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Genomics of Sunflower

Integrated GE³LS Research Intellectual Property and Regulatory Issues for Genetically Modified Plants

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Summary

The Genomics of Sunflowers project will sequence the genome of the sunflower, *Helianthus annuus*, which will facilitate scientific research across this diverse plant family with potential applications ranging from crop improvement to weed control to the development of wood producing sunflower varieties. In addition to the sequencing effort, the project will increase the speed and precision of sunflower breeding programs by identifying molecular markers for beneficial genes underlying important agricultural traits such as seed oil content and flowering time. The project will also develop the genomic tools and resources needed to breed sunflower cultivars with woody stalks - a development that may lead to the improvement of sunflower oilseed crops and biofuel development.

Given these potentially significant economic benefits, the integrated GE³LS project aims to consider the potential legal and regulatory implications of the research. Thus, the GE³LS project will complement this genomic research by investigating the relevant Intellectual Property (IP) issues and regulatory context of the scientific work and its potential applications. The GE³LS project will be led by Emily Marden and Ed Levy, experts on IP and regulatory law in genomics. The primary component of their research will investigate the type of data and IP that will be generated by this project, how the potential for IP will be handled between the University-Industry Liaison Office and co-funders, and whether alternative approaches to IP could forward scientific research or access to the ultimate benefits of the projects. The second arm of the GE³LS research will address ongoing regulatory discussions around genetically modified agriculture and food products, and the specific questions for modified sunflower plants for food and/or biofuel uses.