



## Olive gene sequencing may halt crop disease and substantiate health claims

**A stronger understanding of the olive's genetic structure is providing a US public research university with the tools to prevent crop diseases, as well as identify the healthful benefits of olive oil.**

After several years examining the genetic patterns and sequencing the *Olea europaea* (European olive) genome, a team of researchers at Southern Illinois University in Midwest America are now examining the protein interactions between the host and the disease.

In a March interview with BioSpace, a digital hub for the Life Sciences industry, researcher and doctoral candidate Oussama Badad explained how once the relationship is understood at a molecular level, then the research team can dig further into the genome.

To highlight this, Badad described how they found a little strand of RNA, called a non-interfering RNA, regulates the FAD2 gene family, which is functionally responsible for the conversion of oleic acid to linoleic acid—the latter of which is essential in the human diet.

Oleic acid, a monosaturated fatty acid that can help reduce cholesterol and lessen inflammation, can be found naturally in many foods, notably extra virgin olive oil which boasts a range of 55-83%. Of all available olive oils, Italian varieties are said to contain the highest levels of oleic acid.

"Understanding this basic component of the oil is an excellent stepping-stone for future genome study," says Badad, who grew up in Morocco and began his work on olive genomics after completing a master's degree in biotechnology and crop breeding.

He won a Fulbright scholarship to conduct additional research in the US where he has been working with the International Olive Genome Consortium. The group's purpose is to better understand the olive in order to accelerate flowering, increase the production of leaves, olives and olive oil, and fight the diseases and pests associated with the crop.

The international TAICHI project is spreading the word about the health benefits of using extra virgin olive oil for cooking to Mainland China and Taiwan.

Co-funded by the EU and promoted by the two main consortia of Italian olive growers, Italia Olivicola and UNAPOL, the TAICHI project offers consumers all the information they need to understand olive oil through its website, various social media platforms and OurOliveOil APP – available in the [App Store](#) and [Google Play](#).



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**Sources:**

<https://www.biospace.com/article/student-uses-gene-sequencing-to-understand-health-benefits-of-olive-oil>

<http://olivegenome.org/>

To find out more about the TAICHI project, visit [OurOliveOil.com](http://OurOliveOil.com).

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