureus*, a bacterium with high incidence in hospitals which has developed resistance to antibiotics, so they do not work against it," explains Dr. Elizabeth de la Luz Ortiz Vazquez, who served as an advisor of this research .

In addition to the Bromeliad extract, the scientists have identified the protein responsible for the antibacterial ability of the fruit.

"We try to find alternatives for the food and [health industry](#), and here we have achieved a soluble plant extract; we are also characterizing proteins," Dr. Ortiz Vazquez added.

This is the first time that the fruit of *Bromelia pinguin* L. has been studied, a cousin of the pineapple. The fruit resides within the plant and numbers up to 50 in each bush.

The fruits of the plant are grown from November to May, the ancestors of the region were said to use as an antiparasitic, and that is why the research began in 2009. However, ITM specialists have discovered that proteins of the fruit have antibacterial capacity and can inhibit the growth of fungi.

"If we find any protein or peptide of 5-10 amino acids, we could produce it at a biotechnological level by introducing genetic information in a bacteria," says Dr. Ortiz Vazquez.



The research results generated in the ITM provide basic information for future production of biopharmaceuticals with potential application in the treatment of various diseases or as [antibacterial](#) additives in the [food industry](#).

According to Dr. Jorge Carlos Ruiz, some species of bromeliads are endangered in Yucatan. In the past, the plant was heavily consumed, but lost presence in the area. Therefore, the investigation was revalued and potentiates its consumption and care.

Provided by Investigación y Desarrollo

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