

Special Interview : 教育の担い手

Leader in Education

食環境科学部 食環境科学科 准教授

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Profile

東洋大学食環境科学部食環境科学科 准教授。博士(工学)。東京農工大学工学研究科生命工学専攻を2005年修了。東北大学大学院工学研究科産学官連携研究員、東京農工大学共生科学技術研究員助手を経て同研究院助教に。その後(公財)若手生物学研究センター 園芸資源研究部 主任研究員を経て2017年4月より現職。研究分野は、基礎生物学、植物分子生物学・植物生理学。

Associate professor in the Department of Food and Life Sciences, Faculty of Food and Nutritional Sciences, Toyo University. PhD in engineering. Completed his PhD in the Department of Biotechnology, Graduate School of Engineering, Tokyo University of Agriculture and Technology in 2005. Served as a researcher for industry-academia-government collaboration at the Graduate School of Engineering, Tohoku University, and as an assistant at the Institute of Science and Technology for Sustainable Society, Tokyo University of Agriculture and Technology before assuming the position of assistant professor at the same institute. After that, served as a senior researcher in the Department of Bioresource Sciences, Iwate Biotechnology Research Center before assuming his current position at Toyo University in April 2017. Specializes in basic biology, and plant molecular biology/plant physiology.

普段の生活から研究テーマを考えてみる

植物バイオテクノロジーを中心に生物資源利用などの授業を担当しています。そのうちのひとつ「食品添加物概論」で、2017(平成29)年度第1回 東洋大学優秀教育活動賞をいただきました。ToyoNet-ACE(授業支援システム)の活用が評価に繋がったのだと思います。このシステムは、その場で学生にアンケートを投げかけ、スマホで返答してもらい、集計結果を投影して共有する、というように目で見える形で活用しています。例えば「コンビニで売っている食べ物の中で、食品添加物が入っていない食品はどれか?」など、クイズ形式の設問が多いですね。まずは、授業やその題材に興味をもってもらいたい。そこから主体的な学習が始まりますし、次はどんな質問が来るかなと考えれば、コンビニで買い物をする際など普段から何かを考えるきっかけにもなるはずです。学びや研究のチャンスはどこにでもある。授業を通じてそこに気づいてもらえたら嬉しいですね。

食品添加物は悪者なのか?

さて、食品添加物は一般的にあまり良いイメージをもたれていません。しかし現代の加工食品の豊かさや保存性の高さを維持

Consider your research theme from the perspective of your everyday lives

I teach courses mainly on bioresource use, including plant biotechnology courses. In AY2017, I received the first Toyo University Award for Excellent Educational Activities for one of the courses I teach: Introduction to Food Additives. I suppose my use of the class support system of ToyoNet-ACE was highly rated.

I use this system to visualize interactions with students in classes, by asking them to respond to questionnaires on their smartphones and showing the questionnaire results with the projector to share the results with the students. I often put quiz-style questions to students, such as "What food products sold at convenience stores contain no food additives?" I do so because I hope that students will become more interested in the class and its content, which will serve as the starting point for their studies on their own initiative. If they wonder what questions I will ask in later classes, they may begin considering something in their everyday lives when buying goods at convenience stores, for example. I would be happy if my classes allow students to become aware that opportunities for learning and research are everywhere.

Should food additives be blamed?

In general, few people have a positive image of food additives. However, food additives are indispensable for maintaining an abundance of processed foods and their long-life quality we enjoy today. All kinds of

するためには、食品添加物は不可欠なのです。どの食品添加物も徹底した調査のうえで、「使用しても良い」と認められたものだけが食品衛生法で規定されリスト化され、厳格に運用されています。その意味では、科学的にはこれ以上安全な食材はないときと言えます。むしろ食品添加物を適正に使わない方が問題の場合もあります。例えばお漬物。減塩ブームで塩が減ってきたなか、食品添加物である野菜の殺菌料や保存料を適正に使わないと食中毒が発生することもあります。何が食の安全なのか。イメージや固定観念にとらわれず、科学的に正しく見るという姿勢も大事です。

科学的な視野とモラルのあるプロへ

食環境科学部の学生の多くは、食品会社や食の関連企業で働くことを希望します。今まで消費者だった人たちが、送り手・作り手の立場に変わるので。そのため「『安全』と『安心』は異なるという点にも注目してもらいたい」と教えています。安全なはずの食品も、誰かがルールを破ると、とたんに不安が広がります。だからこそプロとしてのモラルを養うことがとても重要なのです。また、働いていくうえで、食品添加物に関わる機会もあるでしょうから、そのときには学習や研究で得た知識や経験を活かして、科学的に正しく理解し、説明できる人であってほしい。学生の皆さんには、そんな成長をしてほしいと考えています。

current food additives are recognized as "safe for use" based on thorough examination, listed in compliance with the Food Sanitation Act, and managed in a strict way. In this sense, it can be said that no food ingredients are safer than food additives from a scientific perspective. I rather believe that failure to use food additives appropriately may sometimes have adverse impacts on us. Let me take the example of Japanese pickles. Current trends toward the reduction of salt intake in the low-salt food boom may lead to food poisoning from Japanese pickles unless food additives, such as vegetable sterilizers and preservatives are used appropriately. You should correctly judge what food safety is by taking a scientific attitude, instead of sticking to false assumptions and stereotypes.

Become a professional with a scientific perspective and high morals

Many students at the Faculty of Food and Nutritional Sciences hope to work at food or food-related companies. They will transform from consumers to food providers or manufacturers. Therefore, I teach them that they should pay attention to the difference between safety and a sense of security. Once someone violates the rules, anxiety will quickly spread among people even about food products recognized as safe. That's why it is crucial to foster high professional morals among students. They may do work related to food additives. I hope that, in such cases, they will be able to correctly understand things from a scientific perspective and give correct explanations based on the knowledge and experience they have acquired through learning and research.