

## Save the date - half day symposium

Time: Monday, February 10, 2025, 14:00 – 18:00

## New Genomic Technologies - A Versatile Toolbox for Crop and Livestock Improvement

Place: BOKU University, Vienna  
Ilse Wallentin House, Seminar Room 29  
Peter Jordan Strasse 82, 1190 Vienna / Austria

And via livestream, details will be announced later



Target audience: students, high-school pupils, university faculty, high-school teachers, biologists, agriculturalists, professionals in the food or agricultural sector, anyone interested in biology, food safety, biodiversity, etc..

### Background

It is extremely rare for a Nobel Prize to be awarded just 8 years after a breakthrough publication, but in 2020 it has highlighted how quickly the invention of the CRISPR/Cas9 system, an elegant tool for targeted genetic modification, has changed medicine and biotechnology. For 12 years now, the principle of “gene scissors” described by Emmanuelle Charpentier und Jennifer Doudna has allowed the scientific development of further, more finely tuned methods and their application to the study of life and the improvement of crops and animals and has since gained considerable momentum. Despite its widespread use, the public and political debate is often contradictory.

In this half day symposium at BOKU we will: 1) explain and describe the systems around gene editing in an understandable way; 2) show some examples of gene editing for genomic research and crop improvement; 3) discuss some of the economic and political aspects; and 4) discuss with you your expectations, concerns, and questions.

*The detailed program will be communicated soon.*

**The keynote speaker for this event is Prof. Steven Runo from the Kenyatta University Nairobi, Kenya.**

Title: ***Leveraging Genome Editing to Enhance Food Security in Africa***

Steven Runo is working on understanding host-parasite interaction between *Striga hermonthica* (= witchweed) and its host plants. Striga is a noxious parasitic weed that causes major crop losses, particularly in Africa and poses a threat to food security and the livelihoods of smallholder farmer. Steve Runo has identified genes in wild sorghum that are responsible for resistance to Striga and is using his knowledge to equip cultivated sorghum varieties with Striga resistance. Gene editing is one approach used for this purpose: one of many examples in which this principle can contribute to understanding biology and for securing crop yields and food security.

### **Mini CV Steven Runo**

Steven Runo is Professor of Molecular Biology at Kenyatta University in Nairobi, Kenya. He received his BSc and MSc degrees from Kenyatta University. He then was awarded with a Rockefeller Foundation PhD fellowship to study molecular biology as part of a collaboration between Kenyatta University and the University of California in Davis. After completing his PhD in 2008, he accomplished postdoctoral projects at the University of Sheffield (UK) and the University of Virginia (USA) before returning to Kenya and accepting a faculty position at Kenyatta University. Currently, his lab uses molecular genetic tools to understand parasitic plants that limit crop production in Africa and their interaction with the hosts. Steven is a recipient of the Alexander von Humboldt Research Fellowship and the Georg Forster Senior Research Fellowship. In recognition of his contributions to science, Steven Runo was awarded the Royal Society Africa Prize in 2020.

Info: <https://spas.ku.ac.ke/department-of-biochemistry-faculty/prof-steven-runo>

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<https://boku.ac.at/en/ifa-tulln/institut-fuer-biotechnologie-in-der-pflanzenproduktion>

Hosted by BOKU University Vienna, in cooperation with the Gregor Mendel Society Vienna, the Gregor Mendel Institute of Molecular Plant Biology, and the Austrian Academy of Sciences.

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