



European Research Day 2017

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T13 - Dr. Eva KNOCH, Postdoc, German **RIKEN Research Center for Sustainable Resource Science**

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My research project:

Plants produce a large variety of chemicals, called phytochemicals, to communicate, adapt to the environment, and defend themselves against herbivores, pathogens and environmental stresses. Since ancient times we humans have used these phytochemicals for our own benefit: as medicine, poison, spice, etc. Prominent examples are morphine, caffeine, the anti-malarial compounds quinine and artemisinin, and the anti-cancer drug taxol. We have just scratched the surface; nature harbours a lot of chemicals to be used as potential pharmaceuticals. My research is focused on elucidating the biosynthetic pathways of potentially valuable phytochemicals, with an aim to understand the molecular biology and biochemistry behind, in order to enable sustainable production of these chemicals in the future.

My career path:

Originally from Germany, I went to the University of Copenhagen, Denmark for my bachelor-, master-, and PhD-studies in plant cell wall biology, with a one year stay in California. After my PhD I thought of returning to Germany for a postdoc, but was ineligible to apply for German funding. Having studied in Denmark I did no longer count as a German scientist, but had spent too little time abroad to count as foreign researcher. So I stayed in Copenhagen for another two years as postdoc studying plant biochemistry. I then moved to the RIKEN national research institute, Japan, with a grant from the Carlsberg Foundation in 2015, and have just prolonged my stay with another grant from JSPS. Currently I am applying for funding to return to Europe. I plan to join a lab in Vienna with an interesting research focus that will develop my independent research profile so that I can start building my own group after that. However, while I had several options for an outgoing fellowship, I find there are limited grants to apply for to return to Europe, MSCA being one of the few.

My relation to Europe:

Although I keep in contact with previous colleagues and mentors in Europe, I have no current scientific collaborations with European researchers. I found that many Japanese researchers in my field are focusing mostly on national collaborations, with few scientists attending international conferences. RIKEN has been a good place to do a postdoc, with skilled colleagues and an independent research project, and I have grown as a person and a scientist. Personally, the language barrier limited my full integration with further career progression here in Japan, and I am now applying for funding to return to Europe. Although it is sparse, there are some great opportunities for young, international researchers to build an independent research group. Visiting European research institutions after moving to Japan I was inspired by the diversity and energy, openness and interest in each other's research. And I realised that I want to build my further career in this kind of community.