

“Research in Action” Podcast Instructor Guide

Use the following episode description, learning objectives, guiding questions and activity suggestions to more easily include “Research in Action” podcast episodes as a supplemental resource for your course.

Dr. Bastian Minkenberg on Genome Editing [00:00-32:07]

Research in Action - Episode 117

Podcast and Episode Information

“Research in Action” is a weekly podcast about topics and issues related to research in higher education featuring experts across a range of disciplines.

On this episode of the podcast, the guest is Dr. Bastian Minkenberg, a postdoctoral scholar in the Innovative Genomics Institute’s agricultural genomics branch. He started working on genome-editing in the food staple rice during his time as a Beachell-Borlaug International Scholar at Penn State. He now continues his efforts to improve disease resistance and yield of crops at UC Berkeley. Bastian is originally from Germany and obtained his bachelor and master degrees at RWTH Aachen University. His goal during his time at the Innovative Genomics Institute is to develop tools for precise genome-editing and accelerated plant breeding using advanced plant tissue culture and CRISPR methods. Another interest is to develop bioinformatic tools to avoid off-target editing in plants and to increase on-target activity. As ultimate goal, Bastian tries to develop an efficient gene repair system to easily change genetic information in crops to make them healthier and sturdier.

Segment One [00:00-12:19] - In this segment, Bastian describes his work with genome editing.

Segment Two [12:20-22:02] - In this segment, Bastian shares some of the more practical applications of his work.

Segment Three [22:03-32:07] - In this segment, Bastian discusses the importance of mentoring for researchers.

Show notes and a transcript for this episode can be found at:

<http://ecampus.oregonstate.edu/research/podcast/e117/>

Learning Outcomes

By listening to this episode, students will be able to:

- Describe genome editing
- Explain some of the various applications of genome editing
- Discuss some of the tensions surrounding genome editing
- Discuss the importance of mentorship for a researcher

Guiding Questions for Listening

- What is a genome?
- What is genome editing?
- What are some examples of how genome editing is being applied?
- How does Dr. Minkenberg explain the application of genome editing to plants?
- What is the difference between gene insertion and genome editing?
- What are some of the tensions surrounding genome editing?
- What does Dr. Minkenberg share are some of the various technological tools involved in genome editing?
- According to Dr. Minkenberg, why is mentorship important for researchers?
- How did Dr. Minkenberg seek out his own mentorship opportunities?

Possible Activities

- Ask students to visit the show notes for this episode (<http://ecampus.oregonstate.edu/research/podcast/e117/>) and look at an additional resource that is linked in connection with this episode. Students can write a short review of that resource to share with their peers.
- Ask students to visit the show notes for this episode (<http://ecampus.oregonstate.edu/research/podcast/e117/>) and post an additional resource connected to the content of the episode in the comments section.
- Have students share questions that are raised for them based on the content of this episode. What would they ask Dr. Bastian Minkenberg if they could?

Suggested Citation (APA, 6th edition)

Linder, K. (Producer/host). (2018, June 25). *Dr. Bastian Minkenberg on Genome Editing*. [Audio podcast]. Retrieved from <http://ecampus.oregonstate.edu/research/podcast/e117/>

Notes

About the Research in Action Podcast

“Research in Action” (RIA) is a podcast about topics and issues related to research in higher education featuring experts across a range of disciplines. Episodes are posted weekly and include guest interviews and occasional solo episodes. Guests are from a range of higher education institutions and share their expertise on qualitative, quantitative and mixed methods as well as their personal experiences as researchers, research and writing practices, organizational and productivity strategies, and much more. Some weeks, bonus content will also be posted.

“Research in Action” is hosted by [Dr. Katie Linder](#), research director for Oregon State University Ecampus.

Visit the podcast website to view [show notes and transcripts for each episode](#), explore our [episode guide](#), learn more about how to [contact us](#), or [suggest a future guest or topic](#).

You may subscribe to the [“Research in Action” RSS feed](#) or access the podcast via [iTunes](#), [Soundcloud](#) or [Stitcher](#).

“Research in Action” is also listed on [MERLOT](#).

The “Research in Action” podcast is a resource funded by Oregon State University Ecampus – ranked top ten in the nation for online education two years running by U.S. News & World Report. OSU Ecampus has more than 45 degree programs and more than 1,000 classes online.

Contact

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