

## The use of plants and their isolated compounds in type 2 diabetes control

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Diabetes is a condition that affects millions of people throughout the world and has an enormous impact on the costs that the national health systems need to support. While there is no known method to prevent type 1 diabetes, type 2 diabetes can be prevented with a healthy diet and exercise. Not only that, it can also be reversed if detected in the prediabetes stage.

The pharmaceutical market already has several drugs that are used to control type 2 diabetes, many of these use compounds of natural origin. Some examples include acarbose, miglitol, picrogenol, voglibose and metformin.

Other authors have already pointed out that several foods and herbs commonly used in the cuisine have potential in controlling type-2 diabetes, including cinnamon, ginger, soybean and papaya. Additionally, in a work developed in our lab, we found strawberry tree leaves and flowers collected in Algarve have in their composition compounds capable of strongly inhibiting  $\alpha$ -glucosidase of mammalian origin as well as  $\alpha$ -amylase, although to a lesser extent. Still, there are certainly other compounds and plants that could exert a beneficial effect, and perhaps with less side-effects. Therefore, in this work we intend to conduct a survey of plants, from the Algarve region, which could be extended to the Azores and Madeira regions, that have the potential to be used in type 2 diabetes control. The potential of these plants and their isolated compounds, characterized by HPLC, will be determined using enzymatic assays. The safety of these compounds, their extraction and stability will also be tested.