

Exploring the tools of nature with plant biotechnology - Prof. Peggy Ozias-Akins

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According to a [report by the European Academy of Allergy and Clinical Immunology \(EAACI\)](#) 17 Million European suffer from food allergies while allergies in children doubled in the last 10 years. Even though the allergens vary over the continent, a future-oriented response to this development is needed. Therefore, we talked to Prof. Peggy Ozias-Akins to find out more about her research on allergens in our food.

What are the main trends in the plant biotech world?

Since allergic reactions are probably increasing due to a change in nutrition patterns and lifestyle, and exposure to pollutions, plant biotech focuses on opportunities to alter traits of crops without inserting DNA from an unrelated organism. These products are like the ones obtained by traditional plant breeding techniques, because such processes also occur spontaneously in nature. Thus, they are comparable in terms of food safety.

Do you think that certain new biotechniques could be important for consumers? (e.g. CRISPR)

Absolutely, there are a lot of different traits which could be targeted. Some might provide advantages to growers, others certainly more to consumers suffering from different allergies.

“We are starting to explore tools that nature has provided and try to understand how nature does it, to make use of this knowledge.”

Prof. Peggy Ozias-Akins - Professor at the College of Agricultural & Environmental Sciences at the University of Georgia

What kind of role do you think biotech will play in reformulating existing food/products in the future?

Under the premise that consumers accept it, it will play a huge role in certain parts of the world. The whole repertoire of plant biotechnology is having a huge impact on food production. Moreover, also on medicine where new techniques are more readily accepted than in plants or seeds.

Would allergens free or reduced food be appealing to certain niches of consumers?

Products marked as hypoallergenic would certainly appeal to a specific group of consumers. However, it depends on the confidence in the provided scientific evidence and the severity of allergic reaction someone is likely to encounter.

What is next in the plant biotech world?

Future trends in terms of new techniques are hard to predict. Nevertheless, thanks to innovative technologies, we are currently exploring this whole suite of new tools that nature has provided. We understand how it is precisely done and make use of this knowledge.

Ms. Peggy Ozias-Akins is a Professor at the [College of Agricultural & Environmental Sciences at the University of Georgia](#). Her horticulture research focuses on molecular tools to better understand and develop crop improvement. Furthermore, her areas of interest include plant growth as well as seed composition in terms of allergens or resistance to harmful influences.

What is plant breeding?

Plant breeding is the art and science of changing the traits of plants in order to produce desired characteristics to improve the overall function of various plants and crop systems.

With the predicted growth in the global population and the effects of climate change, varieties with increased yields and resistance to drought and disease are critical if we are to provide enough food for future generations. Plant breeding is one of the tools that will help us achieve sustainable crop production in the long term.

About the NBT Platform

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