ID: MSCA-19-VanDerMeer01

Discipline: Law

Title: The potential of genome editing and the legal status of genome edited organisms.

Abstract: The agricultural production chain faces unprecedented and escalating challenges, such as nourishing 9 to 10 billion people by 2050 with sufficient and safe food of adequate nutritious quality; changes in occurrence of pests and diseases due to climate change; changes in growing seasons due to climate change; the need to reduce the environmental footprint of agricultural production; satisfy increasing demand of renewable biomass bio-energy; address the erosion of natural resources and improve livelihood of small farmers and reduce poverty.

These multi-faceted challenges require multifaceted solutions in many areas, such as changes in consumption patterns, improved farming methods (e.g. precision farming), and improved seeds and plant material. Improved seeds and plant material would include drought and flooding tolerant crops, insect and pest resistant crops, abiotic stress resistant crops, crops with increased nutritional value, etc.

We are proposing an interdisciplinary, scientific and legal project that will investigate:

1. The specific characteristics of genome editing that can help address the above challenges.
2. An overview of specific needs for improved seeds and plant material and of ongoing research in genome editing.
3. The legal status of genome edited organisms under international and EU regulations.

The results of this project will provide input to the next negotiations under the Convention on Biology and the Cartagena Protocol on Biosafety (2020, China), as well as the ongoing discussions in the European Union on innovation and regulation.

This project will be hosted by the Research group of Plant Genetics of the Faculty of Sciences and Bioengineering Sciences of the Vrije Universiteit Brussels. Research in the Laboratory of Plant Genetics concerns basic plant molecular genetics as well as applied research relevant to the plant biotechnology and agricultural sector. The research is focused on plant amino acid metabolism, reactions of plants to biotic and abiotic stress factors and improvement of nutritional quality. In the applied research projects, the group makes use of molecular breeding strategies, including genome editing and transgene technology.

Further guidance for this interdisciplinary project will be provided by the Department of European, Public and International Law, of the Faculty of Law, at the Ghent University, Belgium, as well as by other groups at the VUB and the Ghent university on an ‘as need’ basis.

Supervisors: Piet van der Meer, pieter.jan.van.der.meer@vub.ac.be

Website: https://we.vub.ac.be/nl/plant-genetics

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