

Food waste research targets cardiovascular disease

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Credit: University of Abertay Dundee

Researchers are investigating how a by-product from rapeseed oil could reduce the potential formation of toxic compounds that can spark chronic kidney and cardiovascular disease.

The new research from Abertay University in Dundee is investigating how the leftover "press cake" from [rapeseed oil](#) production can be turned into a human food source with health promoting properties.

Nutrients found within the by-product have the potential to help reduce the formation of Advanced Glycation End-Products (AGEs), which are found in different types of cooked food and are linked to pathological conditions such as chronic kidney disease and [cardiovascular disease](#).

Synthetic drugs to combat these diseases are already available but have unwanted side effects, with the research team hopeful that rapeseed press cake—currently used as animal feed—can offer a natural alternative without such drawbacks.

Protein extracted from the press cake has been judged safe and suitable for human diet by the European Food Safety Association (EFSA).

It is obtained from the press cake in a similar processing method to soy protein and has comparably high protein and amino acid content.

Lab testing showed it could be partially substituted for flour in cookies with [positive effects](#) during the baking process, especially in the reduction of acrylamide, a potential carcinogenic compound formed during the cooking of starchy foods.



Dr Alberto Fiore. Credit: University of Abertay Dundee

Research leader, Dr. Alberto Fiore of Abertay's Division of Food and Drink, said antioxidant polyphenols present in the press cake could possibly be used in many new food products or supplements.

He added: "Abertay has a strong track record in food innovation and increasing the value of Scottish by-products is one of our key aims—particularly researching ways in which additional income can be generated for the sector.

"Rapeseed press cake has some exciting potential for [human use](#) and we are hopeful that this project will lead to the creation of new products,

using a resource that may previously have been used for animal feed."

Provided by University of Abertay Dundee

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